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Manager Perceptions of Issues and Actions for Off-Highway Vehicle Management on National Forests in California

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Contents

1	In Brief
3	Acknowledgments
5	Introduction
6	Methods
7	Results
7	Area Background Information
7	Level of Activity
7	Planning
9	Management Issues
14	Seasonality of Issues
14	Management Actions
19	Intersection of Management Issues and Actions
19	General Comments
19	Actions Used Most Often and Perceived as Most Effective
20	Discussion
22	Limitations
22	Summary
23	Future Research
24	References
27	Appendices
27	A. Survey Instrument
35	B. Natural Resource Issues and Management Actions
36	1: Soil Erosion or Trampling
45	2: Soil Erosion or Compaction
53	3: Litter or Trash on Roads or Trails
61	4: Litter or Trash at Trail Access Points
68	5: Vegetation Damage
75	6: Graffiti or Other Vandalism
83	7: Destruction/Defacing of Historic Resources
90	8: Harassment of Wildlife
95	9: Noise and Smoke
101	10: Reduction in Size of Habitat
106	11: Injuries or Death of Individual Members of a Species
111	12: Dust near Developed Campgrounds
117	C. Regulatory/Behavioral and Agency Issues and Management Actions
118	1: Four-Wheelers Going Off Established Roads or Trails.
127	2: OHVs Going Too Fast

136	3: Lack of Safetywear
143	4: Alcohol Use
149	5: Inexperienced Drivers in Difficult Terrain
155	6: Large Group of Four-Wheelers
161	7: Dangerous Drop-Offs, Mines, Etc.
166	8: Too Many People at Trail Access Points
172	9: Wilderness Trespass
177	10: Dangerous Driving Routes
182	11: Too Many Four-Wheelers on Roads or Trails
187	12: Lack of Safety Flags
192	13: Multiple Land Jurisdictions
197	14: Non-Manageable Wilderness Boundaries
202	15: Lack of Consistent Funding
207	D. Social Conflict Issues and Management Actions
208	1: Conflicts with Hikers or Backpackers on the Trails
213	2: Conflicts with Mountain Bikers on the Trails
218	3: Conflicts with People on Horseback on the Trails
223	4: Conflicts with Other Four-Wheelers on the Trails
228	5: Conflicts with Cattle on or near Roads or Trails
233	6: Conflicts with Skiers/Snowshoers
238	7: Conflicts with Owners of Private Land
243	8: OSV-OHV Conflicts
249	E. General Respondent Comments on OHV Use

In Brief...

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The Chief of the USDA Forest Service (USFS), Dale Bosworth recently identified four major issues facing National Forests: fire and fuel, invasive species, habitat fragmentation, and unmanaged recreation. Chief Bosworth cited off-highway vehicle (OHV) use as illustrative of unmanaged recreation. OHVs are motorized vehicles capable of traveling off-road year-round and include over-snow vehicles (OSVs).

OHV issues are complex and require research attention. Of particular interest are the perceptions of managers of OHV activity. They are most likely to understand the complex nature of OHV issues and to take the actions required for mitigating them.

A survey of 45 managers of OHV areas on National Forests in California was conducted. Identified through an internal USFS mailing list and National Forest Web sites, managers received questionnaires via email in advance of telephone interviews. Almost all of the respondents considered control of OHV use a forest management concern. Several expressed concern for erosion and other negative impacts on natural resources (for example, water quality). Some felt that OHV use could be managed successfully.

Size of OHV areas for which managers were responsible varied greatly. The areas had a median of 0 miles of paved road open to nonhighway legal OHV use, 275 miles of unpaved road open to nonhighway legal OHV use, 32 miles of paved road closed to nonhighway legal OHV use, and 36 miles of unpaved road closed to nonhighway legal OHV use. The median number of OHV riders annually for these areas was 20,050. Half of the respondents reported that most OHV use occurred during the summer. About one-third reported the presence of concessionaires or nearby businesses that rented OHVs for use in their area.

Almost all managers reported that their forest plan had provisions for OHV trails and opportunities and considered the differences in use according to season. About half reported that they had completed other surveys to show use patterns, documented impacts, or visitor impressions of OHV use.

Management issues were divided into those related to Natural Resources, Regulatory/Behavioral and Agency, and Social Conflict. Overall, OHV managers reported an average 7.49 issues observed or reported. For the top 10 most frequently named issues, 6 were Natural Resources issues (soil erosion/trampling, soil erosion/compaction, litter/trash on roads and trails, litter/trash at trail access points, vegetation damage, and graffiti or other vandalism). In the Regulatory/Behavioral and Agency classification the issues most frequently observed or reported among the top 10 were: four-wheelers going off established roads or trails, OHVs going too fast, lack of safetywear, and alcohol use. No item in the Social Conflict classification appeared in the top 10 issues nor were any reported by more than one-fifth of the respondents.

Managers did not frequently identify conflict between recreational users. When conflicts were named, they most often occurred between OHV riders and hikers/backpackers and between OHV riders and mountain bikers.

Management actions were categorized into those which indirectly impact recreation visitors, those which directly impact recreation visitors, resource hardening, and bridge-building/collaboration. Overall, OHV managers reported an average of 7.47 actions used. The most frequently named indirect actions were use of posters and signs, bulletin boards, user ethics, maps, and brochures. Direct actions were mainly law enforcement, but there was some reliance on closing or limiting use as well as relocating or designating OHV trails. The most frequently named resource-hardening actions were staging areas with parking facilities and use of artificial tread (e.g., geofabric with sand and gravel) and drain dips (reversal of grade). Bridge-building actions were mostly personal contacts, but also included volunteer patrols, local OHV club meetings, maintaining trails with local groups and volunteers, and adopt-a-trail programs. Actions identified most often overall were personal contacts (bridge building/collaboration), law enforcement (direct), and posters and signs (indirect).

Some of the same issues identified by Chief Bosworth and others were identified by the managers interviewed for this study; specifically, these were soil erosion and habitat destruction. Managers with these same problems can use the study results to determine what kinds of actions are being used in California and to evaluate the efficacy of the actions taken.

Unlike a national study of mountain bike management in which indirect actions were used most often, actions used most frequently by National Forest OHV managers in California were bridge-building/collaboration and direct. Of the bridge-building/collaboration actions, described as “used most often” and “most effective,” personal contacts dominated. There may be constraints to implementing personal

contacts, namely personnel, training, and the requisite funding. Next most frequent actions used were direct, such as law enforcement. These actions, too, may require substantial funding, personnel, and training.

This paper is intended to provide a practical reference for future research on OHV use on public lands and a source of ideas for Federal and State land managers nationally. Appendices provide information about specific actions USFS managers in California are taking to manage respective OHV problems and how effective they perceive these actions to be.

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Introduction

The Chief of the USDA Forest Service (USFS), Dale Bosworth, recently identified four major issues facing national forests: fire and fuel, invasive species, habitat fragmentation and unmanaged recreation (Bosworth 2003). On unmanaged recreation, Chief Bosworth said, “The issue is this: Back when we had light recreational use, we didn’t need to manage it; but now that it’s heavier, we do” (Bosworth 2003, p. 7). The Chief cited off-highway vehicle (OHV) use as illustrative of unmanaged recreation. OHVs are motorized vehicles capable of traveling cross-country and off-road year-round and include over-snow vehicles (OSVs). OHV use has grown exponentially in recent years (Cordell and others 2002) increasing the need for management of this activity on public lands.

There are several OHV management issues of concern, including unplanned roads and trails, soil erosion, water degradation, habitat destruction, the spread of invasive species, conflicts between different recreational user groups, damage to cultural sites, and violations of sites sacred to Native Americans (Bosworth 2003, Bowles 2001, Meyer 2002, Troyer 2003). Each of these issues is complex. For example, soil impacts commonly occur in this progression: abrasive loss of protecting surface vegetation and root mass, compaction and surface subsidence, hydraulic disruption, breakdown of soil structure, and soil particle erosion and deposition (Meyer 2002). Further, these problems can lead to surface erosion or surface failure. Another example of the complexity of issues is social conflict. Social conflict has been defined as goal interference attributed to others (Jacob and Schreyer 1980), a threat to a person or to their belongings (Keller 1990), perceived differences in lifestyles (Ramthun 1995), and perceived differences in style of enjoying the resource (Schuett and Hollenhorst 1994, Watson and others 1991). Further, conflict perceptions may vary according to experience (Chavez 1997) or activity orientation (Watson and others 1997) and are often asymmetrical (Hoger and Chavez 1998, Watson and others 1991).

Despite these complex issues, the USFS is committed to continued OHV use on public lands. Chief Bosworth said, “We want the American people to use their national forests and grasslands. It gives them a stake in the land. It gives them a sense of place. It helps them understand why we in the Forest Service are so passionate about the land—why we think it’s so worth protecting” (Bosworth 2003, p. 7).

Similarly, managers of the Bureau of Land Management’s (BLM) Imperial Sand Dunes in California recognize the positive aspects of OHV use. However, at the same time, they are dealing with some criminal behaviors, such as those reported in several newspapers that described holiday weekend OHV activity in 2001 that

resulted in two vehicular deaths, shootings, stabbings, and numerous assaults (Fisher 2001, Kendall 2001, McQuern 2001, Mitchell 2001, Renteria 2001, Simon 2001). Nevertheless, managers quoted in these articles also described OHV visitors as largely law-abiding and ‘family-oriented’ (Mitchell 2001, Renteria 2001).

Because OHV issues are complex, they require additional research attention. We focused on the perceptions of the managers of OHV activity for this study because they are most likely to understand the complex nature of OHV issues and to take the actions required for resolving or mitigating them. This study identifies the management issues associated with OHV use on National Forests in California and managers’ respective actions. The study is unique in that it identifies not only separate lists of issues and actions but also pairs the actions used to each issue.

Methods

This study was based on a previous investigation addressing issues and actions related to mountain biking on USFS lands (Chavez 1996b). The OHV managers were selected based on management of OHV areas on National Forest lands in California as initially identified by an internal USFS mailing list provided by the Pacific Southwest Region (Region 5; n = 60). Each potential respondent on the list was contacted in October 2003 to verify current management of an OHV area. Some names were removed from the original list and others added to achieve a pool of respondents with knowledge of current conditions. In cases where more than one respondent was responsible for a given area, respondents worked together to submit a single questionnaire (n = 38). Respondents represented 16 of the 18 National Forests in Region 5 plus the Humboldt-Toiyabe in the Intermountain Region (Region 4; a portion is in California). The initial study findings were of the original contacts (n = 38) (Chavez and Knap 2004). After this initial data collection was complete, it became clear that some areas in the state were not included in the study. Based on evidence of previously unreported OHV activity found on USFS Web sites, an additional nine contacts were made in spring 2004. These contacts yielded seven additional respondents. The full findings are reported in this research paper (n = 45).

To streamline the lengthy interview process, questionnaires were mailed electronically to managers in advance of the telephone interview. Managers were encouraged to prepare their responses in advance and to work together where appropriate. Interview length averaged approximately 40 minutes.

Managers were asked to identify OHV management issues from a predetermined list of 26 items. Nine more issues were added to the list by respondents in reply to an open-ended request for additional issues. The final list of 35 items included Natural Resource related issues, such as soil erosion or trampling;

issues concerned with Regulatory/Behavioral and Agency, such as alcohol use; and Social Conflict issues, including conflicts with other four-wheelers on the trails. A separate list of 60 actions used to solve management issues (41 predetermined plus 19 contributed by respondents) included indirect management actions (e.g., posters or signs), direct management actions (e.g., closing or limiting use), resource-hardening techniques (e.g., specifying maximum grades of trails), and bridge-building/collaboration actions (e.g., personal contacts). For each management issue identified from the first list, respondents were asked to select the actions they used to try to solve the issue from the second list. They were asked to identify which of the selected actions was “used most often” and which was “most effective” in solving each respective issue. They were also asked a series of National Forest background questions about their OHV area, such as the number of miles of paved and unpaved roads (both open and closed to OHV use) and the number of OHV riders annually (see appendix A for a copy of the survey instrument).

Results

Area Background Information

The individual OHV areas had a median of 0 miles of paved road open to nonhighway legal OHV use (range of 0 to 55 miles) and a median of 275 miles of unpaved road open to nonhighway legal OHV use (range of 0 to 3,000 miles). A median of 32 miles of paved road were closed to nonhighway legal OHV use (range of 0 to 250 miles), and a median of 36 miles of unpaved road were closed to nonhighway legal OHV use (ranged from 0 to 1,250 miles). Totals for forests are shown in *table 1*.

Level of Activity

The median number of OHV riders annually (i.e., number of riders times number of rides annually) for these areas was 20,050 (range of 162 to 300,000; *table 2*). Half of the respondents reported that most use occurred during the summer (50 percent); 21 percent reported more use during the winter, and 27 percent reported use to be equally distributed across seasons. About one-third (39 percent) reported the presence of concessionaires or nearby businesses that rented OHVs for use in their area. Of these, 65 percent offered only OSV use, while 29 percent rented vehicles year-round.

Planning

All but one manager (98 percent) reported that their forest plan had provisions for OHV trails and opportunities, and most (60 percent) also had forest plans that

Table 1—Miles of paved and unpaved road open and closed to OHV use by National Forest.

Forest	Number of miles of paved road open to OHV use (n = 42)	Number of miles of paved road closed to OHV use (n = 38)	Number of miles of unpaved road open to OHV use (n = 41)	Number of miles of unpaved road closed to OHV use (n = 39)
Angeles	0.00	5.00	291.00	194.00
Cleveland	0.00	55.00	35.50	202.00
Eldorado	19.50	299.00	2155.00	57.00
Humboldt-Toiyabe	0.00	0.00	700.00	200.00
Inyo	0.00	92.00	4465.00	0.00
Klamath	18.00	0.00	135.00	65.00
Lake Tahoe Basin	0.00	19.00	250.00	50.00
Lassen	9.00	0.00	1000.00	144.00
Los Padres	3.00	106.00	207.00	213.50
Mendocino	24.00	24.90	1219.00	426.00
Modoc	48.50	0.00	789.54	3.00
Plumas	0.00	250.00	3000.00	50.00
San Bernardino	0.00	no response	205.00	1250.00
Sequoia	5.50	198.00	868.00	470.00
Shasta-Trinity	12.00	160.00	120.00	0.00
Sierra	55.00	125.60	1564.00	184.70
Six Rivers	0.00	243.00	1538.00	671.00
Stanislaus	1.00	86.00	666.00	36.00

considered the differences in use according to season. About half (49 percent) had completed surveys to show use patterns, documented impacts, or visitor impressions of OHV use.

Almost all (91 percent) considered control of OHV use a forest resource management concern. In response to open-ended requests for comments, managers acknowledged increasing OHV use levels in their areas, and several expressed concern for erosion and other negative impacts caused by OHVs on natural resources, including water quality, wildlife, and aquatic vegetation as habitat. Others were concerned with the lack of regulations protecting natural resources and with increasing OHV entrance into designated wilderness. However, some felt that OHV use could be managed successfully and that it is the improper management of use that impacts negatively on the resource. OHV use was one of the top two forest

Table 2—Number of riders annually by National Forest.

Forest	Riders annually (number of riders times number of rides annually) (n = 38)
Angeles	131,965
Cleveland	30,500
Eldorado	121,000
Humboldt-Toiyabe	60,000
Inyo	108,000
Klamath	8,100
Lake Tahoe Basin	21,000
Lassen	5,200
Los Padres	354,162
Mendocino	128,798
Modoc	36,000
Plumas	130,000
San Bernardino	212,000
Sequoia	18,300
Shasta-Trinity	24,000
Sierra	37,884
Six Rivers	35,300
Stanislaus	192,000
Tahoe	120,100

management issues for 40 percent of respondents. Some respondents mentioned that while OHV management was an important issue, other issues such as fire and timber ranked higher. Almost all (91 percent) reported that USFS staff had observed or received reports of OHV use on closed roads or trails that exclude motorized vehicles.

Management Issues

All respondents were asked a series of questions about 26 issues related to OHV use. Overall, OHV managers reported an average of 7.49 (SD = 4.68) issues observed or reported. During the course of data collection, respondents added another nine issues. For each issue, we asked if they had observed or received reports of the issue. Management issues were divided into those related to Natural Resources (34 percent of the issues identified), Regulatory/Behavioral and Agency (43 percent of the issues identified), or Social Conflict (23 percent of the issues identified).

Natural Resources

The Natural Resource issues identified most frequently (n = 45) were soil erosion/trampling (73 percent), soil erosion/compaction (56 percent), litter/trash on roads or

trails (49 percent), litter/trash at trail access points (42 percent), vegetation damage (38 percent), and graffiti or other vandalism (36 percent; *table 3*). In addition to the 10 items provided, two Natural Resource issues were added by respondents: noise and smoke, and dust near developed campgrounds. If a respondent noted that they had observed or received reports of Natural Resource related issues, then they were also asked if the issue differed by season. Soil erosion/trampling, for example, was

Table 3—Natural resource management issues ranked by frequency observed or reported within category and seasonal differences (n = 45).

Management Issue: Natural Resources	Issue Observed/ Reported		Differ by Season		Differences by Season
	<i>n</i>	<i>percent</i>	<i>n</i>	<i>percent</i>	
Soil erosion/ trampling	33	73	24	73	about half summer (user-created trails) and half winter (when trails are wet)
Soil erosion/ compaction	25	56	14	56	most said summer (harder compaction); winter (wet)
Litter/trash on roads/ trails	22	49	10	45	most said summer; fall (hunting) and winter about even
Litter/trash at trail access points	19	42	4	21	summer (especially restrooms); fall (hunting); and spring/fall high-use seasons
Vegetation damage	17	38	10	59	year-round; slightly more said summer
Graffiti or other vandalism	16	36	7	44	most said summer
Destruction/defacing of historic resources	12	27	5	42	summer; and spring/fall high-use seasons
Harassment of wildlife	6	13	2	33	breeding season
Noise and smoke ¹	3	7	2	67	winter (snowmobiles); summer (dirt bikes)
Reduction in size of habitat	1	2	0	0	—
Injuries to or death of individual members of a species	1	2	0	0	—
Dust near developed campgrounds ¹	1	2	1	100	summer-only campgrounds

¹Issue contributed by respondent(s).

reported by 24 respondents (73 percent of those identifying this issue) to differ by season, with about half noting the issue was observed or reported more during summer (user-created trails) and half during winter (when trails are wet). Within the Natural Resource classification, several issues were most problematic during summer (e.g., soil erosion/compaction, graffiti or other vandalism, and dust near developed campgrounds), while the others were more problematic during breeding season (e.g., harassment of wildlife). Many were problematic during high-use seasons (e.g., litter or trash on roads or trails and destruction or defacing of historic resources).

