

**Managing the St. Anthony Sand Dunes:  
Rural Resident Support for Off-road Vehicle Recreation Development**

A Thesis

Presented in Partial Fulfillment of the Requirements for the

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by

Catherine A. Hughes

Major Professor: Travis Paveglio, Ph.D.

Committee Members: Patrick Wilson, Ph.D.; Nick Sanyal, Ph.D.

Department Administrator: Lee Vierling, Ph.D.

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## Authorization to Submit Thesis

This thesis of Catherine A. Hughes, submitted for the degree of Master of Science with a Major in Natural Resources and titled, "Managing the St. Anthony Sand Dunes: Rural Resident Support for Off-road Vehicle Recreation Development," has been reviewed in final form. Permission, as indicated by the signatures and dates below, is now granted to submit final copies to the College of Graduate Studies for approval.

Major Professor: \_\_\_\_\_ Date: \_\_\_\_\_  
Travis Paveglio, Ph.D.

Committee Members: \_\_\_\_\_ Date: \_\_\_\_\_  
Patrick Wilson, Ph.D.

\_\_\_\_\_ Date: \_\_\_\_\_  
Nick Sanyal, Ph.D.

Department  
Administrator: \_\_\_\_\_ Date: \_\_\_\_\_  
Lee Vierling, Ph.D.

## **Abstract**

Increased participation in recreational activities on public lands challenges land managers to maintain the integrity of landscapes and meet the needs of recreationalists. Off-road vehicle (ORV) recreation is an increasingly-popular recreational activity that can offer social and economic benefits, but often to the cost of the environment. As popularity of ORVs continues to grow, many land management agencies are pursuing strategies to mitigate associated conflicts. However, ORV studies have been scant in recent years. The research presented here addresses the lack of knowledge on ORV area management by exploring local resident and recreationalist perspectives about future regulations in a popular Idaho ORV recreation area. Results indicated that support was influenced by three primary factors: 1) views that increased visitation might change local Dunes culture, 2) concerns that SRP permits might allow government agencies to eventually over-regulate the Dunes, and 3) a desire to ensure that Dunes management decision-making is transparent and inclusive of local residents. We conclude by discussing management actions that land managers can take to ensure successful future development programs.

Keywords: off-road vehicle, recreation development, outdoor recreation management, resource advisory council

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## **Dedication**

To my mother: *for always reminding me to “swim fast!”*

To my father: *for his wisdom and sacrifices that helped me achieve my goals*

To my brother: *for being my role model and best friend*

## Table of Contents

Authorization to Submit Thesis .....	ii
Abstract .....	iii
Acknowledgements .....	iv
Dedication .....	v
Table of Contents .....	vi
<b>1. INTRODUCTION: MAKING A CASE FOR ORV MANAGEMENT.....</b>	<b>1</b>
<b>2. LITERATURE REVIEW: ORV MANAGEMENT OVERVIEW .....</b>	<b>5</b>
<b>3. METHODS: ENGAGING RURAL COMMUNITIES .....</b>	<b>12</b>
3.1 ORV Communities and Recreation Area History .....	12
3.2 Focus Groups .....	14
<b>4. RESULTS: STAKEHOLDER VIEWPOINTS .....</b>	<b>18</b>
<b>5. DISCUSSION: FACTORS INFLUENCING COMMUNITY MEMBERS .....</b>	<b>24</b>
<b>6. CONCLUSION: ADVANCING DUNES TRAVEL MANAGEMENT.....</b>	<b>30</b>
References .....	35
Appendix A: University of Idaho International Review Board Approval .....	46

## **1. INTRODUCTION: MAKING A CASE FOR ORV MANAGEMENT**

Increased participation in recreational activities on public lands challenges land managers to maintain the integrity of landscapes and meet the needs of recreationalists. Recreation and leisure are an integral part of many people's lives for self-expression and connecting with the natural world (Mann & Leahy, 2009). Multiple-use landscapes, such as Bureau of Land Management (BLM) lands or national forests, can offer places for people to have these meaningful experiences. However, unmanaged and undermanaged activities can create conflicts between recreationalists and impair resources and the land (Fischman, Meretsky, Freeman, Lamm, Missik, & Salmon, 2017). Off-road vehicle (ORV) recreation is an increasingly-popular recreational activity, with more than 100% growth in the number of riders reported from 1982 to 2001 (Cordell, Betz, Green, & Stephens, 2008; Kil & Holland, 2012). The number of ORV users is expected to continue to increase, urging federal, state, and local agencies to make informed decisions to successfully manage social and environmental changes that may occur from ORV use (Bosworth, 2004). However, little research exists in this area. The research presented here addresses the lack of knowledge on ORV area management by exploring local resident and recreationalist perspectives about future regulations in a popular Idaho ORV recreation area.

An ORV is any vehicle intended to be ridden off-road or off-highway. The ORV category includes motorcycles or dirt bikes, all-terrain vehicles, side-by-sides, dune buggies, sand rails and modified trucks (Kil & Holland, 2012). Existing literature indicates that ORV use can be highly controversial because of associated environmental degradation (e.g. trail erosion, wildlife disturbance) (Andereck, Valentine, Knopf, & Vogt, 2005; Frauman & Banks, 2011). However, ORV recreation also presents an opportunity to enhance local

economies near popular ORV destinations or disrupt local functioning through increased tourism (Hughes, Becco, Hallo, & Norman, 2014). All of this suggests a careful need to both regulate ORV use and incorporate residents' perspectives about its management due to potential impact on local ways of life (Deery, Jago, & Fredline, 2011).