Regulatory/Behavioral and Agency

The Regulatory/Behavioral and Agency issues are concerned with the violation of regulations by users, unsafe user behaviors, and the institutional behavior of public land management agencies. It may be helpful to think of Natural Resources issues as the consequences of Regulatory/Behavioral and Agency issues. For example, “four-wheelers going off established roads or trails” is a Regulatory/Behavioral and Agency issue while, one of the possible consequences, “vegetation damage,” is a Natural Resources issue. The Regulatory/Behavioral and Agency issues identified most frequently ($n = 45$) were four-wheelers going off established roads or trails (73 percent), OHVs going too fast (58 percent), lack of safetywear (51 percent), alcohol use (42 percent), and inexperienced drivers in difficult terrain (29 percent; *table 4*). In addition to the 11 items provided, respondents added 4 issues: wilderness trespass, multiple land jurisdictions, nonmanageable wilderness boundaries, and lack of consistent funding. If respondents noted they had observed or received reports of Regulatory/Behavioral and Agency issues, then they were also asked if the issue differed by season. Four-wheelers going off established roads or trails, for example, was reported by 17 respondents (52 percent of those identifying this issue) to differ by season, with most noting the issue was observed or reported more during the summer (due to lack of designated routes and off-trail use) and during fall (deer-hunting season). Some of the Regulatory/Behavioral and Agency issues were more problematic in summer (e.g., lack of safetywear and large groups of four-wheelers), and several were more problematic during winter (e.g., OHVs driving too fast, inexperienced drivers in difficult terrain, too many people at trail access points, and dangerous driving routes).

Social Conflict

The Social Conflict items describe negative interactions among visitors, often involving conflicts within and between user groups. About one-third (36 percent)

Table 4—Regulatory/Behavioral and Agency management issues ranked by frequency observed or reported within category and seasonal differences (n = 45).

Management Issue: Regulatory/ Behavioral and Agency	Issue Observed/ Reported		Differ by Season		Differences by Season
	<i>n</i>	<i>percent</i>	<i>n</i>	<i>percent</i>	
Four-wheelers going off established roads or trails	33	73	17	52	most said summer (lack of designated routes, off-trail); fall (deer season)
OHVs going too fast	26	58	7	27	most said winter (better traction and groomed trails = higher speeds); summer (especially near summer-only campgrounds)
Lack of safetywear	23	51	9	39	most said summer (helmets too hot; worn in winter for warmth)
Alcohol use	19	42	2	11	high-use seasons
Inexperienced drivers in difficult terrain	13	29	6	46	most said winter (more difficult terrain, unprepared)
Large group of four-wheelers	9	20	5	56	most said summer (larger groups, high-use)
Dangerous drop-offs/mines	8	18	3	38	winter (drop-offs); summer (mines)
Too many people at trail access points	6	13	3	50	winter (limited parking)
Wilderness trespass ¹	6	13	0	0	—
Dangerous driving routes	3	7	1	33	winter (avalanche conditions)
Too many four-wheelers on roads or trails	2	4	1	50	hunting season
Lack of safety flags	1	2	0	0	—
Multiple land jurisdictions ¹	1	2	0	0	—
Non-manageable wilderness boundaries ¹	1	2	0	0	—
Lack of consistent funding ¹	1	2	1	100	

¹ Issue contributed by respondent(s).

of respondents reported at least one issue in Social Conflict, while 65 percent of respondents reported no Social Conflict issues of any kind. Items in the Social Conflict classification neither appeared in the top 10 issues overall nor were any reported by more than one-fifth of the respondents. The Social Conflict issues identified most frequently ($n = 45$) were conflicts with hikers or backpackers on the trail (18 percent), mountain bikers on the trails (16 percent), and people on horseback on the trails (13 percent; *table 5*). In addition to the five items provided to all respondents, some respondents added three areas of conflict: conflicts with skiers or snowshoers, conflicts with owners of private lands, and OSV-OHV conflicts. If a respondent noted that they had observed or received reports of Social Conflict issues, then they were also asked if the issue differed by season. Some were most problematic during summer (e.g., with mountain bikers on the trails or people on horseback on the trails), winter (e.g., skiers/snowshoers), or spring (e.g., cattle on or near trails).

Table 5—Social Conflict management issues ranked by frequency observed or reported within category and seasonal differences ($n = 45$).

Management Issue: Social Conflict	Issue Observed/ Reported		Differ by Season		Differences by Season
	<i>n</i>	<i>percent</i>	<i>n</i>	<i>percent</i>	
Conflicts with hikers or backpackers on the trails	8	18	5	63	about half summer and half winter (skiers, snowshoers)
Conflicts with mountain bikers on the trails	7	16	5	71	most said summer (no mountain bike use in winter)
Conflicts with people on horseback on the trails	6	13	4	67	summer (very little equestrian use in winter)
Conflicts with other four-wheelers on the trails	2	4	0	0	
Conflicts with cattle on or near trails	2	4	2	100	spring (damage to trails, OHVs come up on cattle quickly)
Conflicts with skiers/snowshoers ¹	2	4	2	100	winter
Conflicts with owners of private lands ¹	1	2	1	100	winter (trespass, noise)
OSV-OHV conflicts ¹	1	2	0	0	—

¹Issue contributed by respondent(s).

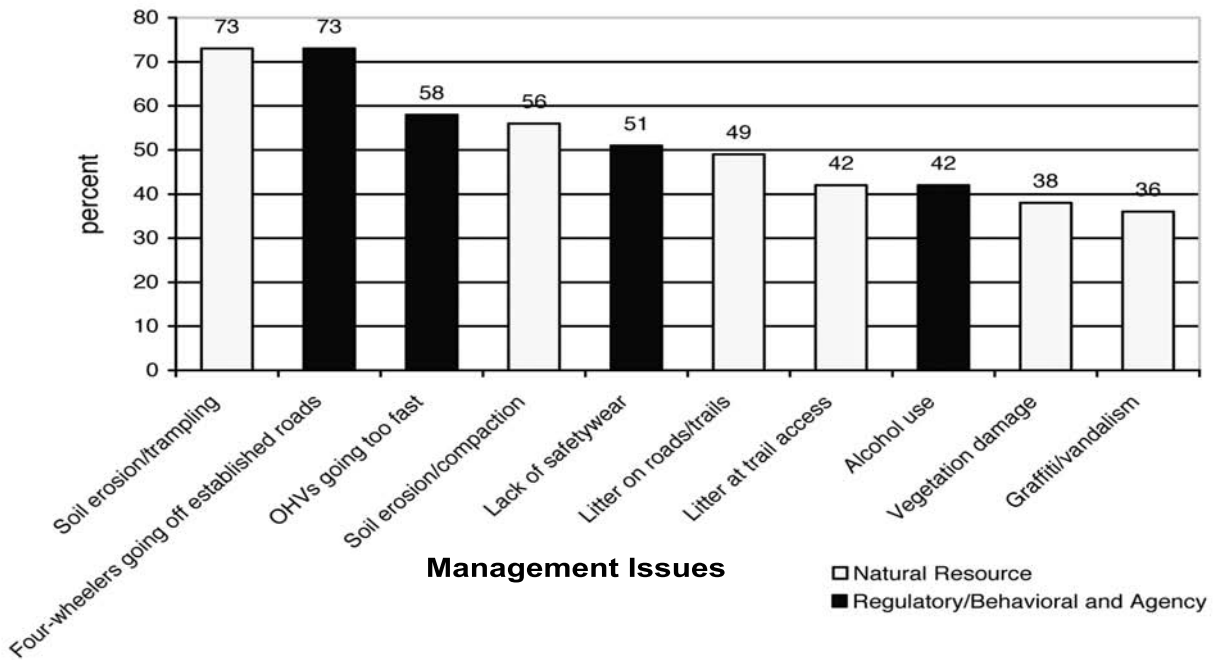


Figure 1—Top 10 management issues observed or reported, ranked by percent (n = 45).

Top Ten OHV Management Issues

When management issues are ranked by frequency observed by or reported to resource managers, those related to Natural Resources (e.g., soil erosion/trampling and soil erosion/compaction) and Regulatory/Behavioral and Agency (e.g., four-wheelers going off established roads or trails and OHVs going too fast) dominate the top 10

Seasonality of Issues

Seasonal differences in management issues that were identified by at least 25 percent of the respondents were ranked by percent reporting the issue (table 6; see appendices B through D).

Management Actions

The management actions are divided into those that indirectly impact recreation visitors, those that directly impact recreation visitors, resource-hardening, and bridge-building/collaboration (Chavez 1996a). Overall, OHV managers reported an average of 7.47 actions.

Table 6—Percentage reporting an issue and percentage identifying seasonal changes (n = 45).

Issue	Percentage reporting issue	Percentage of those reporting issue who identified a seasonal difference	
	percent	percent	n
Soil erosion/trampling	73	73	33
Four-wheelers going off trail	73	23	33
OHVs going too fast	58	27	26
Soil erosion/compaction	56	56	25
Lack of safetywear	51	39	23
Litter or trash on roads or trails	49	45	22
Alcohol use	42	11	19
Litter or trash at trail access points	42	21	19
Vegetation damage	38	59	17
Graffiti or other vandalism	36	44	16
Inexperienced drivers in difficult terrain	29	46	13
Destruction/defacing of historic resources	27	42	12

Indirect Actions

The most frequently named indirect actions across all management issues were posters or signs (69 percent), bulletin boards (50 percent), user ethics (45 percent), maps (43 percent), brochures (41 percent), etiquette (28 percent), other educational materials (26 percent), and trail use recommendations (25 percent; *table 7*). In addition to the 11 indirect actions asked of all respondents, some respondents added the following: additional or matching funds and manufacturers’ stickers on ATVs.

Direct Actions

The most frequently named direct action across all management issues was law enforcement (81 percent). Other direct actions were close or limit use (30 percent), relocate or designate OHV trails (20 percent), provisions for special use permits (18 percent), organized events to do trail maintenance (15 percent), and seasonal closures (13 percent; *table 8*). In addition to the 11 direct actions asked of all respondents, some respondents added the following: making repairs as soon as located, picking up litter, and voluntary sound tests.

Table 7—Indirect actions in rank order of frequency used by respondents across all management issues, within category (n = 336).

<i>Indirect Action</i>	<i>n</i>	<i>percent</i>
Posters or signs	231	69
Bulletin boards	168	50
User ethics	150	45
Maps	145	43
Brochures	139	41
Etiquette	94	28
Other educational materials	89	26
Trail use recommendations	85	25
Trail descriptions	59	18
Local newspaper article	54	16
Public service announcements	27	8
Additional/matching funding ¹	2	< 1
Manufacturers' stickers on ATVs ¹	1	< 1

¹Action added by respondent(s).

Table 8—Direct actions in rank order of frequency used by respondents across all management issues, within category (n = 336).

<i>Direct action</i>	<i>n</i>	<i>percent</i>
Law enforcement	271	81
Close or limit use	100	30
Relocate or designate OHV trails	66	20
Provisions for special use permits	61	18
Organized events to do trail maintenance	51	15
Seasonal closures	45	13
Non-issuance of outfitter/guide/event permits	26	8
Users ride in dispersed patterns	25	7
Separate trails	18	5
Separate user groups	13	4
Making repairs as soon as located ¹	13	4
Alternate between user groups	6	2
Picking up litter ¹	6	2
Voluntary sound tests ¹	2	< 1

¹Action added by respondent(s).

Table 9—Resource-hardening actions in rank order of frequency used by respondents across all management issues, within category (n = 336).

<i>Resource-hardening action</i>	<i>n</i>	<i>percent</i>
Staging areas with parking facilities	57	17
Artificial tread (e.g., geofabric with sand and gravel)	52	15
Drain dips (reversal of grade)	51	15
Designated campsites	29	9
Specification of a maximum grade on trails	27	8
Lengthened trails to disperse riders	20	6
Trail maintenance ¹	14	4
Barricades/barriers ¹	14	4
Trail design ¹	12	4
Various types of erosion control ¹	11	3
Flexible water bars	7	2
Restricting direction of events to one (i.e., either uphill or downhill) ¹	5	1
Rolling dips/dog bones ¹	2	< 1
Minimum grade on trails	1	< 1
Overflow parking and staging areas ¹	1	< 1
Specify minimum grade	1	< 1

¹Action added by respondent(s).

Resource-Hardening Actions

The most frequently named resource-hardening actions across all management issues were staging areas with parking facilities (17 percent), artificial tread (15 percent), drain dips (15 percent), designated campsites (9 percent), and specification of maximum grade on trails (8 percent; *table 9*). In addition to the eight resource-hardening actions asked of all respondents, some respondents added the following: trail maintenance, barricades or barriers, trail design, various types of erosion control, restricting direction of events to either uphill or downhill, rolling dips, and overflow parking and staging areas.

Bridge-Building/Collaboration Actions

The most frequently named bridge-building/collaboration action across all management issues was personal contacts (85 percent). Other bridge-building/collaboration actions were volunteer patrols (38 percent), local OHV club meetings (36 percent), maintain trail with local groups and volunteers (34 percent), adopt-a-trail programs (33 percent), partner with different groups (25 percent), and workshops (16 percent; *table 10*). In addition to the 11 bridge-building/collaboration actions asked of all respondents, some respondents added the following: joint clean-ups with other agencies, working with local law enforcement, mine safety evaluation form, help from regional office and state, and finding out from users and environmentalists where trails should be.

Table 10—*Bridge-building/collaboration* actions in rank order of frequency used by respondents across all management issues, within category (n = 336).

<i>Bridge-building/collaboration action</i>	<i>n</i>	<i>percent</i>
Personal contacts	285	85
Volunteer patrols	127	38
Local OHV club meetings	120	36
Maintain trail with local groups and volunteers	113	34
Adopt-a-trail program	111	33
Partner with different groups	84	25
Workshops	53	16
Meetings with state OHV groups	42	13
Partner with OHV shops	27	8
Committees with different groups	23	7
Education programs ¹	10	3
Trail safety evaluation form	8	2
Using OHV trail crews to maintain trails ¹	2	< 1
Joint clean-ups with other agencies ¹	1	< 1
Working with local law enforcement ¹	1	< 1
Mine safety evaluation form ¹	1	< 1
Help from regional office and state ¹	1	< 1
Finding out from users and environmentalists where trails should be ¹	1	< 1

¹Action added by respondent(s).

Top Ten Management Actions

The top 10 management actions used by respondents across all management issues were indirect (posters or signs, bulletin boards, user ethics, maps, and brochures), bridge-building/collaboration (personal contacts, volunteer patrols, local OHV club meetings, and maintain trails with local groups and volunteers), and direct (law enforcement).

Intersection of Management Issues and Actions

In appendix B we provide the intersection of Natural Resources issues and actions. For example, if soil erosion or trampling is an issue of concern, the Table of Contents cross-references this issue with the page number (in appendix B) that shows how many respondents have observed or received reports of soil erosion or trampling, the actions they used to mitigate this issue, actions used most often, actions perceived to be most effective, and information about how issues and actions related to soil erosion or trampling differ by season. Similarly, appendix C offers the intersection of Regulatory/Behavioral and Agency issues and actions, and appendix D offers the intersection of Social Conflict issues and actions.

General Comments

At the end of the interview we asked respondents if they had any other comments about OHV use. More than 50 comments can be found in appendix E. These are grouped into comments related to depreciative behavior, education, funding, land issues, law enforcement, limitations, maps, policy, politics, process, regulations, use levels, and other.

Actions Used Most Often and Perceived as Most Effective

Those action categories identified as “used most often” and “most effective” were examined for the five top-ranked management issues (named by 50 percent or more of respondents). For four of the top five management issues, actions belonging to the bridge-building/collaboration action category occurred most frequently and therefore ranked first or tied for first as “used most often,” and ranked first or tied for first in four of the five as “most effective” (*table 11*). Within the bridge-building/collaboration category, personal contacts is the specific action used most frequently. In one of the top five management issues (four-wheelers going off established roads or trails), the direct action category ranked first as “used most often.” For the soil erosion or trampling issue, the direct action category was tied for first as “used most often.” Direct actions ranked first (for lack of safetywear) or tied for

first (for OHVs going too fast) in two of the five top issues as “most effective” (*table 11*). Within the direct action category, law enforcement is the specific action used most frequently.

In evaluating all the issues, personal contacts, within the bridge-building/collaboration actions classification, were perceived as more effective for the following issues: soil erosion/trampling, soil erosion/compaction, litter on roads and trails, litter at trail access points, vegetation damage, graffiti or other vandalism, destruction/defacing of historic resources, noise and smoke, alcohol use, large groups of four-wheelers, dangerous drop-offs/mines, too many people at trail access points, wilderness trespass, conflicts with hikers and backpackers, conflicts with cattle on or near trails, and too many four-wheelers on roads and trails. Law enforcement (within the direct action classification) followed personal contacts in effectiveness. Law enforcement actions were perceived to be most effective for the categories of injury or death of individual members of a species, four-wheelers going off trail, and lack of safetywear. Resource-hardening actions, specifically drain dips (reversal of grade), was most effective for dust near developed campgrounds. Under the indirect actions classification, posters were perceived as most effective for inexperienced drivers in difficult terrain, dangerous driving routes, and conflicts with mountain bike riders; user ethics most effective for too many four-wheelers; education at campfires most effective for lack of safety flags; and local news most effective for nonmanageable wilderness boundaries (appendices B through D).

Managers were also asked if their actions differed by season. Management action changes by season were least often found for conflicts with other four-wheelers on the trails, lack of safety flags, reduction in the size of habitat, injuries or death of individual members of a species, conflicts with cattle on or near roads or trails, dangerous driving routes, too many four-wheelers on roads or trails, or harassment of wildlife. The most action differences by season were for soil erosion/trampling. In some cases managers used fewer actions in winter, and sometimes they used seasonal closures.

Discussion

OHV management issues of concern to Chief Bosworth and others (Bosworth 2003, Bowles 2001, Meyer 2002, Troyer 2003) were examined for National Forests in California. Some of those same issues were identified by the managers interviewed for this study; specifically, these were soil erosion and habitat destruction. Managers who experience these problems can use the study results to determine what kinds of actions are being used in California and to evaluate the efficacy of the actions taken.

Table 11—Management issues named by 50 percent or more respondents and ranked by frequency; actions ranked by percentage within category identified as “used most often” and “most effective.”

Soil erosion or trampling ¹		Four-wheelers going off established roads or trails ²		OHVs going too fast ²		Soil erosion or compaction ¹		Lack of safetywear ²	
<i>most often</i>	<i>most effective</i>	<i>most often</i>	<i>most effective</i>	<i>most often</i>	<i>most effective</i>	<i>most often</i>	<i>most effective</i>	<i>most often</i>	<i>most effective</i>
Bridge-building ^{3,4}	Bridge-building	Direct	Bridge-building	Bridge-building	Bridge-building ⁴	Bridge-building	Bridge-building	Bridge-building ⁴	Direct
Direct ⁴	Direct	Bridge-building ⁴	Direct	Direct	Direct ⁴	Direct	Direct	Indirect ⁴	Bridge-building
Resource-hardening	Resource-hardening	Indirect ⁴	Indirect	Indirect	Indirect	Indirect	Resource-hardening	Direct	Indirect
Indirect	Indirect	Resource-hardening	Resource-hardening	Resource-hardening	Resource-hardening	Resource-hardening	Indirect	—	—

¹ Natural Resource-related management issues.

² Regulatory/Behavioral and Agency management issues.

³ Bridge-building=Bridge-building/collaboration.

⁴ Tied ranks.

Almost all of the respondents considered control of OHV use a forest management concern. Several expressed concern for erosion and other negative impacts on natural resources, including water quality and wildlife impacts. Some felt that OHV use could be managed successfully to mitigate these impacts.

There was a large array of issues faced by OHV managers in California. They were categorized as those related to Natural Resources, Regulatory/Behavioral and Agency, and Social Conflict. There was at least one manager in the state (and more typically, several managers), who responded to each of the 26 issues we inquired about, and another nine issues were added by at least one manager (in some cases up to six managers added the same item).