Land management agencies may utilize Special Recreation Permits (SRPs) to create and maintain desired physical and social settings for recreation. SRPs are authorizations that allow "specific recreation use of public lands and waters in ways that provide public services while protecting and enhancing the integrity of the land (United States Department of the Interior Bureau of Land Management, 2007). The four major classifications of SRPs are vending, organized group activity or event use, competitive use, and commercial use (United States Department of the Interior Bureau of Land Management, 2007). Federal planning processes utilize public involvement strategies to ensure that SRP permits will support the public interest while adhering to federal regulations and requirements (United States Department of the Interior Bureau of Land Management, 2011). Previous research indicates early communication with local stakeholders helps maintain a positive relationship with local communities, produce informed and successful development strategies, and is key to achieving management goals (Deery et al., 2012; Lankford, 1994). Incorporating local resident views into SRP development ensures permit specifications adequately represent local stakeholders' perspectives, encourages meaningful dialogue between stakeholders and land management agencies to create clearly defined management objectives, and produces more acceptable outcomes for recreationalists (Bureau of Land Management, 2009). Open communication also empowers local communities to express concerns early and



appropriately, reducing the number of controversial issues that could result in the opposition of management actions.

Place-based management strategies are often suggested as a useful approach for implementing SRPs or other recreation management because site-specific users' needs can be identified and collaboratively managed. "Place" has been defined in multiple ways to describe the shared relationships that develop among people with similar interests, experiences and uses for the landscape (Davenport & Anderson, 2005). Using place to guide management actions may be especially useful in rural communities where residents often share a unique culture, lifestyle and personal identity traits (Huang & Stewart, 1996; McMillan & Chavis, 1986). ORV recreationalists also have been noted to form particular social connections, or "cultural identities" (Manning, 2011), suggesting that rural ORV user groups may have recreation and social needs that are distinct from other recreationalists. Despite a growing knowledge about the influence of place in rural resident's lives, rural ORV recreation areas have received little attention.

Increases in ORV popularity may lead to more requests for SRP permits or regulation on recreation use. Thus, it is critical that land managers gauge recreationalists and locals perspectives about the future management of ORV areas, exchange information, and address specific community needs (United States Department of the Interior Bureau of Land Management, 2011). This study utilized focus groups with local residents and recreationalists living near rural communities proximal to the St. Anthony Sand Dunes ORV recreation area (hereafter referred to as the "Dunes") in southeastern Idaho. The goal of my research was to identify the influences on local support for future recreation development in the Dunes ORV

recreation area. I was particularly interested in gauging locals support for different tourism developments in the area.

## **2. LITERATURE REVIEW: ORV MANAGEMENT OVERVIEW**

The dominant thread of recreation research utilizes quantitative approaches to examine community support for tourism and recreation developments (Lankford & Howard, 1994; McCool & Martin, 1994). Other studies explore how a variety of tourism or development impacts influence support, including potential crowding (Lingburg & Johnson, 1997), personal benefits (McGeehee & Andereck, 2004; Wang & Pfister, 2008), contributions to local economies (Allen, Valentine, Knopf, & Vogt, 1993; Huh & Vogt 2008), or displacement of existing recreationalists (Anderson & Brown, 1984). Exploring support for tourism using demographic information or measures of residents' affective ties to landscapes and communities is also common across the literature (Allen, Perdue, & Kieselbach, 1988; Eisenhauer, Krannich, & Blahna 2000; Kinney, 2016; Lee, 2013; McCool & Martin, 1994). Overarching findings from previous research on support for tourism or recreation development can be consolidated into three primary influences: economic impacts, social disruptions, and environmental changes. I will review the components of these influences in the coming paragraphs of this section, focusing specifically on ORV recreation.

National ORV use has traditionally been highest in the western states and Rocky Mountain region (Silberman & Andereck, 2006). The Western States also are home to many rural communities bordering recreational areas and public lands. Rural areas in the Rocky Mountain region have been experiencing drastic infrastructural changes as traditional local industries associated with resource extraction diminish, thus initiating a need for communities to develop different economic development strategies (Andreck and Vogt, 2000; Smith & Krannich, 2000; Wang & Pfister, 2008). Communities in close proximity to outdoor recreation areas, what some call "gateway communities" may be poised to utilize

projected increases in tourist visitation for economic benefits. However, literature shows this topic is controversial. Most gateway communities have less than 15,000 residents and often experience economic changes as more people relocate there for area amenities (Kurtz, 2010; Frauman & Banks, 2011). Results from various studies suggest a significant and positive relationship between economic gains from tourism and support for tourism within communities (Jurowski, Uysak, & Williams, 1997; McGehee, 2004) For instance, Pizam (1978) and Vesey & Dimanche (2000) both argued that greater economic dependency on tourism should result in positive attitudes toward tourism developments. Likewise, other segments of research indicate that local residents who view tourism as resulting in negative impacts on the local economy had less support for developments. Support for tourism decreased if developments caused an increase in cost of living (Cooke, 1982), negatively impacted local businesses (Akis, 1996; Haukeland, 1984), or provided no economic benefits to individuals (e.g. increased income) (Frauman & Banks, 2011).

Definitions of what constitutes a ‘community’ are varied (Huang & Stewart 1996), but this paper will draw upon Creswell’s (2013) note that people can associate with a community based on shared meanings and value of a geographic area, or places which ‘contain’ likeminded individuals. In essence, communities are not bound by political, physical, or economic boundaries but include those who have formed a social attachment to people and places that they have deemed important (Davenport & Anderson, 2005; Pavaglio, Abrams, & Ellison, 2016). Attachments among people are dynamic and evolve, with new interactions and changes across the landscape allowing places to acquire unique meanings and value that form the basis of local culture (Eisenhauer et al., 2000; McCool & Martin, 1994). Meanings can be considered socially-constructed symbols of a physical space through

shared experiences, often referred to as a “sense of place” (Mann & Leahy, 2009; Relph, 1976; Williams et al., 1992; Williams & Stewart, 1998; Tuan, 1974, 1977). The meanings that are attached to the land can become an extension of the self—a product of intertwined culture, emotions and lifestyles that plays a role in the importance of landscapes and other people.

Existing studies of ORV recreation indicate that recreation setting, opportunities for social interaction, adventure, chances to experience nature and the use of specialized equipment are important influence on rider’s evaluation of their recreation experience (Baker, Schuster, & Cordell, 2007; Budruk, Virden, & Waskey, 2009; Mann & Leahy, 2009). Another qualitative study of ORV riders by Mann and Leahy (2009) found that social connections with the natural world, connections with other riders and the chance to learn more about themselves were prevalent topics during discussions of place meanings associated with ORV recreation. This research suggests that ORV tourism developments should revolve around maintaining the meanings and sense of place that recreationalists create when riding in order to provide beneficial recreation experiences.

Recreation research suggests that recreationalists are able to form social relationships and connections with each other and landscapes through their desired means of recreation, including ORV riders and their ORVs (Manning, 2011). Hughes et al. (2014) found that ORV riders preferred to recreate in communities that embraced a welcoming ORV “culture” that was important to their experience. ORV culture has been noted as featuring community policies that allow ORVs to use public spaces within the town (e.g., public parking, drive-thrus) as well as a friendly and hospitable attitude toward riders. However, the expected increase in ORV use may lead to changes in these cultures. For instance, existing literature

has identified significant differences between long-term and new resident outdoor recreation needs. Spencer (2013) found that local mountain biker recreation needs centered on personal physical and mental health benefits while tourists were viewed as simply enthusiasts of the sport. Influxes of ORV riders may also impact the ways public lands are used, including the displacement of resident riders (Anderson & Brown, 1984; Manning, 2011) and increased conflicts with other user groups (e.g. horseback riders, hikers) (Havlick, 2002). The disparity between these residents may lead to “culture clash” conflicts that affect support for developments, including those related to recreation on public lands (Smith & Krannich 2000). These conflicts can potentially lead to area closures and restricted access (Deisenroth, Loomis, & Bond, 2009), as well as negative recreationalist actions, such as disobeying rules, animosity toward tourists, and intentional harm to the landscape (Kyle, Absher, & Graefe, 2003).

ORV use is considered a major contributor to damage of national forests, grasslands, and other public lands (Jakus, Keith, & Blahna, 2010). Landscape degradation can be one direct impact from ORVs use. Overuse by ORV recreationalists can cause erosion, destruction of wildlife habitats, noise pollution, excessive litter, and damage to significant cultural sites (United States Department of Agriculture Forest Service, 2006). Recreation areas that receive high volumes of ORV riders often observe negative environmental impacts (Fischman, Meretsky, Freeman, Lamm, Missik, & Salmon, 2017; Luckenbach & Bury, 1983; Stebbins, 1974) that may prompt land managers to reevaluate and redesign recreation management practices to mitigate degradation. Gateway communities proximal to ORV areas may be especially susceptible to these environmental threats, as popular recreation areas in close proximity are poised to experience the most significant increase ORV riders (Frauman

& Banks, 2011). Negative environmental impacts from ORV recreation may decrease support for additional recreation developments potentially leading to conflicts between locals, residents and tourists (Fletcher, 2008; Var, Kendall, & Tarakcioglu, 1985). Land managers who hope to mitigate recreationalist conflicts and develop effective, long-lasting recreation management programs can benefit from involving diverse local stakeholders in the process of recreation management and decision making (Andereck & Vogt 2000). Public involvement or input about recreation decision making not only sheds light on the local population and local ORV riders' needs, but also helps balance acceptable costs and benefits for land managers, local residents and tourists (Deery et al., 2012).

Recreation Management Plans and SRPs are common strategies that land managers can enact to produce short and long-term modifications to a recreation landscape (United States Department of the Interior Bureau of Land Management, 2007).” SRPs are discretionary tools that land managers may use to “satisfy recreational demand within allowable use levels in an equitable, safe and enjoyable manner while minimizing adverse resource impacts and user conflicts (United States Department of the Interior Bureau of Land Management, 2007).” Permits may be issued to businesses, organizations or individuals for specific activities or special events held on public lands. There are four categories of SRPs: (1) *commercial use* for business or financial gain (e.g. fundraising or guide services); (2) *competitive use* in which contestants compete in an organized, sanctioned, or structured use activity where two or more contestants compete (e.g. ORV races or rodeos); (3) *organized group activity or event use* intended for group activities that are neither commercial nor competitive (e.g. family reunion held at a BLM recreation site); and (4) *vending* as temporary, short-term, nonexclusive, revocable authorizations to sell goods or services in

conjunction with a recreation activity (e.g. tee shirt sales for an ORV race) (United States Department of the Interior Bureau of Land Management, 2007).” SRPs and recreation management plans also can alter a number of social and environmental aspects of the recreation experience, including patterns of recreational use, local culture, and sense of place through restrictions on access to recreation sites or allowance of previously unpermitted activities (Appleyard, 1979).

In summary, existing literature demonstrates ORV recreation has the potential to trigger changes within the landscape, rural communities and the lives of local residents. Projected increases in ORV use will present a number of land management issues requiring conflict mitigation strategies which draw information area stakeholders, especially in rural areas which may be prone to economic and social disruption. Likewise, there has been comparatively less qualitative research that examines influence on resident support for developments and SRPs associated with ORV-focused recreation areas. This has led to research focused on understanding recreationalists’ motivations surrounding support for additional tourism development (Deery et al., 2012). Analyzing the underlying motivations or influences on resident support for tourism development has the capacity to help explain variable patterns in quantitative studies (Ap, 1992; Deery et al., 2012). This research responds to the lack of qualitative research on ORV recreation by identifying factors that affect rural community members’ support for management of an Idaho ORV recreation area experiencing increased use. I focus specifically on planning for recreational development efforts and potential SRP use. Given the context of this study, I propose the following research questions: (1) what influences rural community member views about federal agency management or development of an ORV recreation area? (2) What influences rural



community member support for commercial Special Recreation Permits associated with a nearby ORV recreation area?