Management issues identified as faced by at least half the OHV managers on National Forests in California were soil erosion/trampling, four-wheelers going off road, OHVs going too fast, soil erosion/compaction, and lack of safetywear. Two of these were Natural Resource issues, and three were Regulatory/Behavioral and Agency issues.

The managers did not identify Social Conflict or conflict between recreational users at high levels of frequency. Some conflicts were evident (mostly between OHV riders and hikers and backpackers and between OHV riders and mountain bike riders). Although no single social conflict was identified by a large number of

managers, there were at least two managers in the state who reported all five Social Conflict issues, and another three Social Conflict issues were added by at least one manager. Current management of the OHV program may be keeping these incidents to a minimum.

Although California is a state with a high number of threatened and endangered species, only one manager reported injuries to or a death of individual members of a species, and only one reported reduction in the size of habitat. Perhaps current management of the OHV program has achieved a measure of success in the reduction of injuries to and deaths of threatened and endangered species.

Several OHV management issues were thought to differ by season. This suggests that OHV managers have issues to handle year-round, though some may be more problematic at particular times of the year. This may indicate more funding is required to run the program at particular times of the year for some programs, while other programs may require year-round attention and funding.

Limitations

Limitations of the study stem from difficulties in identifying all members of the study population, namely persons responsible for managing OHV areas on California National Forests. Our goal was not to survey all OHV managers, but to represent all OHV areas within the geographical confines of the state.

OHV areas are not organized according to Ranger District. They often bridge Ranger Districts, and sometimes management responsibilities within those Districts are further divided into OHV and OSV. Therefore, managers and their respective contact information such as telephone numbers and email addresses cannot be identified according to the ranger district organizational structure. Furthermore, because USFS personnel responsible for OHV management hold a variety of positions and titles, requests for participation in the survey cannot simply be directed to whomever holds a given position on a National Forest. As stated in the Methods section of this report, potential respondents were contacted based on an existing internal USFS mailing list and National Forest Web sites. Although this approach was a good beginning, it was far from complete in terms of reaching the goal of geographic coverage of the entire state.

Summary

This study identified various actions that have been used to address or mitigate Natural Resources, Regulatory/Behavioral and Agency, and Social Conflict issues. Management actions to address those issues included actions within four categories: indirect actions (such as posters or signs, bulletin boards, user ethics, maps,

and brochures), direct actions (such as law enforcement, close or limit use, and relocating or designating OHV trails), resource-hardening actions (such as staging areas with parking facilities, artificial tread, and drain dips), and bridge-building/collaboration (such as personal contacts, volunteer patrols, local OHV club meetings, maintain trails with local groups and volunteers, and adopt-a-trail programs).

Unlike a national study of mountain bike management where indirect actions were used most often (Chavez 1996a, b), actions used most frequently by National Forest OHV managers in California were bridge-building/collaboration (especially personal contacts) and direct actions (especially law enforcement). Of the bridge-building/collaboration actions described as “used most often” and “most effective,” personal contacts dominated. Next most frequent actions were direct, such as law enforcement. Implementing personal contacts and law enforcement actions may be constrained by the need for substantial increases in time, personnel, and training, all of which imply increases in funding.

Sometimes the action thought to be most effective was not the one used most often. When the action used most often does not match the one thought to be most effective, then managers should consider refocusing their resources to the effective actions.

Overall, it appears that OHV managers have many issues to handle, which may change seasonally, and they have implemented many actions to mitigate these issues, again sometimes having to switch actions seasonally. Clearly, OHV management in California is complex. These data further suggest that there is often congruence between the action taken and the one perceived to be most effective.

There is reason to be concerned about OHV management on National Forests in California because of the large number of issues that occur within the state. But there is also reason to commend the managers of these programs for the many actions they have taken to mitigate these issues.

Future Research

Additional research studies are needed. An expansion of this study at a national level would further address USFS Chief Bosworth’s concerns about OHV use. Other research topics might include the value of volunteer patrols and partnerships for reducing conflict or resource damage, and trail construction guidelines to alleviate resource damage. More research into bridge-building/collaboration successes would be quite useful, as would studies of communication techniques.

The resource managers in the study were each asked specifically about 26 issues and 41 actions, and each respondent had an opportunity to react to those items. Another 9 issues and 19 actions were identified by respondents during the course

of the study. It may be that these issues are larger in importance than they appear in this report. In other words, if each respondent was asked about these additional 9 issues in a comparable way to the original 26, then we might find them to be more problematic than found in the current study. In addition, some actions may be under-represented in the study because they, too, were unavailable to all respondents. We suggest the entire list of issues and actions identified here be included in future studies.

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Appendix A—Survey Instrument

Off-Highway Vehicle (OHV) Use Within The Forest Service

Ranger District _____ Region _____
 Contact _____ Date _____

The first few questions are about OHV use in general. OHVs are a group of motor vehicles that are designed to be capable of operating off of highways, streets, and roads designed and maintained for passenger vehicle use. OHVs may be street legal (e.g., four-wheel drive trucks, sport utility vehicles, and dual-sport motorcycles) or non-street-legal (e.g., enduro type motorcycles, all-terrain vehicles, and sand rails).

1. Do you have OHV activity within your Ranger District? _____ YES
 _____ NO (STOP INTERVIEW)
- 1a. What is the current estimated number of OHV riders annually? _____ # RIDERS
 *If one person rides 10 times a year, count that as 10.
- 1b. Are there more riders in the summer, winter, or about the same? _____ S _____ W _____ SAME
2. Have you received any requests to use OHVs on closed roads or trails that exclude motorized vehicles? _____ YES _____ NO
- 2a. In the past year, approximately how many requests have you received? _____ # CLOSED RD REQUESTS
3. Have you received any requests to use OHVs within wilderness? _____ YES _____ NO
- 3a. In the past year, approximately how many requests have you received? _____ # WILDERNESS REQ.
- 3b. Have you received more requests in the summer, winter, or the same? _____ S _____ W _____ SAME
4. Have you received any requests for races or rallies? _____ YES _____ NO
- 4a. In the past year, approximately how many requests have you received? _____ # RACE/RALLY REQ.

5. Have you encountered problems with commercially advertised or sponsored OHV tours coming to the District without permits? _____ YES _____ NO
6. Do you have concessionaires or nearby businesses that rent OHVs for use on the District? _____ YES _____ NO
- 6a. Do the concessionaires operate only in the summer, the winter, or year-round? _____ S _____ W
_____ YEAR-ROUND
- 6b. Approximately how many are on the District? _____ # CONCESSIONAIRES
- 6c. How many are nearby? _____ # NEARBY
7. Does your forest plan have provisions for OHV trails or opportunities? _____ YES _____ NO
- 7a. Does the forest plan consider differences in use according to season? _____ YES _____ NO
8. Do you consider control of OHV use a forest resource management concern? _____ YES _____ NO
- 8a. Why or why not?
9. Is the management of OHV use one of the top two issues on your district? _____ YES _____ NO
10. Has your staff observed or received reports of OHV use on closed roads or trails that exclude motorized vehicles? _____ YES _____ NO
- 10a. In the past year, approximately how many vehicles have been observed or reported on these roads? _____ # ON CLOSED ROADS
- 10b. Have more vehicles been observed or reported on these roads in the summer, winter, or about the same? _____ S _____ W _____ SAME
11. Have you completed any surveys to show use patterns, documented impacts, or to reflect visitor feelings on OHV use? _____ YES _____ NO

Now I have a few questions about management problems related to OHV use. As I read each problem, please tell me which ones you have observed or received reports of and if they differ by season.

12. (1) _____ destruction/defacing of historic resources Differ by season? How?
- (2) _____ soil erosion or trampling Differ by season? How?
- (3) _____ litter or trash on roads or trails Differ by season? How?
- (4) _____ graffiti or other vandalism Differ by season? How?
- (5) _____ litter or trash at trail access points Differ by season? How?
- (6) _____ conflicts with other four-wheelers on the trails Differ by season? How?
- (7) _____ conflicts with people on horse-back on the trails Differ by season? How?
- (8) _____ conflicts with cattle on or near roads or trails Differ by season? How?
- (9) _____ conflicts with mountain bikers on the trails Differ by season? How?
- (10) _____ conflicts with hikers or back-packers on the trails Differ by season? How?
- (11) _____ dangerous driving routes Differ by season? How?
- (12) _____ OHVs going too fast Differ by season? How?
- (13) _____ alcohol use Differ by season? How?
- (14) _____ large group of four-wheelers Differ by season? How?
- (15) _____ dangerous drop-offs, mines, etc. Differ by season? How?
- (16) _____ four-wheelers going off established roads or trails Differ by season? How?
- (17) _____ inexperienced drivers in difficult terrain Differ by season? How?
- (18) _____ too many people at trail access points Differ by season? How?
- (19) _____ too many four-wheelers on roads or trails Differ by season? How?
- (20) _____ lack of safety flags Differ by season? How?
- (21) _____ lack of safety wear (such as helmets, etc.) Differ by season? How?

- (22) soil erosion or compaction Differ by season? How?
- (23) harassment of wildlife Differ by season? How?
- (24) vegetation damage (either food source or cover) Differ by season? How?
- (25) reduction in size of habitat Differ by season? How?
- (26) injuries to or death of individual members of a species Differ by season? How?
- (27-29) Are there any problems related to OHV use that you have observed or received reports of that I did not mention? YES NO

13. OK, now for each management problem related to OHV use that you named, tell me which strategies from the list of strategies provided that you use to prevent that problem. (Go through strategies list for EACH problem identified.)

Strategy Sheet for (write name of problem)

For preventing this problem, which of the following strategies do you use?

- posters or signs maps
- brochures public service announcements
- other educational materials local newspaper articles
- user ethics bulletin boards
- etiquette trail descriptions
- trail use recommendations

- close or limit use provisions for special use permits
- non-issuance of outfitter, guide, or event permits law enforcement
- organized events to do trail maintenance users ride in dispersed patterns
- relocate or designate OHV trails separate trails
- seasonal closures separate user group
- alternate between user groups

_____ Do you specify a maximum grade on trails? (If yes,) What percent would that be? _____%

_____ artificial tread (e.g., geo fabric with sand and gravel, concrete blocks)

_____ How about a minimum grade? (If yes,) What percent? _____%

_____ lengthened trails to disperse riders

_____ drain dips (meaning a reversal of grade)

_____ staging areas with parking facilities

_____ flexible water bars

_____ designated campsites

- _____ personal contacts
- _____ local OHV club meetings
- _____ meetings with state OHV groups
- _____ adopt-a-trail program
- _____ trail safety evaluation form
- _____ partner with different groups
- _____ volunteer patrols
- _____ partner with OHV shops
- _____ workshops
- _____ committees with different groups
- _____ maintain trail with local groups and volunteers

14. Are there strategies you use to prevent this problem that I didn't mention? _____ YES _____ NO

14a. Do the strategies you use to prevent this problem differ by season? _____ YES _____ NO

14b. How?

14c. Of all the strategies you use to prevent this problem, which is the one strategy you use most often?

14d. Of all the strategies you use to prevent this problem, which is the one strategy you think is most effective? Why?

This last set of questions is background information on your District. Please tell me the approximate number of miles of each of the following that are on your District.

15. How many miles of paved road open to non-highway legal OHV use? _____ miles

16. How many miles of paved road closed to non-highway legal OHV use? _____ miles

17. How many miles of unpaved road open to non-highway legal OHV use? _____ miles
18. How many miles of unpaved road closed to non-highway legal OHV use? _____ miles
19. How many miles of hiking trails (overall)? _____ miles
20. How many miles of hiking trails open to non-highway legal OHV use? _____ miles
21. Do you have designated wilderness on your District? Yes or no? _____ YES _____ NO
22. How many acres of wilderness do you have? _____ acres
23. Are there any other comments you would like to make about OHV use on your District?

We're finished! Thanks for all your time and effort.

Would you like a copy of the report that will be written using the information from this survey?

If YES, record mailing address.

For questions or additional information: Dr. Debbie Chavez: (909) 680-1558, or e-mail dchavez@fs.fed.us

Appendix B—Natural Resource Issues and Management Actions

Introduction Appendices B through D

This appendix provides information about what selected managers in California are using and the actions they perceive to be the most effective. It does not necessarily suggest these are the only actions that could be used, nor does it necessarily identify the most effective action for the particular issue. Also, note the very small numbers of responses for many of the actions. These small numbers severely restrict the generalizability of the results.

In *appendix B* we provide the intersection of Natural Resources issues and actions. For example, if soil erosion or trampling is an issue of concern, the Table of Contents cross-references this issue with the page number (in *appendix B*) that shows how many respondents have observed or received reports of soil erosion or trampling, the actions they used to mitigate this issue, actions used most often, actions perceived to be most effective, and information about how issues and actions related to soil erosion or trampling differ by season. Similarly, *appendix C* offers the intersection of Regulatory/Behavioral and Agency issues and actions, and *appendix D* offers the intersection of Social Conflict issues and actions.

Actions added by respondents, and therefore not available for selection by all respondents, are marked with an asterisk (*).

1: Soil Erosion or Trampling

There were 33 respondents (73 percent of the sample) who said they observed or received reports of this management issue. Of these, 24 indicated that the issue differed by season. In summer, for example, changes were in user-created trails or off-trail and streamside impacts. Winter changes caused by wet and muddy ground were also reported.

The most frequently named *indirect* actions were posters or signs, maps, bulletin boards, and brochures. The most frequently named *direct* actions were law enforcement, close or limit use, and relocate or designate OHV trails. The most frequently named *resource-hardening* actions were drain dips (meaning a reversal of grade) and artificial tread. The most frequently named *bridge-building/collaboration* actions were personal contacts and maintaining trails with local groups and volunteers. The actions used most often and seen as most effective were *bridge-building/collaboration* (mostly personal contacts) and *direct* (mostly law enforcement). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Talking to someone is better than leaving a note on an information board (won't get read). Message gets across better.
- Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources.
- You can post signs and talk all you want, but change really happens when the tickets start getting written.

Half of the respondents reporting this issue said the action they used changed seasonally. Most of these said the change occurred in the summer.

**Soil Erosion or Trampling
Issue Observed or Reports Received**

Number of respondents	Percent	
33	73.3	respondents observed or received reports of this management issue
12	26.7	respondents <i>did not</i> observe or receive reports of this management issue
(n = 31)		
24	77.4	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
6	19.4	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	3.2	of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Fall hunt season—more
- ◇ In summer—user-created trails. In winter—wet/muddy.
- ◇ More in summer (2)
- ◇ More in winter (wetter)
- ◇ More in winter because it's wetter
- ◇ Spring to snow—have it
- ◇ Spring–Fall are high-use seasons, so most of problems are related to the number of people
- ◇ Summer low season-low moisture-depend upon water
- ◇ Summer more
- ◇ Summer mostly, hard to do in winter
- ◇ Summer only (2)
- ◇ Summer users
- ◇ Summer: off-trail and streamside impacts. Winter—spring: meadow mud slops
- ◇ Summer-only problem
- ◇ Summer—powdering-out of roads/going across meadows
- ◇ Thunderstorms
- ◇ Wet soils—less erosion. When dry on steeper slopes—worse.
- ◇ Wet weather closures—more problems in winter when wet
- ◇ Winter involves more vegetation damage—summer more soil erosion
- ◇ Winter is worse.
- ◇ Winter—closure for POC protection
- ◇ Winter—more

**Soil Erosion or Trampling
Actions Used**

<i>Indirect actions used by those reporting soil erosion or trampling</i>						(n = 33)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
23	69.7	posters or signs	17	51.5	maps	
16	48.5	brochures	2	6.1	public service announcements	
9	27.3	other educational materials	2	6.1	local newspaper articles	
12	36.4	user ethics	17	51.5	bulletin boards	
9	27.3	etiquette	7	21.2	trail descriptions	
0	0	manufacturers' stickers on ATVs*	9	27.3	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting soil erosion or trampling</i>						(n = 33)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
16	48.5	close or limit use	6	18.2	provisions for special use permits	
6	18.2	non-issuance of outfitter, guide, or event permits	27	81.8	law enforcement	
10	30.3	organized events to do trail maintenance	3	9.1	users ride in dispersed patterns	
15	45.5	relocate or designate OHV trails	1	3.0	separate trails	
8	24.2	seasonal closures	1	3.0	separate user groups	
1	3.0	make repairs as soon as located*	1	3.0	alternate between user groups	
0	0	pick up litter*	1	3.0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting soil erosion or trampling						(n = 33)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
9	27.3	Specify a maximum grade on trails	12	36.4	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)	
0	0	Specify a <u>minimum</u> grade What percent? mean = 13.1429 SD = 2.41030	3	9.1	lengthened trails to disperse riders	
14	42.4	drain dips (meaning a reversal of grade)	8	24.2	staging areas with parking facilities	
3	9.1	flexible water bars	6	18.2	designated campsites	
1	3.0	for events, restricted to one direction (e.g., uphill or downhill)*	3	9.1	barricades, barriers*	
2	6.1	trail design: limit long straightaways/ use all single track/	3	9.1	general trail maintenance use natural obstacles* including consistent, mechanized & 3-year plan*	
1	3.0	rolling dips, dog bones*	0	0	overflow parking and staging areas*	
1	3.0	various types of erosion control*				

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting soil erosion or trampling (n = 33)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
27	81.8	personal contacts	10	30.3	partner with different groups
15	45.5	local OHV club meetings	13	39.4	volunteer patrols
5	15.2	meetings with state OHV groups	2	6.1	partner with OHV shops
15	45.5	adopt-a-trail program	6	18.2	workshops
0	0	trail safety evaluation form	2	6.1	committees with different groups
0	0	education, including camp-fire programs*	18	54.5	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	work with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Soil Erosion or Trampling
Actions Reported Used Most Often**

Actions reported “used most often” (n = 31)		
Number of respondents reporting action “used most often”	Percent reporting “used most often”	Action
7	22.6	personal contacts
5	16.1	posters or signs
4	12.9	law enforcement
3	9.7	general trail maintenance
2	6.5	drain dips
2	6.5	close or limit use
2	6.5	maintain trail with local groups and volunteers
1	3.2	non-issuance of permits
1	3.2	organized events to do trail maintenance
1	3.2	relocate or designate OHV trails
1	3.2	barricades, barriers
1	3.2	use OHV trail crews to maintain trails
1	3.2	trail design

Soil Erosion or Trampling
Actions Reported Most Effective (continued)

Actions reported “most effective”				(n = 32)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
11	34.4	personal contacts	<ul style="list-style-type: none"> ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ Dialog between user and us important. Give them “a why.” Explain to them. ◇ Explain regs. and then use law enforcement ◇ Gets their attention. ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ One-to-one contact gets message across better. ◇ Personal contacts with users is important—club contacts help too. ◇ Talking to someone is better than leaving a note on info board (won’t get read). Message gets across better. ◇ Users see us out there; it establishes a presence. Give them information to make the right choice because they want to do the right thing. ◇ With volunteers (peers) and done at the time of the problem. ◇ No response (1) 	
6	18.8	law enforcement	<ul style="list-style-type: none"> ◇ 95 percent of this unit’s OHV is on existing admin. roads—little to no problems if OHVs stay on routes—fencing for minor off-road activities. ◇ Because there are direct consequences for the violator that don’t negatively affect responsible users. ◇ People need a consequence for doing something they shouldn’t do. ◇ They seem to listen closer to LEO. ◇ You can post signs and talk all you want, but change really happens when the tickets start getting written. ◇ no response (1) 	

**Soil Erosion or Trampling
Actions Reported Most Effective (continued)**

Actions reported “most effective”				(n = 32)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
3	9.4	drain dips	<ul style="list-style-type: none"> ◇ Been proven to work. ◇ Last longer. ◇ Removes water from trail. 	
3	9.4	posters or signs	<ul style="list-style-type: none"> ◇ Better way to educate—display signs at trailheads. It’s a way to educate at the meeting point. ◇ Designated routes with lots of signs and monitoring...the paradigm on the [name of forest] is closed unless designated open... this is the most effective way to provide the use and keep it concentrated. ◇ Keeps people in the right area, affordable 	
2	6.3	general trail maintenance	<ul style="list-style-type: none"> ◇ Because consistent annual mechanized trail maintenance keeps on top of the problem, facilitates drainage. Without it, gullying and “rilling” occur [rilling = furrows begin to make channels]. ◇ Keeping trails maintained makes it no longer an issue. 	
1	3.1	close or limit use	<ul style="list-style-type: none"> ◇ Something user groups understand (i.e., closures)—no funding to use other strategies. 	
1	3.1	non-issuance of permits	<ul style="list-style-type: none"> ◇ Permits have more intense impact—if worried, we don’t issue them a permit. 	
1	3.1	relocate or designate OHV trails	<ul style="list-style-type: none"> ◇ Relocate trails to lower grade—a long-term solution. Then erosion becomes a minimal problem. 	
1	3.1	maintain trail with local groups and volunteers	<ul style="list-style-type: none"> ◇ Wouldn’t get stuff done without volunteers. 	
1	3.1	barricades, barriers	<ul style="list-style-type: none"> ◇ Barriers “last forever”; can’t be cut. 	
1	3.1	use OHV trail crews to maintain trails	<ul style="list-style-type: none"> ◇ Trail machine moves dirt more efficiently. Take care of all trail things before they get really bad. 	