### **3. METHODS: ENGAGING RURAL COMMUNITIES**

#### **3. 1 ORV Communities and Recreation Area History**

This study focused data collection in the two communities of St. Anthony and Rexburg in southeastern Idaho. These communities neighbor the Saint Anthony Sand Dunes Special Recreation Management Area which is intensively managed for ORV use by the Bureau of Land Management (BLM). This area was also designated as the Sand Mountain Wilderness Study Area in 1981 but later recommended for release of the ‘wilderness’ designation for uses other than wilderness pending congressional approval (United States Department of the Interior Bureau of Land Management, 2013). The 21,100 acre area continues to hold dual-designation as a Wilderness Study Area and a Special Recreation Management Area. Around 11,000 acres of the Dunes are open for ORV use and dispersed recreation activities year-round, and 10,000 acres of sagebrush and juniper are protected through restrictions on motorized use. More than 250,000 recreationalists annually visit the Dunes to engage in various activities including horseback riding, hiking, camping, sledding in winter, and exploring on ORVs (United States Department of the Interior Bureau of Land Management, 2016).

The BLM implemented the Medicine Lodge Resource Management Plan (MLRMP) in 1985 to establish management objectives for the Dunes and surrounding BLM lands (United States Bureau of Land Management, Idaho Falls District, 1985). The MLRMP emphasizes a multiple-use framework attributed to the 1976 Federal Land Policy and Management Act, but does not stress the importance of user recreation benefits reflected in the current Outcomes-focused Management framework utilized by the BLM today. Outcomes-focused Management (OFM) focuses on “management of recreation settings to

provide opportunities that allow visitors and local communities to achieve a desired set of individual, social, economic and environmental benefits (United States Department of the Interior Bureau of Land Management, 2011).” Existing regulations within the MLRMP may not be suitable for current area conditions and use levels at the Dunes. Updated information on recreationalist needs, wants and demands is needed to generate a new management plan for current and future use of the Dunes.

A goal of the BLM’s OFM recreation planning process concentrates on engaging local communities to ensure stakeholder views are adequately represented in the plan development process (United States Department of the Interior Bureau of Land Management, 2011). This research fulfills this goal by providing a public input opportunity to local communities surrounding the Dunes through use of focus groups.

### 3. 2 Focus Groups

I utilized a qualitative data collection approach using focus groups to allow themes surrounding Dunes management and stakeholder views to develop naturally as a result of participant conversations. Focus groups help land managers to explore relationships between people and the landscape, and illuminate core values, feelings, and reasoning that influence the perspectives of individuals engaged in decisions about resource management. These discussions also allow for meaningful, open-ended dialogue between people who share activities, cultures, languages, or attachments, thus reflecting a social constructivism approach (Pernecky, 2012).

I conducted six focus groups in early spring 2017. Approval to conduct fieldwork was obtained from a University of Idaho International Review Board. Three of those focus groups were hosted in St. Anthony, Idaho, and three in Rexburg, Idaho. Sessions were held in city halls in each location to provide a neutral location for conversations and elicitation of values and support for recreation developments. A total of 65 people attended the focus group sessions, and group size ranged from 6 to 16 participants with each session lasting around two hours.

I utilized a combination of theoretical and purposive sampling to select participants for the focus groups. Theoretical sampling is a method to gather diverse and relevant groups or individuals through pinpointing and refining data throughout research (Charmaz, 2000). Recruitment of participants was aimed at inclusion of a variety of Dune-users with local knowledge of and experience with recreation at the Dunes. I began by calling and emailing local business owners, community leaders, emergency responders and government representatives to gauge interest levels and gather initial focus group participants. I then used

a combination of purposeful and snowball sampling (i.e. chain referral sampling) to recruit additional and diverse participants.

Purposive sampling occurred throughout the duration of our recruitment and allowed me to selectively sample local populations who may have a vested interest in the Dunes. Purposeful sampling ensured that my focus groups would include a representative sample of ORV and Dune enthusiasts and have relevant data outputs from the sessions. My recruitment effort included postings via Dune-specific social media websites (e.g. *St. Anthony Duners—home of the locals* Facebook page) and distribution of fliers in local ORV retail stores, mechanic and hardware shops. I then asked store owners in-person for referrals to other people who may be interested in participating. Snowball sampling utilizes these *chain referral* methods to identify other knowledgeable participants within communities based off of suggestions by existing participants (Lindlof & Taylor, 2002). Other methods of gathering prospective participants included advertisements on city marquees and local online newspapers to ensure public advertisement to local populations that may not have been addressed previously. Phone numbers and emails were collected from previous Dunes season-pass holders whose ZIP code matched a neighboring community to the Dunes. A local fire station was also recruited to assist in distribution of flyers to local businesses throughout nearby communities. My wide-ranging methods of contact and corresponding sample of Dune-users ensured inclusion of a representative sample of area stakeholders and avoidance of bias during data collection.

A semi-structured protocol guided each focus group discussion. The protocol focused on topics centered on local versus non-local of the Dunes, SRPs and overall management of the area. Initial questions covered by the protocol included: (1) participant's views on the

importance and influence of the Dunes for the local community; (2) identifying the most important management issues at the Dunes and; (3) perspectives concerning restrictions or permitting at the Dunes. The focus group discussions then centered around participants' perspectives on SRP options (e.g. additional vending opportunities and guided Dune tours) and additional developments at the Dunes. General questions concerning overall management at the Dunes and public access to information about the Dunes helped to close each discussion, and address any questions or concerns that were not covered during the focus group duration.

Focus groups were recorded with the permission of the participants, and were facilitated by me. Each discussion was later transcribed verbatim. I used the computer-based qualitative analysis program, QSR NVivo, to facilitate coding of the data. I used thematic analysis to identify factors influencing participant support for commercial developments associated with the Dunes. Thematic analysis provided an overall umbrella for coding efforts and the identification of salient concepts (i.e. themes) within the data (Vaismoradi et al., 2016). This method helped to identify patterns based on participants' similar experiences associated with the Dunes (Vaismoradi, Jones, Turunen, & Snelgrove, 2016). Coding began with researchers simultaneously reviewing, open coding and comparing focus group transcripts to identify provisional broad themes related to the research questions. I utilized open coding to group similar responses together based off of commonalities (Hughes, Becco, & Halo, 2014), and continued until consistent results were found between coders. Any discrepancies among coders was clarified and noted to ensure consistent and accurate future coding. This process of cross-checking, known as *intercoder reliability*, is a key component of qualitative analysis to ensure consistent and valid codes (Lombard, Snyder-Duch, &

Bracken, 2002). Once agreement on the provisional codes was reached, similar codes were then grouped together to identify emergent themes with broad descriptions for each. These codes helped generate a codebook to guide the rest of the coding process by being a reference point as more ideas and themes emerged in the data. I took the lead for the remainder of the transcripts using axial coding to continue thematic analysis, constantly comparing data and adding more specific codes throughout the process. Finally, I identified representative quotations for each theme and key findings (Boyatzis, 1998).

#### **4. RESULTS: STAKEHOLDER VIEWPOINTS**

The purpose of this research was to identify factors influencing local community support for developments associated with the Dunes ORV recreation area. My analysis uncovered three primary factors influencing local community support for developments at the Dunes ORV recreation area: 1) views that increased visitation might change local Dunes culture, 2) concerns that SRP permits might allow government agencies to eventually over-regulate the Dunes, and 3) a desire to ensure Dunes management decision-making is transparent and inclusive of local residents. I explore each of these themes in the following sections.

Focus group participants agreed that there had been an increase in visitation at the Dunes within their lifetimes, and acknowledged it would continue to increase. Many said they regularly recreate at the Dunes, but some noted that they no longer visit because of crowding and resulting safety issues. As one resident described: “Locals that I talk to in the immediate area said, ‘I won’t go out there it’s just too busy anymore.’”

Residents avoiding recreation opportunities at the Dunes typically included long-term residents and families with children. Both of these groups indicated that many of the areas they frequently visited were becoming too crowded. Some people also noted specific locations where a great number of Dunes users rode ORVs at a high rate of speed, making it unsafe for pedestrians, other ORV riders and especially children.

Residents expressed concern about future Dunes developments attracting more people to the area. They were not entirely against new developments, but wanted the current use level to be maintained. Participants suggested that altering the current use level would impact the way local resident’s access, enjoy and recreate at the Dunes, such as displacing them



from their regular riding locations. Carefully monitoring and testing new developments at the Dunes would aid in maintaining the current use level, and leave the local Dunes ORV recreation norms unchanged. As one local resident explained:

That's probably one of the qualities of the SASD that all of us here would like to see preserved and that is the uncrowded feeling when were out there. Most of the time now if you're out there on Memorial Day or Fourth of July or Labor Day it can start to feel a little crowded...but I'll just say one of our concerns when we think about what future development of the Dunes might look like is the over-commercialization and the over-development that might lead to the kind of situation that [name] is talking about in a place like Glamis, where it's so darn crowded that you're afraid to do much except sit around and people watch instead of actually enjoying the resource.

Many participants explained the unique culture and style of people who recreate at the Dunes, and they noted that this culture was an important aspect of their recreation experience. This culture included both local and non-local visitors as well as motorized and non-motorized recreationalists that recreate together on the Dunes. Participants explained how social bonds and respectable relationships were created between people through shared experiences together on the Dunes, and that these were part of their local culture. One participant said, "...there's a friendship and a bond immediately, just for the simple fact that you're out there on the sand together."

Part of the Dunes culture celebrated by local residents was a focus on being safety-conscious and courteous of other users. Participants noted how local ORV riders would slow down at necessary times, maintain safe distances between non-motorized recreationalists and familiarize themselves with the terrain. Residents reported enjoying interacting and recreating with non-local visitors but some noted that there are important differences between locals and non-locals. Non-local visitors did not always follow the same "etiquette" for ORV

riding and may not be as knowledgeable about the hazards of the Dunes. These concerns influenced locals concerns about additional developments, as they had the potential to increase the number of non-local recreationalists. As one participant described:

How many times have you guys heard of people running into each other on their dirtbikes? And that's where the local thing comes in versus the out-of-staters and the flow of the riding and the etiquette of the sand dunes that were generating. People aren't watching other people they think they have the right of way and in those situations nobody has the right of way. If you see somebody you get out of their way before they think you're going to get out of their way. So it's just a dangerous place when you have high horsepower machines, openness and crazy terrain that's fairly unique.

Focus group participants described the Dunes' physical landscape as one that is constantly changing, posing significant safety hazards to non-local ORV riders who are less familiar with the area. One participant described it in the following way: "Coming back like [name] was saying, [EMS] hasn't pulled a local off the Dunes in six years and there's a reason for that. It's because we know the area."

Participants expressed resentment toward visitors that were 'disrespectful' of the Dunes. They recalled multiple occasions where trash—including wooden pallets, nails and beer cans —were found in the sand at popular access sites or camping areas. Participants recalled that these instances were primarily non-local or out-of-state visitors who only visited a few days per year and expected that someone else would clean up for them. As resident articulated, "You're going to take care of your backyard first before somebody else's, which is out of county."

Existing recreationalists were wary of newcomers because they felt those people may not have the same respect for the Dunes. As one participant described: "I think what the

dunes and other recreation places are facing is the more that come in the higher percentage of people that are not going to take care of it.” They described “local” as populations from Madison and Fremont counties in Idaho, as well as a few long-time visitors who came from farther away.

Focus group participants expressed concern that greater government involvement in BLM management decisions would lead to an unacceptable level of rules and regulations at the Dunes. They feared that allowing government agencies to impose new developments would eventually grant those agencies full control over the area. Respondents frequently mentioned other popular recreation areas managed by federal agencies as an example of an over-regulated and over-managed recreation areas. They did not want the same to occur in the Dunes. As one participant explained:

I just think over-management is going to kill it. I really do. There's things that need to be managed, but I'm just afraid that they're just going to start making up more rules and it's the tip of the iceberg, and they'll just manage it to death and turn it into Yellowstone Park.