**Soil Erosion or Trampling
Actions Reported Most Effective (continued)**

Actions reported “most effective”				(n = 32)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
1	3.1	trail design	◇ Someone once said, there are no bad users, only bad trails... This has proven to be true in many trail studies on erosional impacts from various users.	

**Soil Erosion or Trampling
Seasonal Differences of Actions**

(n = 32)

Number of respondents	Percent of respondents	Seasonal nature of actions
16	50.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
16	50.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Different types of use during different seasons. Winter-snow (problem not as critical at that time). Use fewer strategies.
- ◇ Don't get too many volunteers in the heat of summer or rain.
- ◇ During hunting season—do more law enforcement (expand)
- ◇ Erosion occurs during winter, soil saturation. Erosion increases the problem.
- ◇ Hunting seasons
- ◇ In the winter we enforce seasonal closures and allow snowmobile use when cover is adequate.
- ◇ Message to public/talking points change with season. Different resources of concern change with season.
- ◇ N/A in winter
- ◇ Only winter—maintenance of trails
- ◇ Summer issue
- ◇ Summer only
- ◇ Thunderstorms create big problems (summer).
- ◇ We have limited staff in winter with little to no field presence.
- ◇ Wet weather closures
- ◇ Winter and summer differ—roads closed in summer are open in winter.
- ◇ Winter closures are used.

2: Soil Erosion or Compaction

There were 25 respondents (56 percent of the sample) who said they observed or received reports of this management issue. Of these, 14 indicated that the issue differed by season. In summer, for example, changes were in user-created trails, or off-trail and streamside impacts. Winter changes caused by wet and muddy soil were also reported.

The most frequently named *indirect* actions were posters or signs, brochures, and bulletin boards. The most frequently named *direct* actions were law enforcement and close or limit use. The most frequently named *resource-hardening* actions were drain dips (meaning a reversal of grade) and artificial tread. The most frequently named *bridge-building/collaboration* actions were personal contacts and maintaining trails with local groups and volunteers. The actions used most often were *bridge-building/collaboration*, *direct*, and *indirect*. Those seen as most effective were *bridge-building/collaboration* (mostly personal contacts), and *direct* (mostly law enforcement). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Combine USFS presence with signs for enforcement of rules and regulations.
- With volunteers, done at the time of the problem.
- They seem to listen closer to a law enforcement officer.

Less than half of the respondents reporting this issue said the action they used changed seasonally. Changes in summer trail maintenance, winter maintenance, and fall for hunting season were mentioned.

**Soil Erosion or Compaction
Issue Observed or Reports Received**

Number of respondents	Percent	
25	55.6	respondents observed or received reports of this management issue
20	44.4	respondents <i>did not</i> observe or receive reports of this management issue
(n = 22)		
14	63.6	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
7	31.8	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	4.5	of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.
For those who reported the issue differed by season, how the respondent said it differed.		
<ul style="list-style-type: none"> ◇ Harder compaction in summer ◇ In summer—user-created trails. In winter—wet/muddy. ◇ More in summer ◇ More in winter—wetter ◇ Mostly summer, hard to do in winter ◇ Not much erosion/compaction by OSVs—in lower elevations there are soil impacts late season. ◇ Spring–Fall are high-use seasons, so most of problems are related to the number of people. ◇ Summer issue ◇ Summer only ◇ Summer season ◇ Summer: off-trail and streamside impacts. Winter–spring: meadow mud slops ◇ Winter closures for POC protection ◇ Winter—more (2) 		

**Soil Erosion or Compaction
Actions Used**

Indirect actions used by those reporting soil erosion or compaction (n = 21)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
13	61.9	posters or signs	10	47.6	maps
12	57.1	brochures	1	4.8	public service announcements
7	33.3	other educational materials	1	4.8	local newspaper articles
10	47.6	user ethics	11	52.4	bulletin boards
4	19.0	etiquette	4	19.0	trail descriptions
0	0	manufacturers' stickers on ATVs*	10	47.6	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting soil erosion or compaction (n = 21)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
11	52.4	close or limit use	4	19.0	provisions for special use permits
3	14.3	non-issuance of outfitter, guide, or event permits	18	85.7	law enforcement
5	23.8	organized events to do trail maintenance	2	9.5	users ride in dispersed patterns
9	42.9	relocate or designate OHV trails	0	0	separate trails
7	33.3	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting soil erosion or compaction (n =21)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
6	28.6	Specify a maximum grade on trails What percent? mean = 18.3333 SD = 6.05530	7	33.3	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
1	4.8	Specify a <u>minimum</u> grade What percent? mean = 0.0000 (only response)	2	9.5	lengthened trails to disperse riders
10	47.6	drain dips (meaning a reversal of grade)	6	28.6	staging areas with parking facilities
3	14.3	flexible water bars	2	9.5	designated campsites
1	4.8	for events, restricted to one direction (e.g., uphill or downhill)*	1	4.8	barricades, barriers*
2	9.5	trail design: limit long straightaways/use all single track/use natural obstacles*	1	4.8	general trail maintenance including consistent, mechanized & 3-year plan*
1	4.8	rolling dips, dog bones*	0	0	overflow parking and staging areas*

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting soil erosion or compaction (n = 21)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
19	90.5	personal contacts	7	33.3	partner with different groups
7	33.3	local OHV club meetings	7	33.3	volunteer patrols
2	9.5	meetings with state OHV groups	2	9.5	partner with OHV shops
10	47.6	adopt-a-trail program	4	19.0	workshops
0	0	trail safety evaluation form	1	4.8	committees with different groups
0	0	education, including campfire programs*	11	52.4	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Soil Erosion or Compaction
Actions Reported Used Most Often**

Actions reported “used most often”			(n = 20)
Number of respondents reporting action “used most often”	Percent reporting “used most often”	Action	
4	20.0	posters or signs	
4	20.0	personal contacts	
2	10.0	close or limit use	
2	10.0	drain dips	
2	10.0	maintain trail with local groups and volunteers	
2	10.0	general trail maintenance	
1	5.0	user ethics	
1	5.0	organized events to do trail maintenance	
1	5.0	law enforcement	
1	5.0	barricades, barriers	

**Soil Erosion or Compaction
Actions Reported Most Effective**

Actions reported “most effective” **(n = 21)**

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
7	33.3	personal contacts	<ul style="list-style-type: none"> ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ Dialog between user and us important. Give them “a why.” Explain to them. Plus, give them other places to ride. ◇ Explain WHY they need to stay on trails—can lose their riding privilege. When they understand, they comply. ◇ Gets their attention. ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ Personal contact with users is important—club contacts help too. ◇ With volunteers, done at time of problem.
4	19.0	law enforcement	<ul style="list-style-type: none"> ◇ People need a consequence for doing something they shouldn’t do. ◇ They seem to listen closer to LEO. ◇ You can post signs and talk all you want but change really happens when the tickets start getting written. ◇ no response (1)
3	14.3	drain dips	<ul style="list-style-type: none"> ◇ Been proven to work. ◇ Last longer. ◇ Reduce erosion.
2	9.5	posters or signs	<ul style="list-style-type: none"> ◇ Relatively inexpensive and it informs the public of impacts. ◇ With problems like this you have to explain more. We develop our own signs with additional information other than “stay on trail.” Tell them what the problem is/why road closed.
2	9.5	close or limit use	<ul style="list-style-type: none"> ◇ no response (1) ◇ Prevents heavy use and compaction from going on. Control use that way.

**Soil Erosion or Compaction
Actions Reported Most Effective (contined)**

Actions reported “most effective”				(n = 21)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
1	4.8	maintain trail with local groups and volunteers	◇ Wouldn't get stuff done without volunteers.	
1	4.8	barricades, barriers	◇ Barriers “last forever;” can't be cut.	
1	4.8	general trail maintenance	◇ Between EIS and Trail Plan, maintaining and rerouting trails to eliminate erosion.	

**Soil Erosion or Compaction
Seasonal Differences of Actions**

Number of respondents	Percent of respondents	Seasonal nature of actions	(n = 21)
9	42.9	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
12	57.1	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Don't get too many volunteers in heat of summer or rain.
- ◇ During hunting season—do more law enforcement.
- ◇ Hunting season
- ◇ Message to public/talking points change with season. Resources of concern change with season.
- ◇ No maintenance during summer—too dry
- ◇ Only winter—maintenance of trails
- ◇ Summer only
- ◇ Summer trail maintenance
- ◇ Winter closures are used.

3: Litter or Trash on Roads or Trails

There were 22 respondents (49 percent of the sample) who said they observed or received reports of this management issue. Of these, 10 indicated that the issue differed by season. Most indicated this was a summer issue.

The most frequently named *indirect* actions were posters or signs, bulletin boards, and user ethics. The most frequently named *direct* action was law enforcement. The most frequently named resource hardening action was staging areas with parking facilities. The most frequently named *bridge building/collaboration* actions were personal contacts and volunteer patrols. The action used most often and seen as most effective was *bridge-building/collaboration* (mostly personal contacts). Why this was perceived as most effective included the following explanations by respondents to an open-ended question:

- It gives us a chance to educate and interact with visitors.
- Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources.

About one-third of the respondents reporting this issue said the action they used changed seasonally.

**Litter or Trash on Roads or Trails
Issue Observed or Reports Received**

Number of respondents	Percent	
22	48.9	respondents observed or received reports of this management issue
23	51.1	respondents <i>did not</i> observe or receive reports of this management issue
(n = 22)		
10	45.5	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
11	50.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	4.5	of those respondents who observed or received reports of this management issue indicated that they <i>did not</i> know if the issue differed by season.
For those who reported the issue differed by season, how the respondents said it differed:		
◇		Fall hunt season—more
◇		Hunting season more—August-September
◇		Spring—Fall are high-use seasons, so most of problems are related to the number of people.
◇		Summer
◇		Summer mostly
◇		Summer only
◇		Summer problem
◇		Summer season
◇		Winter 4x4 over snow access to campgrounds, vandalism burning tables, etc. leaving trash
◇		Winter more

**Litter or Trash on Roads or Trails
Actions Used**

Indirect actions used by those reporting litter or trash on roads or trails (n = 22)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
16	72.7	posters or signs	7	31.8	maps
8	36.4	brochures	1	4.5	public service announcements
6	27.3	other educational materials	4	18.2	local newspaper articles
12	54.5	user ethics	13	59.1	bulletin boards
8	36.4	etiquette	2	9.1	trail descriptions
0	0	manufacturers' stickers on ATVs*	1	4.5	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting litter or trash on roads or trails (n = 22)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	9.1	close or limit use	4	18.2	provisions for special use permits
1	4.5	non-issuance of outfitter, guide, or event permits	18	81.8	law enforcement
4	18.2	organized events to do trail maintenance	1	4.5	users ride in dispersed patterns
1	4.5	relocate or designate OHV trails	1	4.5	separate trails
1	4.5	seasonal closures	1	4.5	separate user groups
1	4.5	make repairs as soon as located*	0	0	alternate between user groups
3	13.6	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting litter or trash on roads or trails

(n = 22)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	4.5	Specify a maximum grade on trails? What percent? mean = 15.00 (only response)	2	9.1	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade? What percent? n/a	1	4.5	lengthened trails to disperse riders
1	4.5	drain dips (meaning a reversal of grade)	4	18.2	staging areas with parking facilities
0	0	flexible water bars	1	4.5	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	1	4.5	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
1	4.5	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting litter or trash on roads or trails (n = 22)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
20	90.9	personal contacts	4	18.2	partner with different groups
7	31.8	local OHV club meetings	10	45.5	volunteer patrols
3	13.6	meetings with state OHV groups	2	9.1	partner with OHV shops
7	31.8	adopt-a-trail program	2	9.1	workshops
1	4.5	trail safety evaluation form	1	4.5	committees with different groups
1	4.5	education, including campfire programs*	9	40.9	maintain trail with local groups and volunteers
1	4.5	joint clean-ups with BLM*	0	0	working with sheriff's dept.*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Litter or Trash on Roads or Trails
Actions Reported Used Most Often**

Actions reported “used most often”			(n = 21)
Number of respondents reporting action “used most often”	Percent reporting “used most often”	Action	
7	33.3	personal contacts	
4	19.0	posters or signs	
5	23.8	law enforcement	
2	9.5	maintain trail with local groups and volunteers	
1	4.8	user ethics	
1	4.8	adopt-a-trail program	
1	4.8	volunteer patrols	

**Litter or Trash on Roads or Trails
Actions Reported Most Effective**

Actions reported “most effective”				(n = 22)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
8	36.4	personal contacts	<ul style="list-style-type: none"> ◇ Gets their attention; FS also organizes an event to clean up forest each year. ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ It gives us a chance to educate and interact with visitors. ◇ People get handed a trash bag and told to “Pick it up.” ◇ Talk about human waste issues, “I can’t believe someone would dump their trash here.” Hard to know whose trash it is. May be boaters, camper, not OHV. ◇ Talk to them and get them on your side; have good attitude helps get them to see things your way. ◇ The “FS presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. 	no response (1)

Litter or Trash on Roads or Trails
Actions Reported Most Effective (continued)

Actions reported “most effective”				(n = 22)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
5	22.7	law enforcement	<ul style="list-style-type: none"> ◇ Because there are direct consequences for the violator that don’t negatively affect responsible users. ◇ People don’t read signs. A ticket is effective. ◇ Talking to someone is better than leaving a note on info board (won’t get read) Message gets across better. ◇ They seem to listen closer to LEO. ◇ Type of visitor—young males—care mostly about their experience not the NF. They will pay attention if prosecution is result of their bad actions. 	
3	13.6	user ethics	<ul style="list-style-type: none"> ◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. ◇ Monitor themselves (hopefully). ◇ Most people know not to put trash on the trail. 	
2	9.1	maintain trail with local groups and volunteers	<ul style="list-style-type: none"> ◇ After they work on a trail, the peer pressure is great. ◇ no response (1) 	
1	4.5	adopt-a-trail program	<ul style="list-style-type: none"> ◇ If they’re picking it up, they won’t throw it down. 	
1	4.5	volunteer patrols	<ul style="list-style-type: none"> ◇ Get out there and contact public more often. They’re there when we are not. Peer-to-peer interactions help. 	
1	4.5	pick up litter	<ul style="list-style-type: none"> ◇ Pick up most visitor trash along roads/trails. ◇ Keep it clean—most people don’t litter if the area looks nice. 	
1	4.5	posters or signs	<ul style="list-style-type: none"> ◇ Because 99 percent of folks take stuff with them is evidence that signs are working at the staging areas: they are pretty clean where sign is. Along road to area, not so good (but no signs there). 	

**Litter or Trash on Roads or Trails
Seasonal Differences of Actions**

(n = 22)

Number of respondents	Percent of respondents	Seasonal nature of actions
8	36.4	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
14	63.6	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.
For those who reported their actions differed by season, how the respondents said they differed.		
<ul style="list-style-type: none"> ◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas. ◇ During hunting season—do more law enforcement. ◇ Hunting season ◇ Little or no problem with winter use. Summer use getting out of control. Law enforcement and personal I&E contacts only strategy at this time. ◇ Message to public/talking points change with season. Different resources of concern change with season. ◇ We have limited staff in winter with little to no field presence. ◇ Winter is problem time—when most of the use is. ◇ Winter worse 		

4: Litter or Trash at Trail Access Points

There were 19 respondents (42 percent of the sample) who said they observed or received reports of this management issue. Of these, only four indicated that the issue differed by season.

The most frequently named *indirect* actions were posters or signs, bulletin boards, and user ethics. The most frequently named *direct* actions were law enforcement, provisions for special use permits, and organized events to do trail maintenance. The most frequently named *resource-hardening* action was staging areas with parking facilities. The most frequently named *bridge-building/collaboration* actions were personal contacts, adopt-a-trail program, maintaining trails with local groups and volunteers, and volunteer patrols. The actions used most often and seen as most effective were *bridge-building/collaboration* (mostly personal contacts) and *indirect* (posters and signs). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Talk about human waste issues: “I can’t believe that someone would dump their trash here.” Hard to know whose trash it is. May be boaters, campers, not OHV.
- Hand out trash bags—pass the word to pick up trash. Use large staging area as a place to do this.
- Post signs at trailheads to remind users to pick up trash. Makes them aware of the problem.

Less than one-third of the respondents reporting this issue said the action they used changed seasonally.

**Litter or Trash at Trail Access Points
Issue Observed or Reports Received**

Number of respondents	Percent	
19	42.2	respondents observed or received reports of this management issue
26	21.1	respondents <i>did not</i> observe or receive reports of this management issue
(n = 19)		
4	73.7	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
14	5.3	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1		of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.
For those who reported the issue differed by season, how the respondents said it differed.		
◇ Fall hunt season—more		
◇ Spring—Fall are high use seasons so most of problems are related to the number of people.		
◇ Summer problem		
◇ Trailhead restrooms trash more in summer; winter access is limited.		