My respondents indicated that guided ORV tours at the Dunes would lead to changes in the local culture of the Dunes. Major concerns surrounding this type of development included the aforementioned issues with safety, displacement of local ORV riders, and limited access to recreation site. Over-management was also mentioned during discussions of different SRP options and developments within the Dune area, including vending, large events and competitive ORV events. Participants expressed concern that allowing these activities occur at the Dunes would lead to over-commercialization and continued development of the area to a point where it would be unacceptable for the local population. As one resident said:

That's the Pandora's Box I'm talking about. They are all intertwined. You start having a competitive event and all of a sudden these vendors want to join and services and it starts to grow and snowball and we don't recognize the little box of sand anymore because its overrun.

Focus group participants described what they saw as a communication disconnection between local residents and the large government bureaucracy characterizing BLM management. Participants felt local and regional BLM officials were managing the Dunes appropriately and were trustworthy. However, they felt the federal government in general is not reliable, and tends to dismiss opinions of the local community. It was because of this federal oversight that many participants felt local officials were tied and could not perform additional management at the Dunes. Most participants expressed negative emotions toward federal land management agencies. They felt the federal government at large did not care about the local residents, and frequently acted as though local perspectives were less important or credible to their management efforts. As mentioned by a local resident:

My problem with the BLM that I've always had and the Forest Service and Fish and Game need to remember that they are the stewards of our land, too. Many times they act like they own it and they need to sit down and listen to the people in the communities, and I don't care if its St. Anthony, or Salmon or Bumsquat, Egypt, because that's the peoples livelihoods right there and with the stoke of a pen they can do more damage that will take years to fix and usually it doesn't get fixed.

Participants stressed that local resident stakeholders should be at the forefront of management decisions. Many suggested creating a local group comprised of a wide range of stakeholders aimed at having open and inclusive dialogue about management goals at the Dunes. They described this group as including both locals and long-time visitors to the Dunes in order to reflect the perspectives of people who were invested in the recreation area.

It also would help support a more transparent management process and give local residents greater opportunity to better engage in management decisions. Participants suggested the group should convene annually to discuss local views concerning issues at the Dunes, management and potential development options. As one participant suggested:

I think it's a great idea for everyone to get together and have a round table about what's going on and continuing that a yearly basis or something where people get together and say, 'What's working? What's not working? How do we resolve these problems?' Not, 'We got 15 years of this garbage.'

Resident's desire to integrating local knowledge into new Dunes regulations was a highlight of many focus group discussions. They acknowledged the importance of local action to maintain their desired recreation conditions, as well as prevent future degradation of the area. As one local resident pointed out:

My point is we can see those bad circumstances so how do we prevent those? So then we can bring the problem to the table, but then our challenge is also to bring the solution to the table...the visitors are only here a couple times a year like you guys said. You were in the early days...visitors that come a couple times a year can't really do anything but use...so if we really do want to protect so that we have a clean, viable, good experience here, we need to take the problems and come up with the solutions. It's got to be up to us.

## **5. DISCUSSION: FACTORS INFLUENCING COMMUNITY MEMBERS**

The purpose of this research was to understand what factors influence rural community member support for commercial developments associated with an ORV recreation area. Fewer studies have been conducted that focus specifically on the ways that ORV recreation developments may be viewed by local residents. I was particularly interested in resident support for SRP options including vending, organized group activity or event use, competitive use and commercial use at the Dunes. I found there were conflicting feelings regarding future developments at the Dunes. The impact of potential developments on the local culture of current Dunes riders was an important influence on support for SRP permits, as was a fear that new permits would eventually lead to additional bureaucracy or regulation of recreation in the area. Finally, I found local residents were interested in developing new avenues for addressing their concerns and interests, and for those to be interwoven into the planning and decision making processes surrounding Dunes management. The following paragraphs explain how this study contributes to a larger literature on ORV tourism and recreation. I present management implications for ORV management at the Dunes in a subsequent section.

My participants felt additional developments at the Dunes may attract new recreationalists that do not share the same values for safety and comradery that are present among existing riders. That is, their consideration of new developments revolved around the ways developments might affect their recreational experience, and specifically the social aspects of that experience (e.g. shared safety norms, time with family and friends) that are often a noted in existing ORV literature (Baker et al., 2007; Budruk, et al., 2009; Hammitt, Backlund, & Bixler, 2006). This is similar to Smith and Krannich's (2000) observation that

rural residents may view newcomers as having different societal values than themselves. My research findings emphasize the importance of land managers researching how proposed developments may impact existing social aspects of the recreation experience when managing ORV recreation areas. This may be especially applicable in rural areas where community members are often highly attached to each other and the landscape (Huang & Stewart, 1996; McMillan & Chavis, 1986).

Future research could further examine the role of culture surrounding ORV recreation to provide a more holistic perspective on this fairly unexplored topic. Previous studies indicate a potential for ORV riders to develop unique rider cultures or identities that embody essential aspects of their riding habits and preferences (Manning, 2011). My findings support this by showing how residents' support for developments is highly influenced by their expectations of visitors to possess good riding habits and attitudes toward the local landscape and each other. Future studies should look at a variety of ORV-centered communities to see what the most important considerations are in terms of support for developments which could potentially alter the local culture. Processes for monitoring change in the social components of a recreation setting are common in recreation research, and future researchers could explore means to adapt these scales more specifically to ORV riders. Identifying unique cultural values held by ORV riders offers land managers an opportunity to communicate with riders on a more intimate level, maintain a sense of place among riders, and create individual management strategies for each community. The outcome these strategies may ultimately be more local support for, and ownership over, ongoing recreation management decisions (Mann & Leahy, 2009). My results support that overall conclusion.

Support for additional developments at the Dunes also was influenced by participants' fear that new SRPs would eventually lead to more regulation of recreation at the Dunes or the proliferation of higher-level agency bureaucracy. Existing literature frequently notes the long-standing conflicts between rural Westerners and federal government control of public lands (Krannich & Smith, 1998). I found a similar situation among our participants, though our results extend that work by demonstrating how uncertainty about the impacts of federal land developments may motivate some local populations to seek cautious development trajectories or reduced permit allocations. More specifically, participants viewed additional developments as attracting visitors who may be disrespectful and ignorant of the existing cultural rules at the Dunes. Developments might also open the door to greater federal control of the area. My focus group participants compared their existing recreation conditions, and especially managerial settings, to other recreation or ORV specific areas. For instance, participants described the Dunes as having minimal development compared to ORV-oriented BLM recreation areas, such as the Imperial Sand Dunes and Little Sahara Recreation Areas, and used those comparisons to argue for specific management strategies to maintain the Dunes area. As such, it is critical for managers to realize their management efforts are frequently compared to other areas, and that they can use these comparisons to address recreationalists' desired conditions as examples.