**Litter or Trash at Trail Access Points
Actions Used**

Indirect actions used by those reporting litter or trash at trail access points						(n = 19)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
18	94.7	posters or signs	6	31.6	maps	
8	42.1	brochures	2	10.5	public service announcements	
5	26.3	other educational materials	5	26.3	local newspaper articles	
13	68.4	user ethics	14	73.7	bulletin boards	
9	47.4	etiquette	1	5.3	trail descriptions	
0	0	manufacturers' stickers on ATVs*	1	5.3	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting litter or trash at trail access points (n = 19)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	5.3	close or limit use	5	26.3	provisions for special use permits
1	5.3	non-issuance of outfitter, guide, or event permits	13	68.4	law enforcement
5	26.3	organized events to do trail maintenance	1	5.3	users ride in dispersed patterns
2	10.5	relocate or designate OHV trails	1	5.3	separate trails
1	5.3	seasonal closures	1	5.3	separate user groups
1	5.3	make repairs as soon as located*	0	0	alternate between user groups
3	15.8	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting litter or trash at trail access points (n = 19)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	5.3	Specify a maximum grade on trails	2	10.5	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? mean = 15.00 (only response)			
0	0	Specify a <u>minimum</u> grade	1	5.3	lengthened trails to disperse riders
		What percent? n/a			
1	5.3	drain dips (meaning a reversal of grade)	5	26.3	staging areas with parking facilities
0	0	flexible water bars	2	10.5	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	1	5.3	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting litter or trash at trail access points						(n = 19)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
17	89.5	personal contacts	4	21.1	partner with different groups	
6	31.6	local OHV club meetings	8	42.1	volunteer patrols	
3	15.8	meetings with state OHV groups	2	10.5	partner with OHV shops	
10	52.6	adopt-a-trail program	2	10.5	workshops	
1	5.3	trail safety evaluation form	1	5.3	committees with different groups	
1	5.3	education, including campfire programs*	9	47.4	maintain trail with local groups and volunteers	
0	0	joint clean-ups with BLM*	0	0	working with sheriff's dept.*	
0	0	mine safety evaluation form*	0	0	help from regional office and state*	
0	0	find out from users and environmentalists where trails should be*				

*Actions added by respondents in response to open-ended questions.

**Litter or Trash at Trail Access Points
Actions Reported Used Most Often**

Actions reported "used most often"			(n = 19)
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action	
6	31.6	personal contacts	
5	26.3	posters or signs	
3	15.8	bulletin boards	
2	10.5	law enforcement	
2	10.5	maintain trail with local groups and volunteers	
1	5.3	volunteer patrols	

**Litter or Trash at Trail Access Points
Actions Reported Most Effective**

(n = 19)

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
6	31.6	personal contacts	<ul style="list-style-type: none"> ◇ Hand out trash bags—pass the word to pick up trash. Use large staging area as a place to do this. ◇ It gives us a chance to educate and interact with visitors. ◇ Talk about human waste issues, “I can’t believe someone would dump their trash here.” Hard to know whose trash it is. May be boaters, campers, not OHV. ◇ The “FS presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. ◇ Try to educate people. ◇ no response (1)
2	10.5	user ethics	<ul style="list-style-type: none"> ◇ Getting them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. ◇ More of them than us. Peer pressure.
2	10.2	bulletin boards	<ul style="list-style-type: none"> ◇ Because it works. ◇ Bulletin boards tell the public all the regulations, and they are close to the trailheads.
2	10.5	adopt-a-trail program	<ul style="list-style-type: none"> ◇ Adopt-a-trail puts more people out there—additional number of people. ◇ Club signs at trailheads get respect by other users.
2	10.5	maintain trail with local groups and volunteers	<ul style="list-style-type: none"> ◇ It is essentially free, and it reaches the most people. ◇ no response (1)
2	10.5	pick up litter	<ul style="list-style-type: none"> ◇ If users see less trash, they are less apt to do it. Research says so. ◇ If you can keep it clean, most people don’t litter because it looks nice.

**Litter or Trash at Trail Access Points
Actions Reported Most Effective (continued)**

(n = 19)

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	5.3	posters or signs	◇ Post them at the trailhead to remind users to pick up trash. Makes them aware of the problem.
1	5.3	law enforcement	◇ They seem to listen closer to LEO.
1	5.3	volunteer patrols	◇ Get out there and contact public more often. They’re there when we are not. Peer-to-peer interactions help.

**Litter or Trash at Trail Access Points
Seasonal Differences of Actions**

(n = 19)

Number of respondents	Percent of respondents	Seasonal nature of actions
5	26.3	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
14	73.7	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Adopt-a-trail is for snowmobiles only. There are no maps for summer—undeveloped dispersed-type use.
- ◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas.
- ◇ During hunting season—do more law enforcement
- ◇ Message to public/talking points change with season.Resources of concern change with season.
- ◇ We have limited staff in winter with little to no field presence.

5: Vegetation Damage

There were 17 respondents (38 percent of the sample) who said they observed or received reports of this management issue. Of these, 10 indicated that the issue differed by season. In summer, for example, managers reported more damage. Some managers reported more damage in winter while others reported less damage in winter.

The most frequently named *indirect* actions were posters or signs, brochures, bulletin boards, and user ethics. The most frequently named *direct* actions were law enforcement and close or limit use. The most frequently named *resource-hardening* actions were drain dips (meaning a reversal of grade) and artificial tread. The most frequently named *bridge-building/collaboration* actions were personal contacts and local OHV club meetings. The actions used most often were *bridge-building/collaboration* (mostly personal contacts) and *indirect* (mostly posters and signs). The most effective actions were *bridge-building/collaboration* and *indirect*. Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Because we get to talk to and educate our publics. There is a good chance for dialog and a good chance to explain why an area is closed, or there are certain rules for a reason.
- Explain why they need to stay on trails—can lose their riding privilege. When they understand, they comply.
- They respect signs. Special signage talks about plants and gives more in-depth information about what is being protected.
- Use signs saying “save the vegetation” and “don’t drive on meadows.” Personal contact is limited by budgets.

Less than one-third of the respondents reporting this issue said the action they used changed seasonally.

**Vegetation Damage
Issue Observed or Reports Received**

Number of respondents	Percent	
17	37.8	respondents observed or received reports of this management issue
28	62.2	respondents <i>did not</i> observe or receive reports of this management issue
(n = 17)		
10	58.8	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
7	41.2	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Less in snow
- ◇ More damage in summer
- ◇ More in summer
- ◇ Only summer
- ◇ Slight amount in winter—can clip tops of small trees.
- ◇ Spring—Fall are high-use seasons so most of problems are related to the number of people.
- ◇ Summer
- ◇ Vegetation damage to meadows in spring and summer
- ◇ Winter closures for POC protection
- ◇ Winter—more

**Vegetation Damage
Actions Used**

Indirect actions used by those reporting vegetation damage (n = 17)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
12	70.6	posters or signs	6	35.3	maps
10	58.8	brochures	1	5.9	public service announcements
4	23.5	other educational materials	4	23.5	local newspaper articles
8	47.1	user ethics	9	52.9	bulletin boards
3	17.6	etiquette	3	17.6	trail descriptions
0	0	manufacturers' stickers on ATVs*	5	29.4	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting vegetation damage (n = 17)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
8	47.1	close or limit use	3	17.6	provisions for special use permits
1	5.9	non-issuance of or outfitter, guide, event permits	14	82.4	law enforcement
3	17.6	organized events to do trail maintenance	0	0	users ride in dispersed patterns
4	23.5	relocate or designate OHV trails	0	0	separate trails
4	23.5	seasonal closures	0	0	separate user groups
1	5.9	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

<i>Resource-hardening actions used by those reporting vegetation damage</i>						<i>(n = 17)</i>
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	Specify a maximum grade on trails	4	23.5	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)	
		What percent? n/a				
0	0	Specify a <u>minimum</u> grade	1	5.9	lengthened trails to disperse riders	
		n/a				
		What percent?				
4	23.5	drain dips (meaning a reversal of grade)	3	17.6	staging areas with parking facilities	
0	0	flexible water bars	2	11.8	designated campsites	
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	1	5.9	barricades, barriers*	
1	5.9	trail design: limit long straightaways/use all single track/use natural obstacles*	1	5.9	general trail maintenance including consistent, mechanized & 3-year plan*	
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*	
1	5.9	various types of erosion control*				

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting vegetation damage (n = 17)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
16	94.1	personal contacts	5	29.4	partner with different groups
7	41.2	local OHV club meetings	6	35.3	volunteer patrols
3	17.6	meetings with state OHV groups	1	5.9	partner with OHV shops
5	29.4	adopt-a-trail program	4	23.5	workshops
0	0	trail safety evaluation form	1	5.9	committees with different groups
0	0	education, including campfire programs*	6	35.3	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Vegetation Damage
Actions Reported Used Most Often**

Actions reported “used most often” (n = 17)		
Number of respondents reporting action “used most often”	Percent reporting “used most often”	Action
6	35.3	personal contacts
5	29.4	posters or signs
3	17.6	law enforcement
1	5.9	user ethics
1	5.9	close or limit use
1	5.9	trail design

**Vegetation Damage
Actions Reported Most Effective**

Actions reported “most effective” (n = 16)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
6	37.5	personal contacts	<ul style="list-style-type: none"> ◇ Because we get to talk and educate our publics. There is the chance for dialog and a good chance to explain why an area is closed, or there are certain rules for a reason. ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ Explain WHY they need to stay on trails—can lose their riding privilege. When they understand, they comply. ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ It is difficult to know the extent—usually must be observed. ◇ no response (1)

**Vegetation Damage
Actions Reported Most Effective (continued)**

Actions reported “most effective”				(n = 16)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
5	31.3	law enforcement	<ul style="list-style-type: none"> ◇ Educate/provide consequence for actions. ◇ They seem to listen closer to LEO. ◇ Type of visitor—young males—care mostly about their experience not the NF. They will pay attention if prosecution is result of their bad actions. ◇ no response (2) 	
3	18.8	posters or signs	<ul style="list-style-type: none"> ◇ Able to identify/make users aware of info. ◇ They respect signs (special signage: talk about plants/gives more in-depth information about what is being protected). ◇ Use signs saying “Save the vegetation” and “Don’t drive on meadows.” Personal contact is limited by budgets. 	
1	6.3	user ethics	<ul style="list-style-type: none"> ◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. 	
1	6.3	trail design	<ul style="list-style-type: none"> ◇ Often good trail design will encourage users to stay on existing trails. 	

**Vegetation Damage
Seasonal Differences of Actions**

Number of respondents	Percent of respondents	Seasonal nature of actions
5	29.4	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
12	70.6	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ During hunting season—do more law enforcement
- ◇ Hunting season
- ◇ Little or no problem with winter use. Summer use getting out of control. Law enforcement and personal I&E contacts only strategy at this time.
- ◇ Summer only
- ◇ We have limited staff in winter with little to no field presence.

6: Graffiti or Other Vandalism

There were 16 respondents (36 percent of the sample) who said they observed or received reports of this management issue. Of these, only seven indicated that the issue differed by season.

The most frequently named *indirect* actions were user ethics and posters or signs. The most frequently named *direct* actions were law enforcement and organized events to do trail maintenance. The most frequently named *resource-hardening* actions were artificial tread and staging areas with parking facilities. The most frequently named *bridge-building/collaboration* actions were personal contacts, maintaining trails with local groups and volunteers, local OHV club meetings, adopt-a-trail program, and volunteer patrols. The actions used most often were indirect (poster and signs and user ethics), *direct* (mostly law enforcement), and *bridge-building/collaboration* (mostly personal contacts). The actions seen as most effective were *bridge-building/collaboration* and *indirect* (mostly user ethics). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- The “Forest Service presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has riding ability and can talk bikes with users.
- Talk to them and get them on your side; having good attitude helps get them to see things your way.
- Personal contacts (sting operations). Law enforcement officers get them, they contact perpetrators. They don’t go there to recreate—vandalism is their goal. OHVers don’t do it.

About one-third of the respondents reporting this issue said the action they used changed seasonally. Most of these said the change occurred in the summer.

**Graffiti or Other Vandalism
Issue Observed or Reports Received**

Number of respondents	Percent	
16	35.6	respondents observed or received reports of this management issue
29	64.4	respondents <i>did not</i> observe or receive reports of this management issue
(n = 15)		
7	46.7	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
7	46.7	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	6.7	of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.
For those who reported the issue differed by season, how the respondents said it differed:		
<ul style="list-style-type: none"> ◇ In summer, more (2) ◇ Spring—Fall are high-use seasons, so most of problems are related to the number of people. ◇ Summer is use season; winter—no problem ◇ Summer problem ◇ Very few in summer—tied in to lookouts. ◇ Winter 4x4 over snow access to campgrounds, vandalism, burning tables, etc., leaving trash 		

**Graffiti or Other Vandalism
Actions Used**

Indirect actions used by those reporting graffiti or other vandalism (n = 16)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
8	50.0	posters or signs	4	25.0	maps
4	25.0	brochures	2	12.5	public service announcements
4	25.0	other educational materials	5	31.3	local newspaper articles
9	56.3	user ethics	7	43.8	bulletin boards
5	31.3	etiquette	1	6.3	trail descriptions
0	0	manufacturers' stickers on ATVs*	1	6.3	trail use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting graffiti or other vandalism (n = 16)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	6.3	close or limit use	2	12.5	provisions for special use permits
1	6.3	non-issuance of outfitter, guide, or event permits	3	18.8	law enforcement
3	18.8	organized events to do trail maintenance	1	6.3	users ride in dispersed patterns
1	6.3	relocate or designate OHV trails	1	6.3	separate trails
1	6.3	seasonal closures	1	6.3	separate user groups
3	18.8	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting graffiti or other vandalism (n = 16)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	6.3	Specify a maximum grade on trails What percent? mean = 15.00 (only response)	2	12.5	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	1	6.3	lengthened trails to disperse riders
1	6.3	drain dips (meaning a reversal of grade)	2	12.5	staging areas with parking facilities
0	0	flexible water bars	1	6.3	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/ use natural obstacles*	1	6.3	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
1	6.3	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

<i>Bridge-building/collaboration actions used by those reporting graffiti or other vandalism</i> (n = 16)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
14	87.5	personal contacts	4	25.0	partner with different groups
6	37.5	local OHV club meetings	6	37.5	volunteer patrols
3	18.8	meetings with state OHV groups	2	12.5	partner with OHV shops
6	37.5	adopt-a-trail program	2	12.5	workshops
1	6.3	trail safety evaluation form	1	6.3	committees with different groups
1	6.3	education, including campfire programs*	6	37.5	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

Graffiti or Other Vandalism Actions Reported Used Most Often

Actions reported "used most often" n = 15		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
4	26.7	law enforcement
2	13.3	posters or signs
3	20.0	personal contacts
2	13.3	make repairs as soon as located
2	13.3	user ethics
1	6.7	etiquette
1	6.7	volunteer patrols

**Graffiti or Other Vandalism
Actions Reported Most Effective (continue)**

Actions reported “most effective”				(n = 15)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
5	33.3	personal contacts	<ul style="list-style-type: none"> ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ Talk to them and get them on your side; have good attitude helps get them to see things your way. ◇ Talking to someone is better than leaving a note on info board (won’t get read) Message gets across better. ◇ The “FS presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. no response (1) 	
2	13.3	user ethics	<ul style="list-style-type: none"> ◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. ◇ Have to depend on the user—we can’t really catch them. 	
2	13.3	make repairs as soon as located	<ul style="list-style-type: none"> ◇ Removing graffiti prevents more of it ◇ Signs get shot up. Replacing them doesn’t promote same kind of activity. Replace signs—don’t encourage the same kind of vandalism. 	
2	13.3	law enforcement	<ul style="list-style-type: none"> ◇ Able to investigate and contact person who did it and publish in paper. ◇ Personal contact (sting operations) LEOs get them. Contact perps. Don’t go there to recreate—vandalism is their goal. OHVers don’t do it. 	
1	6.7	posters or signs	<ul style="list-style-type: none"> ◇ Visible in many locations. 	
1	6.7	etiquette	<ul style="list-style-type: none"> ◇ Most people know not to do such things. 	

**Graffiti or Other Vandalism
Actions Reported Most Effective**

Actions reported “most effective” (n = 15)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	6.7	volunteer patrols	<ul style="list-style-type: none"> ◇ Get out there and contact public more often. ◇ They’re there when we are not. Peer-to-peer interactions help.
1	6.7	maintain trail with local groups and volunteers	<ul style="list-style-type: none"> ◇ After they work on a trail, the peer pressure is great.

**Graffiti or Other Vandalism
Seasonal Differences of Actions**

(n = 15)		
Number of respondents	Percent of respondents	Seasonal nature of actions
7	47.7	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
8	53.3	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.
For those who reported their actions differed by season, how the respondents said they differed.		
<ul style="list-style-type: none"> ◇ (Summer) Law enforcement—need to have more of a presence out there to prevent problem. ◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas. ◇ Hunting season ◇ Less in winter—smaller area. Summer—more dispersed use. ◇ Message to public/talking points change with season. Resources of concern change with season. ◇ There is more OHV activity in summer. ◇ We have limited staff in winter with little to no field presence. 		

7: Destruction/Defacing of Historic Resources

There were 12 respondents (27 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Destruction/Defacing of Historic Resources Issue Observed or Reports Received

Number of respondents	Percent	
12	26.7	respondents observed or received reports of this management issue
33	73.3	respondents <i>did not</i> observe or receive reports of this management issue
(n = 12)		
5	41.7	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
7	58.3	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ More in hunting season.
- ◇ More in summer.
- ◇ Spring—Fall are high-use seasons, so most of problems are related to the number of people.
- ◇ Summer at river access.
- ◇ Summer—at lookouts, unmanned. Access not there in winter.

**Destruction/Defacing of Historic Resources
Actions Used**

<i>Indirect</i> actions used by those reporting destruction/defacing of historic resources						(n = 12)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
9	75.0	posters or signs	2	16.7	maps	
4	33.3	brochures	0	0	public service announcements	
5	41.7	other educational materials	3	25.0	local newspaper articles	
7	55.3	user ethics	4	33.3	bulletin boards	
4	33.3	etiquette	2	16.7	trail descriptions	
0	0	manufacturers' stickers on ATVs*	2	16.7	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting destruction/defacing of historic resources						(n = 12)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
7	55.3	close or limit use	5	41.7	provisions for special use permits	
2	16.7	non-issuance of outfitter, guide, or event permits	9	75.0	law enforcement	
1	8.3	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
2	16.7	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting destruction/defacing of historic resources (n = 12)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	2	16.7	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	1	8.3	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/ use natural obstacles*	1	8.3	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting destruction/defacing of historic resources (n = 12)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
9	75.0	personal contacts	2	16.7	partner with different groups
3	25.0	local OHV club meetings	3	25.0	volunteer patrols
1	8.3	meetings with state OHV groups	1	8.3	partner with OHV shops
2	16.7	adopt-a-trail program	2	16.7	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	3	25.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Destruction/Defacing of Historic Resources
Actions Reported Used Most Often**

Actions reported "used most often" (n = 11)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
3	30.0	close or limit use
2	20.0	posters or signs
3	30.0	personal contacts
2	20.0	law enforcement
1	10.0	volunteer patrols

**Destruction/Defacing of Historic Resources
Actions Reported Most Effective**

Actions reported “most effective”				(n = 12)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
5	41.7	personal contacts	<ul style="list-style-type: none"> ◇ Dialog between user and us important. Give them “a why.” Explain to them. ◇ Gets their attention. ◇ Gives users opportunities to ask for clarification of rules; let users know that we keeping an eye on resources. ◇ With volunteers (peers) and done at the time of the problem. ◇ no response (1) 	
3	25.0	close or limit use	<ul style="list-style-type: none"> ◇ Keep some distance from vandals. ◇ Limits use completely—these areas are completely closed unless there is a tour. ◇ Much less damage is done by people that walk into these areas versus people that drive and bring in camping and digging equipment and the damage done by the vehicle to the soil and vegetation. 	
1	8.3	posters or signs	<ul style="list-style-type: none"> ◇ It is there for everyone to see, and it informs the public of the relevance and the need to protect historic resources. 	
1	8.3	user ethics	<ul style="list-style-type: none"> ◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. 	
1	8.3	relocate or designate OHV trails	<ul style="list-style-type: none"> ◇ Relocating the trail makes it no longer an issue. 	
1	8.3	law enforcement	<ul style="list-style-type: none"> ◇ Allows patrol officers to gain a first-hand knowledge of what’s happening now. 	