Previous literature acknowledges that distrust may pose a barrier to communication, cooperation and support for management decision-making between entities engaged in recreation management (Winter, Palucki, & Burkhardt, 1999). Mitigating these conflicts first means to understand the relationship between local residents and the Dunes area, as that relationship will provide land managers historical information about Dunes recreation



dynamics. It is important to note that a growing body of research recognizes how local knowledge can help make better-informed management decisions through citizen monitoring or increased adherence to any new regulations put in place (e.g. permit processes, closures) (Richardson & Long, 1991). Finally, working with local communities can help close communication gaps between two traditionally opposed entities, develop trust between the parties, and formulate travel management goals that better incorporate resident desires and Dunes management plan requirements. My results make it clear that the best means to build relationships between locals and the BLM will start with local or regional BLM officials, who are already respected among residents. Likewise, there may be opportunities to provide those local officials with additional decision-making power that would enable them to better interface with recreationalists on the management of the Dunes. I turn to the latter issue next.

My participants indicated that local residents would be interested in developing new avenues for integrating recreationalists' perspectives surrounding the planning and decision-making processes at the Dunes. Focus group participants had a strong sense of connection to the Dunes and view themselves as stewards of the land—it is duty the local's duty to protect the Dunes both environmentally and culturally. That connection can be utilized to help create collective norms surrounding support for management initiatives and informal standards for enacting less restrictive regulations, or they can lead to wariness about federal control of the area. As my results suggest, careful consideration of the ways that new permits or developments might affect existing recreation conditions, including perceived riding safety, the informal and respectful culture of riders at the Dunes are critical hinging points influencing the prevalence of the above outcomes. Perhaps more importantly, local people

want to be part of the process for implementing any new developments, including SRPs, at the Dunes.

Local residents in my sample wanted to ensure that all stakeholders—both local and non-local—were included in the any decision-making process surrounding future Dunes management. This finding expands ORV and recreation literature by demonstrating a case where local people overcome the often antagonistic relationship between local and extra-local recreationalists (Arlinghaus, 2005; Arnberger & Brandenburg, 2007; Stedman 2006). For instance, a predominant thread of the recreation literature outlines how conflicts can arise between two or more recreation or social groups with different values and recreation goals (Jacob & Schreyer, 1980). My study indicates that the Dunes community is aware of the potential conflicts between locals and visitors, but they still want accurate representation of all stakeholder views. Likewise, long-term visitors to the dunes and locals both indicated appreciation of the local culture surrounding the Dunes had the capacity to overcome these conflicts by promoting common values for safe riding and a respect for the unique character of the area. I return to this point in our management suggestions below.

One notable omission from my results includes the influence of economic benefits tied to recreation development or SRPs in the Dunes area. While there were sporadic mentions of the ways future Dunes development could provide jobs or money to local economies, most participants indicated this was of lesser concern than issues outlined in our results section above. For example, residents articulated the top priority of any commercial activity such as ORV tours should be safety, and not necessarily profit. I would suggest a few reasons for our finding that economic development was not a major influence on support for local regulations. To begin, the communities surrounding the Dunes do not rely solely on

ORV recreation to support the local economy. The area has long been a center for agriculture and cattle production, as is much of the western United States (Brehm, Eisenhauer, & Krannich, 2004). Amenity migration is less prevalent in the area and there are not many other recreational opportunities or public lands beyond the Dunes in the immediate region. Second, local residents in my sample stressed the importance of maintaining the well-being of area people and their rural character than additional developments that might generate revenue.

## **6. CONCLUSION: ADVANCING DUNES TRAVEL MANAGEMENT**

My findings help identify potential avenues for stakeholder involvement that could inform future development or permitting efforts at the Dunes. Both my analysis and the research participants suggest the creation of a Dunes advisory group to serve as an effective means to represent stakeholder views surrounding future management. That group could also provide an effective means to communicate to the broad range of stakeholders who care about recreation or management at the Dunes. Resource Advisory Councils (RAC) or Resource Advisory Committees have long been used by the BLM to better engage stakeholders in management processes surrounding recreation (Haight & Ginger, 2000; Olinger, 1998). However, such groups often serve larger areas. My results suggest there is support among Dunes users to form a smaller recreation RAC that would help steer ongoing travel management planning at the Dunes.

Identifying potential participants for any advisory group requires careful consideration. More specifically, it would be important to populate any group with a representative range of users, including local and non-local users. Fortunately, participants in my research were already supportive of including individuals from outside of the immediate area to ensure that all perspectives have an opportunity to be included in decisions. However, critical considerations would concern the relative proportion of users (e.g. riders, campers, horse riders) and local vs. non-local visitors on the advisory council to avoid consideration of bias by having disproportionate groups of stakeholders. Representatives of local communities and area businesses whose livelihood are heavily tied to ORV recreation are another consideration for advisory group membership.

Potential participants for the RAC could be identified through a number of processes, including local nomination by interested individuals or group discussion during informational meetings about Dunes management. Olinger (1998) points out that members of any advisory group should have a vested interest in the outcome of management decision, rather than a strong opinion on issues. Considering this, stakeholders should be gathered using avenues relevant to existing stakeholders of the Dunes. The voluntary nature of an RAC would allow stakeholders to identify themselves as willing to effectively engage in the committee's decisions. Advertisement and nomination of individuals could occur through the BLM webpage, with additional avenues through the Facebook page for local Dune riders (*St. Anthony Duners—home of the locals*), the UTV Invasion webpage, or large local ORV retailers such as Rexburg Motor Sports. Participants in our focus groups suggested nominees within the room for positions on a Dunes RAC, which indicates the willingness of locals to take action for their community. Early stakeholder meeting(s) would focus on identifying and outlining the overarching issues currently existing at the Dunes, as well as mutual goals of the RAC.

The OFM the BLM utilizes emphasizes the importance of local public involvement throughout management processes, which places a RAC within the future management framework at the Dunes (United States Bureau of Land Management Idaho Falls District, 1985). A RAC provides one viable avenue for locals to play an active role in the management process. It addresses a predominant concern among locals and recreationalists that they lack a “voice” in the management process. Additionally, an entity like a RAC could alleviate concerns about bureaucratic control of the Dunes because the locals are integrated into the planning process. Members of the RAC could serve as a conduit for the two-way

communication of ideas and feedback between the BLM and a variety of recreationalists. Existing literature stresses how such opportunities make the decision-making process more transparent, which can alleviate concerns about government overreach. Establishing a RAC-like entity for the Dunes is especially timely because the Dunes is currently revising and updating its travel management plan. Members of the RAC could serve as an ideal group to help refine management alternatives, select preferred management alternatives, or develop goals for future management actions.

While a RAC might be helpful for integrating local perspectives into management, it does less to address residents' concerns about potential impacts of development on local culture or current visitors' recreational experience. It is clear that Dunes users would like to see a measured and conservative testing of any recreational developments (e.g. expanded facilities, guiding permits) in the future. This implies a need for adaptive management, whereby managers and recreationalists would study the impact of developments on recreationalists' experience or benefits. We would suggest that utilization of the Limits of Acceptable Change (LAC) planning framework in Dunes management as an ideal way to move forward given recreationalists concerns and the state of the current travel management plan (McCool, 1994). The LAC process focuses on maintaining desired future resource and social conditions in protected areas. It uses collaborative methods to develop indicators and standards that serve as thresholds for management actions (Stankey, Cole, Lucas, Peterson, & Frissell, 1985). In the case of the Dunes, the introduction and scale of new developments such as vendors, guided permits, or SRP permits could serve as potential management alternatives. Indicators and standards could apply to elements of local Dunes culture and recreation opportunities current users want to maintain, including crowding, safety concerns,

and instances of degradation at the Dunes. Standards could be developed collaboratively among recreationalists or using the RAC described above. If standards are met, it would be a clear indication that thresholds for development had begun to negatively impact the recreational experience, and that continued use of new developments should be reconsidered or reduced.

The LAC is already noted as critical tool within the OFM and Visitor Use Management frameworks that currently guide BLM and inter-agency recreation management. It can help provide mutually-acceptable outcomes for all stakeholders, and gives structure and transparency to any recreation management decisions going forward at the Dunes (Ahn, Lee, & Shafer, 2000). More specifically, using an LAC process would provide a way for locals to include direct input from first-hand experiences at the Dunes and acquire baseline data for recreationalists' motivations, and desired conditions at the Dunes. It has the capacity to not only address recreationalists concerns about future development, but has the potential to make them partners in the continued collection of data that is necessary for the LAC and continued recreation management. Given the local population is primarily concerned with maintaining the comradery and safety at the Dunes inherent in local culture, early and inclusive involvement in processes such as the LAC will help ensure the local culture is integrated into the initial management recommendations.

Finally, my results suggest the local culture of the Dunes has the potential to be a powerful management tool in the future. That is, promotion of a Dunes culture among newcomers that celebrates etiquette, safety and stewardship of the recreation area can influence new visitors to adopt similar behaviors. Likewise, utilizing existing recreationalists as ambassadors for new users has the potential to expand and perpetuate that local culture in

a way that can help maintain the desired conditions of informality and friendliness that make the Dunes a place where people want to recreate. There are a number of programs or initiatives that could facilitate the promotion or growth of that local culture, including the organization of guided rides or orientation sessions to the Dunes led by longtime users or a PR campaign celebrating Dunes culture as a draw to the recreation area. For instance, the 2016 UTV Invasion at the Dunes invited riders to participate in the first informal “Intro to the Dunes” tour led by local riders. The purpose of the event was to explore the Dunes, test new machines and become familiar with the area (“2016 Idaho Dunes UTV Invasion”). The BLM and existing recreationalists could explore the expansion or formalization of these processes to further capitalize on existing social aspects of Dunes recreation.



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## Appendix A: University of Idaho International Review Board Approval

### University of Idaho

Office of Research Assurances  
Institutional Review Board  
875 Perimeter Drive, MS 3010  
Moscow ID 83844-3010  
Phone: 208-885-6162  
Fax: 208-885-5752  
[irb@uidaho.edu](mailto:irb@uidaho.edu)

To: Travis B Paveglio  
Cc: Catherine Hughes  
From: Jennifer Walker, IRB Coordinator  
Approval Date: February 28, 2017  
Title: Rural Residents' Attitudes Toward Commercial Recreation Development  
Project: 17-048  
Certified: Certified as exempt under category 2 at 45 CFR 46.101(b)(2).

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On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for the research project Rural Residents' Attitudes Toward Commercial Recreation Development has been certified as exempt under the category and reference number listed above.

This certification is valid only for the study protocol as it was submitted. Studies certified as Exempt are not subject to continuing review and this certification does not expire. However, if changes are made to the study protocol, you must submit the changes through [VERAS](#) for review before implementing the changes. Amendments may include but are not limited to, changes in study population, study personnel, study instruments, consent documents, recruitment materials, sites of research, etc. If you have any additional questions, please contact me through the VERAS messaging system by clicking the 'Reply' button.

As Principal Investigator, you are responsible for ensuring compliance with all applicable FERPA regulations, University of Idaho policies, state and federal regulations. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice. The Principal Investigator is responsible for ensuring that all study personnel have completed the online human subjects training requirement.

You are required to timely notify the IRB if any unanticipated or adverse events occur during the study, if you experience and increased risk to the participants, or if you have participants withdraw or register complaints about the study.