**Destruction/Defacing of Historic Resources
Seasonal Differences of Actions**

(n = 12)

Number of respondents	Percent of respondents	Seasonal nature of actions
7	58.3	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
5	41.7	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Don't get too many volunteers in the heat of summer or rain.
- ◇ Hunting season
- ◇ In winter in [respondent's forest] the problems shift due to the change from summer to winter recreation. For example, in the winter we have more problems with historic cabins being used as warming huts. We patrol the areas to determine violations and respond accordingly.
- ◇ Message to public/talking points change with season. Different resources of concern change with season.
- ◇ Snow conditions allow less use.
- ◇ Summer only
- ◇ We have limited staff in winter with little to no field presence.

8: Harassment of Wildlife

There were six respondents (13 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Harassment of Wildlife Issue Observed or Reports Received

Number of respondents	Percent	
6	13.3	respondents observed or received reports of this management issue
39	86.7	respondents <i>did not</i> observe or receive reports of this management issue
(n = 6)		
2	33.3	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
4	66.7	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

◇	breeding season closures
◇	breeding season of species

Harassment of Wildlife Actions Used

Indirect actions used by those reporting harassment of wildlife **(n = 6)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
3	50.0	posters or signs	1	16.7	maps
3	50.0	brochures	1	16.7	public service announcements
2	33.3	other educational materials	1	16.7	local newspaper articles
3	50.0	user ethics	3	50.0	bulletin boards
1	16.7	etiquette	0	0	trail descriptions
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting harassment of wildlife (n = 6)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
3	50.0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	6	100.0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
0	0	relocate or designate OHV trails	0	0	separate trails
3	50.0	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting harassment of wildlife**(n = 6)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade n/a What percent?	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	1	16.7	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting harassment of wildlife					
(n = 6)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
6	100.0	personal contacts	1	16.7	partner with different groups
2	33.3	local OHV club meetings	1	16.7	volunteer patrols
1	16.7	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's dept.*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Harassment of Wildlife
Actions Reported Used Most Often**

Actions reported "used most often"			n = 6
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action	
3	50.0	law enforcement	
1	16.7	posters or signs	
1	16.7	personal contacts	
1	16.7	close or limit use	

**Harassment of Wildlife
Actions Reported Most Effective**

Actions reported “most effective”				(n = 6)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
4	66.7	law enforcement	<ul style="list-style-type: none"> ◇ They seem to listen closer to LEO. ◇ We call it the 3 Es: Engineer, Educate, Enforce. You MUST do the first two but the message is most effectively sent when the rules are enforced. It doesn't take much of the third “E” if the first two are done well. ◇ no response (2) 	
1	16.7	posters or signs	<ul style="list-style-type: none"> ◇ Able to identify wildlife that live in area. Educate to prevent harassment. 	
1	16.7	user ethics	<ul style="list-style-type: none"> ◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. 	

**Harassment of Wildlife
Seasonal Differences of Actions**

			(n = 6)
Number of respondents	Percent of respondents	Seasonal nature of actions	
1	16.7	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
5	83.3	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how they differed.			
<ul style="list-style-type: none"> ◇ During hunting season—do more law enforcement. 			

9: Noise and smoke

This issue was added by the respondent(s) and was not included in the set of issues available to all respondents. There were three respondents (7 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Noise and Smoke Issue Observed or Reports Received

Number of respondents	Percent	
3	6.7	respondents observed or received reports of this management issue
42	93.3	respondents <i>did not</i> observe or receive reports of this management issue
(n = 3)		
2	66.7	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
1	33.3	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
For those who reported the issue differed by season, how the respondents said it differed:		
◇ Noise—summer dirt bikes, winter snowmobiles—complaints from skiers.		
◇ Winter only		

**Noise and Smoke
Actions Used**

<i>Indirect</i> actions used by those reporting noise and smoke (n = 3)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	33.3	posters or signs	0	0	maps
0	0	brochures	1	33.3	public service announcements
0	0	other educational materials	1	33.3	local newspaper articles
0	0	user ethics	1	33.3	bulletin boards
0	0	etiquette	0	0	trail descriptions
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting noise and smoke</i> (n = 3)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide,	2	66.7	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
1	33.3	relocate or designate OHV trails	1	33.3	separate trails
1	33.3	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
2	66.7	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting noise and smoke (n = 3)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting noise and smoke						(n = 3)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
3	100.0	personal contacts	3	100.0	partner with different groups	
1	33.3	local OHV club meetings	1	33.3	volunteer patrols	
1	33.3	meetings with state OHV groups	1	33.3	partner with OHV shops	
1	33.3	adopt-a-trail program	1	33.3	workshops	
0	0	trail safety evaluation form	0	0	committees with different groups	
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers	
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*	
0	0	mine safety evaluation form*	0	0	help from regional office and state*	
0	0	find out from users and environmentalists where trails should be*				

*Actions added by respondents in response to open-ended questions.

**Noise and Smoke
Actions Used Most Often**

Actions reported "used most often"			(n = 3)
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action	
2	66.7	personal contacts	
1	33.3	posters or signs	

**Noise and Smoke
Actions Reported Most Effective**

Actions reported “most effective” (n = 3)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
2	66.7	personal contacts	<ul style="list-style-type: none"> ◇ Explain more out at the trailhead—conflicts occur at trailhead. ◇ Use personal contacts for voluntary sound checks. “Your bike sounds noisy. Can we check it for you?” There is a NEW California law on reduced noise levels.
1	33.3	voluntary sound checks	<ul style="list-style-type: none"> ◇ Noise checks at staging areas and events off-forest inform/educate users and lower noise levels.

**Noise and Smoke
Seasonal Differences of Actions**

(n = 3)		
Number of respondents	Percent of respondents	Seasonal nature of actions
2	66.7	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
1	33.3	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

◇ No way to check noise for snowmobiles. (Sound check equipment is not designed for snowmobiles.) Have to use personal contact in winter.
◇ Winter only

10: Reduction in Size of Habitat

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Reduction in Size of Habitat Issue Observed or Reports Received

Number of respondents	Percent	
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
n = 1		
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Reduction in Size of Habitat Actions Used

<i>Indirect actions used by those reporting reduction in size of habitat</i> (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	posters or signs	1	100.0	maps
1	100.0	brochures	1	100.0	public service announcements
1	100.0	other educational materials	0	0	local newspaper articles
1	100.0	user ethics	1	100.0	bulletin boards
1	100.0	etiquette	1	100.0	trail descriptions
0	0	manufacturers' stickers on ATVs*	1	100.0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting reduction in size of habitat**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	close or limit use	0	0	provisions for special use permits
1	100.0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement
1	100.0	organized events to do trail maintenance	1	100.0	users ride in dispersed patterns
1	100.0	relocate or designate OHV trails	1	100.0	separate trails
1	100.0	seasonal closures	1	100.0	separate user groups
0	0	make repairs as soon as located*	1	100.0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

<i>Resource-hardening actions used by those reporting reduction in size of habitat</i> (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	1	100.0	staging areas with parking facilities
0	0	flexible water bars	1	100.0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting reduction in size of habitat (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	1	100.0	partner with different groups
1	100.0	local OHV club meetings	1	100.0	volunteer patrols
1	100.0	meetings with state OHV groups	1	100.0	partner with OHV shops
1	100.0	adopt-a-trail program	1	100.0	workshops
0	0	trail safety evaluation form	1	100.0	committees with different groups
0	0	education, including campfire programs*	1	100.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's dept.*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Reduction in Size of Habitat
Actions Reported Used Most Often**

Actions reported "used most often" (n = 1)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	close or limit use

**Reduction in Size of Habitat
Actions Reported Most Effective**

Actions reported “most effective” (n = 0)

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
no response			

**Reduction in Size of Habitat
Seasonal Differences of Actions**

(n = 1)

Number of respondents	Percent	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

11: Injuries or Death of Individual Members of a Species

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Injuries or Death of Individual Members of a Species Issue Observed or Reports Received

Number of respondents	Percent	
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents did not observe or receive reports of this management issue
(n = 1)		
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Injuries or Death of Individual Members of a Species Actions Used

<i>Indirect</i> actions used by those reporting injuries or death of individual members of a species (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	posters or signs	1	100.0	maps
1	100.0	brochures	0	0	public service announcements
0	0	other educational materials	0	0	local newspaper articles
0	0	user ethics	1	100.0	bulletin boards
0	0	etiquette	0	0	trail descriptions
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting injuries or death of individual members of a species (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
0	0	relocate or	0	0	separate trails
1	100.0	seasonal closures designate OHV trails	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting injuries or death of individual members of a species (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	1	100.0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting injuries or death of individual members of a species (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	0	0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Injuries or Death of Individual Members of a Species
Actions Reported Used Most Often**

Actions reported "used most often" (n = 1)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	close or limit use

**Injuries or Death of Individual Members of a Species
Actions Reported Most Effective**

Actions reported “most effective” **(n = 1)**

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	100.0	law enforcement	no response

**Injuries or Death of Individual Members of a Species
Seasonal Differences of Actions**

(n = 1)

Number of respondents	Percent	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

12: Dust near Developed Campgrounds

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Dust near Developed Campgrounds Issue Observed or Reports Received

Number of respondents	Percent	
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
(n = 1)		
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.

Dust near Developed Campgrounds Actions Used

<i>Indirect actions used by those reporting dust near developed campgrounds</i>						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	100.0	posters or signs	1	100.0	maps	
1	100.0	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
0	0	user ethics	1	100.0	bulletin boards	
0	0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	1	100.0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting dust near developed campgrounds**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	close or limit use	1	100.0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement
1	100.0	organized events to do trail maintenance	1	100.0	users ride in dispersed patterns
0	0	relocate or designate OHV trails	0	0	separate trails
0	0	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

<i>Resource-hardening actions used by those reporting dust near developed campgrounds</i> (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	Specify a maximum grade on trails	1	100.0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? mean = 15.00 (only response)			
0	0	Specify a <u>minimum</u> grade	0	0	lengthened trails to disperse riders
		What percent? n/a			
1	100.0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
1	100.0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting dust near developed campgrounds (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	1	100.0	partner with different groups
1	100.0	local OHV club meetings	1	100.0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
1	100.0	adopt-a-trail program	1	100.0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	1	100.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Dust near Developed Campgrounds
Actions Reported Used Most Often**

(n = 1)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	organized events to do trail maintenance

**Dust near Developed Campgrounds
Actions Reported Used Most Often**

(n = 1)

Number of respondents reporting action "most effective"	Percent reporting "most effective"	Action	Why "most effective"
1	100.0	drain dips	◇ Last longer.

**Dust near Developed Campgrounds
Seasonal Differences of Actions**

(n = 1)

Number of respondents	Percent	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

Appendix C—Regulatory/Behavioral and Agency Issues and Management Actions

This appendix provides information about the actions in use on National Forests in California for each of the management issues identified under the *Regulatory/Behavioral and Agency* category.

Eleven issues were asked of all respondents, and some managers included additional issues. These were wilderness trespass, multiple land jurisdictions, non-manageable wilderness boundaries, and lack of consistent funding. These small percentages reflect the responses of only those respondents who added them to the list. If they had been on the original list to all respondents, then the numbers might be different.

1: Four-Wheelers Going Off Established Roads or Trails

There were 33 respondents (73 percent of the sample) who said they observed or received reports of this management issue. Of these, 17 indicated that the issue differed by season. In summer, for example, changes were going off-trail and trespassing. Fall/hunting season changes were also reported.

The most frequently named *indirect* actions were posters or signs and bulletin boards. The most frequently named *direct* actions were law enforcement and close or limit use. The most frequently named *resource-hardening* actions were drain dips (meaning a reversal of grade) and staging areas with parking facilities. The most frequently named *bridge-building/collaboration* actions were personal contacts and local OHV club meetings. The actions used most often and seen as most effective were *bridge-building/collaboration* (mostly personal contacts) and *indirect* (mostly posters or signs). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Dialog between the user and us is important. Give them “a why.” Explain to them. Plus, they know they’re being watched.
- Face-to-face contact works.
- Dealing with users directly—word of mouth among users. Word reaches people faster.
- We call it the “3 Es”: Engineer, Educate, Enforce. You must do the first two, but the message is more effectively sent when the rules are enforced. It doesn’t take much of the third “E” if the first two are done well.

Only seven of the respondents reporting this issue said the action they used changed seasonally.

**Four-Wheelers Going Off Established Roads or Trails
Issue Observed or Reports Received**

Number of respondents	Percent	
33	73.3	respondents observed or received reports of this management issue
12	26.7	respondents <i>did not</i> observe or receive reports of this management issue
(n = 30)		
17	56.7	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
12	40.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	3.3	of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Happens mostly in fall (deer season) ATVs and Jeeps.
- ◇ Hunting season—more often
- ◇ In winter, snowmobiles go in wilderness areas.
- ◇ More in summer (2)
- ◇ More in summer (not snow machines)
- ◇ Mostly during hunting season, hunters going off established roads or trails
- ◇ Mostly summer
- ◇ Spring—Fall are high-use seasons, so most of problems are related to the number of people.
- ◇ Summer
- ◇ Summer [illegible] going.
- ◇ Summer season
- ◇ Summer they go off-trail; winter wilderness trespass
- ◇ Summer only. Some “wheeled” vehicles go on snowmobile trails.
- ◇ Summer: 4-wheelers—certain areas they want to go in—off-trail and trespassing
- ◇ Summer—lack of designated routes—which is now being changed over and in transition to designated routes
- ◇ Winter—closure for POC protection

**Four-Wheelers Going Off Established Roads or Trails
Actions Used**

Indirect actions used by those reporting four-wheelers going off established roads or trails (n = 33)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
27	81.8	posters or signs	19	57.6	maps
17	51.5	brochures	3	9.1	public service announcements
14	44.4	other educational materials	7	21.2	local newspaper articles
16	48.5	user ethics	21	63.6	bulletin boards
10	30.3	etiquette	4	12.1	trail descriptions
0	0	manufacturers' stickers on ATVs*	10	30.3	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting four-wheelers going off established roads or trails (n = 33)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
15	45.5	close or limit use	6	18.2	provisions for special use permits
3	9.1	non-issuance of outfitter, guide, or event permits	32	97.0	law enforcement
6	18.2	organized events to do trail maintenance	3	9.1	users ride in dispersed patterns
7	21.2	relocate or designate OHV trails	1	3.0	separate trails
4	12.1	seasonal closures	1	3.0	separate user groups
2	6.1	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	1	3.0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting four-wheelers going off established roads or trails (n = 33)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	6.1	Specify a maximum grade on trails What percent? mean = 15.00 SD = 0.00000	6	18.2	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	2	6.1	lengthened trails to disperse riders
7	21.2	drain dips (meaning a reversal of grade)	7	21.2	staging areas with parking facilities
1	3.0	flexible water bars	4	12.1	designated campsites
1	3.0	for events, restricted to one direction (e.g., uphill or downhill)*	5	15.2	barricades, barriers*
1	3.0	trail design: limit long straightaways/use all single track/use natural obstacles*	1	3.0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
1		various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting four-wheelers going off established roads or trails**(n = 33)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
29	87.9	personal contacts	10	30.3	partner with different groups
16	48.5	local OHV club meetings	13	39.4	volunteer patrols
5	15.2	meetings with state OHV groups	3	9.1	partner with OHV shops
13	39.4	adopt-a-trail program	6	18.2	workshops
1	3.0	trail safety evaluation form	2	6.1	committees with different groups
1	3.0	education, including campfire programs*	12	36.4	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
1	3.0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Four-Wheelers Going Off Established Roads or Trails
Actions Reported Used Most Often**

Actions reported “used most often” n = 30

Number of respondents reporting action “used most often”	Percent reporting “used most often”	Action
9	30.0	personal contacts
7	23.3	posters or signs
6	20.0	law enforcement
2	6.7	maps
2	6.7	close or limit use
2	6.7	barricades, barriers
1	3.3	organized events to do trail maintenance
1	3.3	relocate or designate OHV trails

**Four-Wheelers Going Off Established Roads or Trails
Actions Reported Most Effective**

Actions reported “most effective”				(n = 32)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
11	34.4	personal contacts	<ul style="list-style-type: none"> ◇ Because [respondent] said so. ◇ Because we get to talk and educate our publics. There is the chance for dialog and a good chance to explain why an area is closed or there are certain rules for a reason. ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ Dialog between user and us is important. Give them “a why.” Explain to them. Plus, they know they’re being watched. ◇ Face-to-face contact works. ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ Like to get more information. ◇ The “FS presence,” whether to help or enforce regulations, is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. ◇ Users see us out there; it establishes a presence. Give them information to make the right choice because they want to do the right thing. 	
9	28.1	law enforcement	<ul style="list-style-type: none"> ◇ no response (2) ◇ Because there are direct consequences for the violator that don’t negatively affect responsible users. ◇ Dealing with users directly—word of mouth among users. Word reaches people faster. ◇ Educate/provide consequence for actions. ◇ Signs are ignored without back-up. ◇ They seem to listen closer to LEO. ◇ Type of visitor—young males—care mostly about their experience not the NF. They will pay attention if prosecution is result of their bad actions. 	

**Four-Wheelers Going Off Established Roads or Trails
Actions Reported Most Effective (continued)**

Actions reported “most effective”				(n = 32)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
3	9.4	posters or signs	<ul style="list-style-type: none"> ◇ We call it the 3 Es: Engineer, Educate, Enforce. You MUST do the first two but the message is most effectively sent when the rules are enforced. It doesn’t take much of the third “E” if the first two are done well. ◇ no response (2) ◇ Designated routes with lots of signs and monitoring...the paradigm on the Cleveland is closed unless designated open...this is the most effective way to provide the use and keep it concentrated. ◇ OHV use has specific borders. Put Carsonite signs on illegal trails—this works well. ◇ Volunteers help put them up. 	
3	9.4	barricades, barriers	<ul style="list-style-type: none"> ◇ Can’t get past the barricade of rocks. Barricade there all the time when personnel isn’t. ◇ If it takes time/effort to disassemble block, they will stay on route—most likely. Otherwise they risk chance of being caught by us/public. ◇ Last longer. 	
1	3.1	other educational material	<ul style="list-style-type: none"> ◇ Non-local trail-bike/ATV users have switched to other districts with OHV trail opportunity. OSV clubs are excellent at policing their own user type. 	
1	3.1	maps	<ul style="list-style-type: none"> ◇ Maps tell where can ride and cannot. (Most people do that.) ATVs/motorcycles do more off-trail—4WDs don’t. 	
1	3.1	close or limit use	<ul style="list-style-type: none"> ◇ Closed by private landowner. 	
1	3.1	relocate or designate OHV trails	<ul style="list-style-type: none"> ◇ Need to have adequate signing of trail designations for OHV use. Education of where OHVs are allowed to be—needs to be combined with a good map. 	
1	3.1	drain dips	<ul style="list-style-type: none"> ◇ Last longer 	
1	3.1	trail design	<ul style="list-style-type: none"> ◇ If we can provide quality experiences, four-wheelers will tend to stick to the trails. 	

**Four-Wheelers Going Off Established Roads or Trails
Seasonal Differences of Actions**

(n = 31)

Number of respondents	Percent	Seasonal nature of actions
16	50.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
16	50.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.
For those who reported their actions differed by season, how the respondents said they differed.		
<ul style="list-style-type: none"> ◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas. ◇ During hunting season—do more law enforcement. ◇ Hunting season. ◇ Little or no problem with winter use. Summer use getting out of control. Law enforcement and personal I&E contacts only strategy at this time. ◇ Message to public/talking points change with season. Resources of concern change with season. ◇ Use barricades/barriers in summer, not in winter. ◇ We have limited staff in winter with little to no field presence. 		

2: OHVs Going Too Fast

There were 26 respondents (58 percent of the sample) who said they observed or received reports of this management issue. Of these, only seven indicated that the issue differed by season.

The most frequently named *indirect* actions were posters or signs and maps. The most frequently named *direct* action was law enforcement. The most frequently named *resource-hardening* action was artificial tread. The most frequently named *bridge building/collaboration* actions were personal contacts and local OHV club meetings. The actions used most often and seen as most effective were *bridge-building/collaboration* (mostly personal contacts) and *direct* (mostly law enforcement). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Try to educate/warn them of violations (safety concerns/violations). They pay attention to the risk of getting injured and/or paying a fine.
- Can explain why instead of just what the rule is. It goes a long way.
- Due to fines, very effective.
- Because users pay attention to law enforcement, but fast is part of the experience.

Only six of the respondents reporting this issue said the action they used changed seasonally.

**OHVs Going too Fast
Issue Observed or Reports Received**

Number of respondents	Percent	
26	57.8	respondents observed or received reports of this management issue
19	42.2	respondents <i>did not</i> observe or receive reports of this management issue
(n = 24)		
7	29.2	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
16	66.7	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	4.2	of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.
For those who reported the issue differed by season, how the respondents said it differed:		
◇		Complaints of going too fast near campground that is open only in summer
◇		In winter, speed of snowmobiles around blind corners is an issue. Groomed trail lends itself to higher speed.
◇		More in winter, better traction, less dust.
◇		Spring—Fall are high-use seasons, so most of problems are related to the number of people.
◇		Summer season—motorcycles and quads
◇		Winter more
◇		Winter only

**OHVs Going too Fast
Actions Used**

Indirect actions used by those reporting OHVs going too fast (n = 26)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
18	69.2	posters or signs	14	53.8	maps
11	42.3	brochures	0	0	public service announcements
7	26.9	other educational materials	2	7.7	local newspaper articles
13	50.0	user ethics	13	50.0	bulletin boards
9	34.6	etiquette	2	7.7	trail descriptions
0	0	manufacturers' stickers on ATVs*	6	23.1	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting OHVs going too fast**(n = 26)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	3.8	close or limit use	4	15.4	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	23	88.5	law enforcement
3	11.5	organized events to do trail maintenance	2	7.7	users ride in dispersed patterns
2	7.7	relocate or designate OHV trails	1	3.8	separate trails
1	3.8	seasonal closures	1	3.8	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting OHVs going too fast						(n = 26)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
2	7.7	Specify a maximum grade on trails What percent? mean = 12.5000 SD = 3.53553	4	15.4	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)	
0	0	Specify a <u>minimum</u> grade What percent? n/a	2	7.7	lengthened trails to disperse riders	
3	11.5	drain dips (meaning a reversal of grade)	2	7.7	staging areas with parking facilities	
0	0	flexible water bars	1	3.8	designated campsites	
1	3.8	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*	
3	11.5	trail design: limit long straightaways/use all single track/use natural obstacles*	1	3.8	general trail maintenance including consistent, mechanized & 3-year plan*	
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*	
1	3.8	various types of erosion control*				

*Actions added by respondents in response to open-ended questions.

<i>Bridge-building/collaboration actions used by those reporting OHVs going too fast</i> (n = 26)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
21	80.8	personal contacts	7	26.9	partner with different groups
13	50.0	local OHV club meetings	9	34.6	volunteer patrols
3	11.5	meetings with state OHV groups	1	3.8	partner with OHV shops
7	26.9	adopt-a-trail program	4	15.4	workshops
0	0	trail safety evaluation form	3	11.5	committees with different groups
0	0	education, including campfire programs*	5	19.2	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety with BLM*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**OHVs Going too Fast
Actions Reported Used Most Often**

Actions reported "used most often" (n = 25)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
9	36.0	personal contacts
8	32.0	law enforcement
5	20.0	posters or signs
2	8.0	user ethics
1	4.0	trail design

**OHVs Going too Fast
Actions Reported Most Effective**

Actions reported “most effective”				(n = 25)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
9	36.0	personal contacts	<ul style="list-style-type: none"> ◇ Can explain why instead of just what the rule is—goes a long way. ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ Dialog between user and us important. Give them “a why.” Explain to them. ◇ If you explain why better—educational/cost \$ explanations. ◇ One-on-one information to deal with the problem is best—let them know. ◇ Personal contacts can be educational in the field. ◇ Talking to someone is better than leaving a note on info board (won’t get read). Message gets across better. We are right there when it happens. ◇ Try to educate/warn them of violations (safety concerns/violations). They pay attention to the risk of getting injured and/or paying a fine. ◇ no response (1) 	
9	36.0	law enforcement	<ul style="list-style-type: none"> ◇ Because there are direct consequences for the violator that don’t negatively affect responsible users. ◇ Because users pay attention to law enforcement. (“Fast is part of the experience.”) ◇ Due to fines, very effective. ◇ Get a ticket, gonna do it again? ◇ Prefer personal contact with teeth—although does not currently exist with budget restraints. ◇ Talk to them and get them on your side; having a good attitude helps get them to see things your way. ◇ Ticketing a lot—word of mouth gets out (local folks more than visitors) 	

**OHVs Going too Fast
Actions Reported Most Effective (continued)**

Actions reported “most effective”				(n = 25)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
3	12.0	user ethics	<ul style="list-style-type: none"> ◇ Type of visitor—young males—care mostly about their experience not the NF. They will pay attention if prosecution is result of their bad actions. ◇ You can post signs and talk all you want, but change really happens when the tickets start getting written. ◇ If we get them to be responsible for their own safety, it’s the best. Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. ◇ More of them than us. Patrol themselves. ◇ Peer pressure. Organized groups are into “Tread Lightly” (same message as on signs/bulletin boards) 	
3	12.0	posters or signs	<ul style="list-style-type: none"> ◇ Posted speed limits and safety signs help by getting info to riders. ◇ Speed limits are placed at staging areas. ◇ Thoughtful trail layout and design (including signs) affects user experiences in many ways, including conflicts. A good design may substantially reduce conflicts. 	
1	4.0	trail design	<ul style="list-style-type: none"> ◇ All single track keeps speed down. 	

**OHVs Going too Fast
Seasonal Differences of Actions**

(n = 26)

Number of respondents	Percent of respondents	Seasonal nature of actions
6	23.1	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
20	76.9	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Little or no problem with winter use. Summer use getting out of control. Law enforcement and personal I&E contacts only strategy at this time.
- ◇ Message to public/talking points change with season. Different resources of concern change with season.
- ◇ Signs—in winter only—“slow” at trailheads.
- ◇ We have limited staff in winter with little to no field presence.
- ◇ Winter primarily.
- ◇ Winter snowmobile use is not necessarily on trails.

3: Lack of Safetywear (such as helmets, etc.)

There were 23 respondents (51 percent of the sample) who said they observed or received reports of this management issue. Of these, nine indicated that the issue differed by season. Most indicated this was a summer issue (mostly because winter users wear helmets for warmth).

The most frequently named *indirect* actions were posters or signs, bulletin boards, and brochures. The most frequently named *direct* action was law enforcement. The most frequently named *resource-hardening* action was staging areas with parking facilities. The most frequently named *bridge-building/collaboration* actions were personal contacts and volunteer patrols. The actions used most often and seen as most effective were *direct* (mostly law enforcement) and *bridge building/collaboration* (mostly personal contacts). Why this was perceived as most effective included the following explanations by respondents to an open-ended question:

- They get a ticket.
- No regulations/laws to do with safety except helmet on ATV. Tell them they are not wise to wear shorts, etc. Write tickets for no helmet.
- Tell people face-to-face what they need to wear for safety.

About one-third of the respondents reporting this issue said the action they used changed seasonally.

**Lack of Safetywear (such as helmets, etc.)
Issue Observed or Reports Received**

Number of respondents	Percent	
23	51.1	respondents observed or received reports of this management issue
22	48.9	respondents <i>did not</i> observe or receive reports of this management issue
(n = 23)		
9	39.1	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
13	56.5	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	4.3	of those respondents who observed or received reports of this management issue indicated that they <i>did not know</i> if the issue differed by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ During fall hunting season—more
- ◇ More of a problem in summer. Worn in winter for warmth.
- ◇ More of a problem in summer—a law in summer on ATVs. Snowmobilers wear them for warmth.
- ◇ Most OSVs wear helmets for warmth.
- ◇ Not required to wear helmet on snowmobile.
- ◇ Riders don't want to wear helmets in the summer and during deer season because it's too hot.
- ◇ Spring—Fall are high-use seasons, so most of the problems are related to the number of people.
- ◇ Summer only
- ◇ Summer season

**Lack of Safetywear (such as helmets, etc.)
Actions Used**

<i>Indirect actions used by those reporting a lack of safetywear</i> (n = 23)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
16	69.6	posters or signs	4	17.4	maps
13	56.5	brochures	2	8.7	public service announcements
8	34.8	other educational materials	3	13.0	local newspaper articles
11	47.8	user ethics	13	56.5	bulletin boards
5	21.7	etiquette	1	4.3	trail descriptions
1	4.3	manufacturers' stickers on ATVs*	1	4.3	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting a lack of safetywear</i> (n = 23)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	4.3	close or limit use	3	13.0	provisions for special use permits
1	4.3	non-issuance of outfitter, guide, or event permits	23	100.0	law enforcement
2	8.7	organized events to do trail maintenance	1	4.3	users ride in dispersed patterns
1	4.3	relocate or designate OHV trails	1	4.3	separate trails
1	4.3	seasonal closures	1	4.3	separate user groups
1	4.3	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting a lack of safetywear (n = 23)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	4.3	Specify a maximum grade on trails	2	8.7	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? mean = 15.00 (only response)			
0	0	Specify a <u>minimum</u> grade	1	4.3	lengthened trails to disperse riders
		What percent? n/a			
1	4.3	drain dips (meaning a reversal of grade)	3	13.0	staging areas with parking facilities
0	0	flexible water bars	2	8.7	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	1	4.3	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
1	4.3	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting a lack of safetywear (n = 23)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
20	87.0	personal contacts	4	17.4	partner with different groups
4	17.4	local OHV club meetings	7	30.4	volunteer patrols
3	13.0	meetings with state OHV groups	2	8.7	partner with OHV shops
4	17.4	adopt-a-trail program	3	13.0	workshops
1	4.3	trail safety evaluation form	1	4.3	committees with different groups
1	4.3	education, including campfire programs*	3	13.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Lack of Safetywear (such as helmets, etc.)
Actions Reported Used Most Often**

Actions reported "used most often" (n = 23)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
8	34.8	personal contacts
7	30.4	law enforcement
6	26.1	posters or signs
1	4.3	maps
1	4.3	bulletin boards

**Lack of Safetywear (such as helmets, etc.)
Actions Reported Most Effective**

Actions reported “most effective” (n = 22)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
10	45.5	law enforcement	<ul style="list-style-type: none"> ◇ Because there are direct consequences for the violator that don’t negatively affect responsible users. ◇ Dealing with people with guns (hunting) get belligerent—their goal is to get a deer—safety is not a priority. ◇ Just a few tickets go a long way—word travels fast among users. ◇ Lack of safetywear is an individual issue, only affecting themselves (the wearer). ◇ No regs/laws to do with safety except helmet on ATV. Tell them they are not wise to wear shorts, etc. Write tickets for that one thing (no helmet). ◇ They get a ticket. ◇ They seem to listen closer to LEO. ◇ Ticket with a fine—state law violation. ◇ Users can’t ignore law enforcement. ◇ no response (1)
8	36.4	personal contacts	<ul style="list-style-type: none"> ◇ Able to answer why—cite person—answer questions Enforce/why/options. ◇ Getting a ticket gives them “a clue.” ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ Talking to someone is better than leaving a note or info board (won’t get read). Message gets across better. ◇ Tell people face-to-face what need to wear for their safety. ◇ The “FS presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. ◇ no response (2)

**Lack of Safetywear (such as helmets, etc.)
Actions Reported Most Effective (continued)**

Actions reported “most effective” (n = 22)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	4.5	brochures	◇ Detailed regs. from California vehicle code, cost of violation. If they know that they are violating California code (and not just ours) and how much the fines are (\$150), less likely to do without safetywear.
1	4.5	user ethics	◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem.
1	4.5	maps	◇ Our OHV/OSV map has all the correct safetywear on it.
1	4.5	bulletin boards	◇ Informed public generally do the right thing.

**Lack of Safetywear (such as helmets, etc.)
Seasonal Differences of Actions**

(n = 23)		
Number of respondents	Percent of respondents	Seasonal nature of actions
8	34.8	of those respondents who observed or received reports of this management issue indicated that their actions differed by season
15	65.2	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas.
- ◇ Different equipment needed for snowmobiles.
- ◇ During hunting season—do more law enforcement
- ◇ Hunting season.
- ◇ In deer hunting season—don’t want to wear safety gear.
- ◇ No law on helmets on snowmobiles.
- ◇ Summer only.
- ◇ We have limited staff in winter with little to no field presence.

4: Alcohol use

There were 19 respondents (42 percent of the sample) who said they observed or received reports of this management issue. Of these, only two indicated that the issue differed by season.

The most frequently named *indirect* actions were posters or signs and brochures. The most frequently named *direct* action was provisions for special use permits. The most frequently named *resource-hardening* action was artificial tread. The most frequently named *bridge-building/collaboration* actions were personal contacts and volunteer patrols. The actions used most often and seen as most effective were *bridge-building/collaboration* (mostly personal contacts) and *direct* (mostly law enforcement). Why these were perceived as most effective included the following explanations by respondents to an open-ended question:

- Using alcohol makes them uneasy—they will comply if they know they will have their vehicle searched. Use a check station—talk to everyone and tell them not to drink and they may be searched.
- Personal contact is more effective than a passive poster.
- People don't tend to drink when law enforcement is present.

Only five of the respondents reporting this issue said the action they used changed seasonally.

Alcohol Use Issue Observed or Reports Received

Number of respondents	Percent	
19	42.2	respondents observed or received reports of this management issue
26	57.8	respondents <i>did not</i> observe or receive reports of this management issue
(n = 19)		
2	10.5	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
16	84.2	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
1	5.3	of those respondents who observed or received reports of this management issue indicated that they <i>did not</i> know if the issue differed by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇Spring—Fall are high-use seasons, so most of problems are related to the number of people.
- ◇Summer—Mostly young riders drinking.

<i>Indirect actions used by those reporting alcohol use</i>						(n = 19)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
8	42.1	posters or signs	3	15.8	maps	
7	36.8	brochures	2	10.5	public service announcements	
5	26.3	other educational materials	3	15.8	local newspaper articles	
6	31.6	user ethics	6	31.6	bulletin boards	
4	21.1	etiquette	2	10.5	trail descriptions	
0	0	manufacturers' stickers on ATVs*	2	10.5	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting alcohol use</i>						(n = 19)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
2	10.5	close or limit use	5	26.3	provisions for special use permits	
1	5.3	non-issuance of outfitter, guide, or event permits	1	5.3	law enforcement	
2	10.5	organized events to do trail maintenance	1	5.3	users ride in dispersed patterns	
2	10.5	relocate or designate OHV trails	1	5.3	separate trails	
1	5.3	seasonal closures	1	5.3	separate user groups	
1	5.3	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting alcohol use						(n = 19)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	5.3	Specify a maximum grade on trails	2	10.5	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)	
		What percent? mean = 15.00 (only response)				
0	0	Specify a <u>minimum</u> grade	1	5.3	lengthened trails to disperse riders	
		What percent? n/a				
1	5.3	drain dips (meaning a reversal of grade)	1	5.3	staging areas with parking facilities	
0	0	flexible water bars	1	5.3	designated campsites	
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*	
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	1	5.3	general trail maintenance including consistent, mechanized & 3-year plan*	
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*	
1	5.3	various types of erosion control*				

*Actions added by respondents in response to open-ended questions.

<i>Bridge-building/collaboration actions used by those reporting alcohol use</i> (n = 19)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
17	89.5	personal contacts	4	21.1	partner with different groups
5	26.3	local OHV club meetings	6	31.6	volunteer patrols
2	10.5	meetings with state OHV groups	2	10.5	partner with OHV shops
5	26.3	adopt-a-trail program	3	15.8	workshops
1	5.3	trail safety evaluation form	1	5.3	committees with different groups
1	5.3	education, including campfire programs*	3	15.8	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	1	5.3	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

Alcohol Use Actions Reported Used Most Often

Actions reported "used most often" (n = 18)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
9	50.0	personal contacts
5	27.8	law enforcement
2	11.1	posters or signs
1	5.6	local OHV club meetings
1	5.6	working with Sheriff's Dept.

**Alcohol Use
Actions Reported Most Effective**

Actions reported “most effective”				(n = 19)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
10	52.6	personal contacts	<ul style="list-style-type: none"> ◇ Dialog between user and us is important. Give them “a why.” Explain to them. ◇ Due to the interaction with visitors, chance to explain in more detail why there are rules, answer visitors’ questions, etc. ◇ Gets attention of users. ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ Not a specific law for a long time. FPOs don’t really do law enforcement (law enforcement is also personal contact). Peer pressure. ◇ Personal contact is more effective than, say, a passive poster. ◇ Talking to someone is better than leaving a note on info board (won’t get read). Message gets across better. People get tired of reading negative posters. ◇ The “FS presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. ◇ Using alcohol makes them uneasy—they will comply if they know they will have vehicle searched. Use a check station—talk to everyone and tell them not to drink/may be searched. 	
6	31.6	law enforcement	<ul style="list-style-type: none"> ◇ no response (1) ◇ Dealing with underage drinking and of-age, but irresponsible. ◇ Educate/provide consequence for actions. ◇ People don’t tend to drink when law enforcement is present. ◇ They seem to listen closer to LEO. ◇ You can post signs and talk all you want, but change really happens when the tickets start getting written. (FS LEOs working with county sheriff) ◇ no response (1) 	

Alcohol Use
Actions Reported Most Effective (continued)

Actions reported “most effective”				(n = 19)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
1	5.3	posters or signs	◇ Information is “in their face” to read. They have had specific signs made for this and posted on trail and at trailhead.	
1	5.3	user ethics	◇ Getting them to do it on their own means more than a ticket. Used to do law enforcement but unarmed FPOs can’t do it. When alcohol is around, FPOs don’t deal with it because unarmed. Need to call cops who aren’t available much.	
1	5.3	working with sheriff’s department	◇ Do 15-minute program. Kids pay attention, but hard to know how well it works. Haven’t found much that works.	

Alcohol Use
Seasonal Differences of Actions

			(n = 19)
Number of respondents	Percent of respondents	Seasonal nature of actions	
5	26.3	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
14	73.7	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
◇ Areas are closed to ATVs in winter where we don’t want them damaging trails that could be a safety hazard to others (rutting).			
◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas.			
◇ During hunting season, do more law enforcement			
◇ Hunting season			
◇ We have limited staff in winter with little to no field presence.			

5: Inexperienced Drivers in Difficult Terrain

There were 13 respondents (29 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Inexperienced Drivers in Difficult Terrain Issue Observed or Reports Received

Number of respondents	Percent	
13	28.9	respondents observed or received reports of this management issue
32	71.1	respondents <i>did not</i> observe or receive reports of this management issue
(n = 12)		
6	50.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
6	50.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ In summer, on technical trails, 4x4s get stuck.
- ◇ More in summer
- ◇ Most use November through May
- ◇ Winter drivers stuck in the snow (not prepared).
- ◇ Winter is more difficult riding terrain.
- ◇ Winter, summer is not as much of a problem, because winter access is limited.

**Inexperienced Drivers in Difficult Terrain
Actions Used**

<i>Indirect actions used by those reporting inexperienced drivers in difficult terrain</i>						(n = 13)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
9	69.2	posters or signs	10	76.9	maps	
5	38.5	brochures	0	0	public service announcements	
3	23.1	other educational materials	2	15.4	local newspaper articles	
4	30.8	user ethics	5	38.5	bulletin boards	
2	15.4	etiquette	8	61.5	trail descriptions	
0	0	manufacturers' stickers on ATVs*	7	53.8	trail-use recommendations	
1	7.7	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting inexperienced drivers in difficult terrain</i>						(n = 13)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	7.7	close or limit use	1	7.7	provisions for special use permits	
0	0	non-issuance outfitter, guide, or event permits	6	46.2	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
2	15.4	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
1	7.7	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting inexperienced drivers in difficult terrain (n = 13)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails	2	15.4	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? n/a			
0	0	Specify a <u>minimum</u> grade	0	0	lengthened trails to disperse riders
		What percent? n/a			
2	15.4	drain dips (meaning a reversal of grade)	3	23.1	staging areas with parking facilities
0	0	flexible water bars	1	7.7	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	1	7.7	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting inexperienced drivers in difficult terrain (n = 13)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
8	61.5	personal contacts	1	7.7	partner with different groups
3	23.1	local OHV club meetings	5	38.5	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
4	30.8	adopt-a-trail program	1	7.7	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	3	23.1	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Inexperienced Drivers in Difficult Terrain
Actions Reported Used Most Often**

Actions reported "used most often"			(n = 13)
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action	
4	30.8	posters or signs	
3	23.1	personal contacts	
2	15.4	trail descriptions	
1	7.7	maps	
1	7.7	trail use recommendations	
1	7.7	relocate or designate OHV trails	
1	7.7	additional funding, matching funds	

**Inexperienced Drivers in Difficult Terrain
Actions Reported Most Effective**

Actions reported “most effective” (n = 13)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
6	46.2	posters or signs	<ul style="list-style-type: none"> ◇ Getting the right information to users will allow them to make good decisions. ◇ OHV use has specific borders. Put Carsonite signs on illegal trails—this works well. ◇ People think they are more experienced than they are (so trails signed by difficulty help). ◇ Signs get message out to everybody, as opposed to a handout. ◇ Trails are rated by difficulty, although there is no real standard—sometimes the most difficult trail in an area is automatically a black diamond.
3	23.1	personal contacts	<ul style="list-style-type: none"> ◇ no response (1) ◇ Because we get to talk and educate our publics. There is the chance for dialog and a good chance to explain why an area is closed or there are certain rules for a reason. ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ One-on-one, hand out info (Tread Lightly) with safety tips.
1	7.7	local newspaper articles	<ul style="list-style-type: none"> ◇ Peer pressure—people don’t want others to know they got stuck.
1	7.7	trail-use recommendations	<ul style="list-style-type: none"> ◇ Identify easy/moderate/difficult riding areas and let them know where they are (information is on maps, too).
1	7.7	relocate or designate OHV trails	<ul style="list-style-type: none"> ◇ Redesignate county road for nonlicensed OHV.
1	7.7	additional funding, matching funds	<ul style="list-style-type: none"> ◇ Money drives everything.

**Inexperienced Drivers in Difficult Terrain
Seasonal Differences of Actions**

(n = 13)

Number of respondents	Percent of respondents	Seasonal nature of actions
4	30.8	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
9	69.2	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.
For those who reported their actions differed by season, how the respondents said they differed.		
<ul style="list-style-type: none"> ◇ More publicity in winter ◇ Mostly in winter ◇ Winter-only problem ◇ Winter—warning signs about dangers and road closures; Summer—public contacts and information 		

6: Large Group of Four-Wheelers

There were nine respondents (20 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Large Group of Four-Wheelers Issue Observed or Reports Received

Number of respondents	Percent	
9	20.0	respondents observed or received reports of this management issue
36	80.0	respondents <i>did not</i> observe or receive reports of this management issue
(n = 9)		
5	55.6	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
4	44.4	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Holiday weekends—heaviest use
- ◇ More in winter
- ◇ Summer
- ◇ Summer—larger groups
- ◇ Summer use of [respondent named] trail

**Large Group of Four-Wheelers
Actions Used**

<i>Indirect actions used by those reporting large groups of four-wheelers</i> (n = 9)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	22.2	posters or signs	5	55.6	maps
3	33.3	brochures	0	0	public service announcements
0	0	other educational materials	0	0	local newspaper articles
6	66.7	user ethics	2	22.2	bulletin boards
4	44.4	etiquette	2	22.2	trail descriptions
0	0	manufacturers' stickers on ATVs*	3	33.3	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting large groups of four-wheelers</i> (n = 9)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	22.2	close or limit use	2	22.2	provisions for special use permits
1	11.1	non-issuance of outfitter, guide, or event permits	5	55.6	law enforcement
1	11.1	organized events to do trail maintenance	3	33.3	users ride in dispersed patterns
2	22.2	relocate or designate OHV trails	0	0	separate trails
2	22.2	seasonal closures	1	11.1	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting large groups of four-wheelers						(n = 9)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	Specify a maximum grade on trails	1	11.1	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)	
		What percent? n/a				
0	0	Specify a <u>minimum</u> grade	1	11.1	lengthened trails to disperse riders	
		What percent? n/a				
1	11.1	drain dips (meaning a reversal of grade)	3	33.3	staging areas with parking facilities	
0	0	flexible water	2	22.2	designated campsites	
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	1	11.1	barricades, barriers*	
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*	
0	0	rolling dips, * dog bones	1	11.1	overflow parking and staging areas*	
0	0	various types of erosion control*				

*Actions added by respondents in response to open-ended questions.

Bridge Building/Collaboration Actions used by those reporting large groups of four-wheelers (n=9)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
7	77.8	personal contacts	2	22.2	partner with different groups
6	66.7	local OHV club meetings	3	33.3	volunteer patrols
1	11.1	meetings with state OHV groups	1	11.1	partner with OHV shops
3	33.3	adopt-a-trail program	1	11.1	workshops
0	0	trail safety evaluation form	1	11.1	committees with different groups
1	11.1	education, including campfire programs*	3	33.3	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Large Group of Four-Wheelers
Actions Reported Used Most Often**

Actions reported "used most often" (n = 9)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
3	33.3	personal contacts
2	22.2	law enforcement
1	11.1	staging areas with parking facilities
1	11.1	adopt-a-trail program
1	11.1	partner with different groups
1	11.1	education, including campfire programs

**Large Group of Four-Wheelers
Actions Reported Most Effective**

Actions reported “most effective” (n = 9)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
3	33.3	personal contacts	<ul style="list-style-type: none"> ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ More personal than info. board. ◇ One-on-one contact to pass on info. In field and at OHV meetings—club members spread word to other members. ◇ Type of visitor—young males—care mostly about their experience, not the NF. They will pay attention if prosecution is result of their bad actions.
2	22.2	law enforcement	<ul style="list-style-type: none"> ◇ If you want to disperse people, threaten people with tickets—works good.
1	11.1	staging areas with parking facilities	<ul style="list-style-type: none"> ◇ Providing a staging area with parking directs activity to an area where they can camp and off-load (easing crowding).
1	11.1	adopt-a-trail program	<ul style="list-style-type: none"> ◇ You have these groups that have numerous members that travel as groups; monthly meetings (50 groups) get messages out so can share goals.
1	11.1	partner with different groups	<ul style="list-style-type: none"> ◇ Able to meet with lots of people to educate them.
1	11.1	barricades, barriers	<ul style="list-style-type: none"> ◇ Large groups of 4-wheelers cause adverse impacts when they camp or gather. Effective barriers combined with designated camping often meets needs and contains impacts to roads.

**Large Group of Four-Wheelers
Seasonal Differences of Actions**

(n = 9)

Number of respondents	Percent of respondents	Seasonal nature of actions
3	33.3	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
6	66.7	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Hunting season
- ◇ Little or no problem with winter use. Summer use getting out of control. Law enforcement and personal I&E contacts only strategy at this time.
- ◇ Most use is November—May.

7: Dangerous Drop-offs, Mines, Etc.

There were eight respondents (18 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Dangerous Drop-offs, Mines, Etc. Issue Observed or Reports Received

Number of respondents	Percent	
8	17.8	respondents observed or received reports of this management issue
37	82.2	respondents <i>did not</i> observe or receive reports of this management issue
(n = 8)		
3	37.5	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
5	62.5	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ In winter, “explorers” on snowmobiles go off trail and encounter dangerous drop-offs.
- ◇ Summer—lots of old mining claims, some have hazards
- ◇ Winter trails—due to weather—temperature gets holes to open up. In summer, a mine (on private land)—FS flags it off during events.

**Dangerous Drop-offs, Mines, Etc.
Actions Used**

<i>Indirect actions used by those reporting dangerous drop-offs, mines, etc.</i>						(n = 8)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
7	87.5	posters or signs	2	25.0	maps	
0	0	brochures	0	0	public service announcements	
1	12.5	other educational materials	0	0	local newspaper articles	
0	0	user ethics	1	12.5	bulletin boards	
0	0	etiquette	2	25.0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	3	37.5	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting dangerous drop-offs, mines, Etc.</i>						(n = 8)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
8	100.0	close or limit use	1	12.5	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	4	50.0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
2	25.0	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting dangerous drop-offs, mines, Etc. (n = 8)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails? What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade? What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	1	12.5	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting dangerous drop-offs, mines, Etc. (n = 8)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
5	62.5	personal contacts	0	0	partner with different groups
1	12.5	local OHV club meetings	2	25.0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
1	12.5	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	2	25.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
1	12.5	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Dangerous Drop-offs, Mines, Etc.
Actions Reported Used Most Often**

Actions reported "used most often" (n = 8)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
4	50.0	posters or signs
2	25.0	personal contacts
2	25.0	close or limit use

**Dangerous Drop-offs, Mines, etc.
Actions Reported Most Effective**

Actions reported “most effective” (n = 8)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
4	50.0	posters or signs	<ul style="list-style-type: none"> ◇ Real visual signs (colorful—HAZARD AREA) gets message across. ◇ Signs are on site, on the ground. Repeat users know to look for the signs. ◇ no response (2)
3	37.5	personal contacts	<ul style="list-style-type: none"> ◇ Best to give warning face to face. ◇ Due to the interaction with visitors, chance to explain in more detail why there are rules, answers visitors’ questions, etc. ◇ Gets their attention.
1	12.5	close or limit use	<ul style="list-style-type: none"> ◇ Closed by private landowner.

**Dangerous Drop-offs, Mines, etc.
Seasonal Differences of Actions**

			(n = 8)
Number of respondents	Percent of respondents	Seasonal nature of actions	
2	25.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
6	75.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
<ul style="list-style-type: none"> ◇ Areas are closed to ATVs in winter where we don’t want them damaging trails that could be a safety hazard to others (rutting). ◇ Winter: re-groom signs “Danger”; use re-writeable sign for trail conditions, “avalanche,” etc., grooming, too. Summer: flag off mine. 			

8: Too Many People at Trail Access Points

There were six respondents (13 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Too Many People at Trail Access Points Issue Observed or Reports Received

Number of respondents	Percent	
6	13.3	respondents observed or received reports of this management issue
39	86.7	respondents <i>did not</i> observe or receive reports of this management issue
(n = 6)		
3	50.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
3	50.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Winter more
- ◇ Winter more/limited parking
- ◇ Winter, only—a few trails overflow.

**Too Many People at Trail Access Points
Actions Used**

Indirect actions used by those reporting too many people at trail access points (n = 6)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
4	66.7	posters or signs	4	66.7	maps
2	33.3	brochures	1	16.7	public service announcements
2	33.3	other educational materials	2	33.3	local newspaper articles
3	50.0	user ethics	2	33.3	bulletin boards
3	50.0	etiquette	2	33.3	trail descriptions
0	0	manufacturers' stickers on ATVs*	4	66.7	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting too many people at trail access points (n = 6)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
3	50.0	close or limit use	2	33.3	provisions for special use permits
1	16.7	non-issuance of outfitter, guide, or event permits	4	66.7	law enforcement
1	16.7	organized events to do trail maintenance	2	33.3	users ride in dispersed patterns
2	33.3	relocate or designate OHV trails	1	16.7	separate trails
3	50.0	seasonal closures	1	16.7	separate user groups
1	16.7	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting too many people at trail access points**(n = 6)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	16.7	Specify a maximum grade on trails	1	16.7	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? mean = 15.00 (only response)			
0	0	Specify a <u>minimum</u> grade	1	16.7	lengthened trails to disperse riders
		What percent? n/a			
1	16.7	drain dips (meaning a reversal of grade)	2	33.3	staging areas with parking facilities
0	0	flexible water bars	1	16.7	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting too many people at trail access points (n = 6)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
5	83.3	personal contacts	2	33.3	partner with different groups
2	33.3	local OHV club meetings	2	33.3	volunteer patrols
1	16.7	meetings with state OHV groups	1	16.7	partner with OHV shops
1	16.7	adopt-a-trail program	1	16.7	workshops
1	16.7	trail safety evaluation form	2	33.3	committees with different groups
1	16.7	education, including campfire programs*	1	16.7	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Too Many People at Trail Access Points
Actions Reported Used Most Often**

Actions reported "used most often" (n = 6)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
3	50.0	personal contacts
1	16.7	posters or signs
1	16.7	etiquette
1	16.7	staging areas with parking facilities

**Too Many People at Trail Access Points
Actions Reported Most Effective**

Actions reported “most effective”				(n = 6)
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”	
3	50.0	personal contacts	<ul style="list-style-type: none"> ◇ Dialog between user and us important. Give them “a why.” Explain to them. Give them a description on where to go park. ◇ Parking and trailhead are along Hwy [named] and have so many snowmobiles at parking lot/trailhead they direct traffic. ◇ The “FS presence” whether to help or enforce regulations is effective. Use motorcycle patrols to be “one of them.” Someone who has “riding ability” and can “talk bikes” with users. 	
1	16.7	user ethics	<ul style="list-style-type: none"> ◇ If people are nice to one another and take turns, works better. Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be a problem. 	
1	16.7	maps	<ul style="list-style-type: none"> ◇ Gives different trailhead locations so users can find other opportunities to ride, launch, and park. 	
1	16.7	staging areas with parking facilities	<ul style="list-style-type: none"> ◇ By providing enough access, many crowding issues may be resolved. Additionally, trail crowding may often be limited by available parking. 	

**Too Many People at Trail Access Points
Seasonal Differences of Actions**

(n = 6)

Number of respondents	Percent of respondents	Seasonal nature of actions
5	83.3	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
1	16.7	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ Change with fire, wet weather, spring. Restrictions in spring to avoid fawning, nesting, and frogs in aquatic areas.
- ◇ Message to public/talking points change with season. Different resources of concern change with season.
- ◇ Winter access is limited by areas that are plowed.
- ◇ Winter—only problem

9: Wilderness Trespass

This issue was added by the respondent(s) and was not included in the set of issues available to all respondents. There were six respondents (13 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Wilderness Trespass Issue Observed or Reports Received

Number of respondents	Percent	
6	13.3	respondents observed or received reports of this management issue
39	86.7	respondents <i>did not</i> observe or receive reports of this management issue
(n = 5)		
5	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Wilderness Trespass Actions Used

<i>Indirect actions used by those reporting wilderness trespass</i>						(n = 6)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
6	100.0	posters or signs	2	33.3	maps	
2	33.3	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
0	0	user ethics	1	16.7	bulletin boards	
0	0	etiquette	1	16.7	trail descriptions	
0	0	manufacturers' stickers on ATVs*	1	16.7	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting wilderness trespass						(n = 6)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	16.7	close or limit use	0	0	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	0	0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
0	0	relocate or designate OHV trails	0	0	separate trails	
1	16.7	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting wilderness trespass (n = 6)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	1	16.7	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting wilderness trespass						(n = 6)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
5	83.3	personal contacts	0	0	partner with different groups	
2	33.3	local OHV club meetings	1	16.7	volunteer patrols	
0	0	meetings with state OHV groups	0	0	partner with OHV shops	
1	16.7	adopt-a-trail program	0	0	workshops	
0	0	trail safety evaluation form	0	0	committees with different groups	
0	0	education, including campfire programs*	1	16.7	maintain trail with local groups and volunteers	
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*	
0	0	mine safety evaluation form*	0	0	help from regional office and state*	
0	0	find out from users and environmentalists where trails should be*				

*Actions added by respondents in response to open-ended questions.

**Wilderness Trespass
Actions Reported Used Most Often**

Actions reported "used most often"			(n = 6)
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action	
2	33.3	posters or signs	
2	33.3	personal contacts	
1	16.7	law enforcement	
1	16.7	barricades, barriers	

**Wilderness Trespass
Actions Reported Most Effective**

Actions reported “most effective” (n = 6)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
3	50.0	law enforcement	<ul style="list-style-type: none"> ◇ They seem to listen closer to LEO. ◇ Word gets around. ◇ no response (1)
2	33.3	personal contacts	<ul style="list-style-type: none"> ◇ Gives users an opportunity to ask for clarification of the rules; lets the users know that we are keeping an eye on the resources. ◇ Personal contacts: allows discussion and agreement to the situation.
1	16.7	barricades, barriers	<ul style="list-style-type: none"> ◇ no response (1)

**Wilderness Trespass
Seasonal Differences of Actions**

(n = 5)		
Number of respondents	Percent of respondents	Seasonal nature of actions
3	60.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
2	40.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondents said they differed.

◇ During hunting season—do more LE.
◇ Hunting season
◇ Winter closures—use signs; winter—add different signs along boundaries—use grey and black signs.

10: Dangerous Driving Routes

There were three respondents (7 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Dangerous Driving Routes Issue Observed or Reports Received

Number of respondents	Percent	
3	6.7	respondents observed or received reports of this management issue
42	93.3	respondents <i>did not</i> observe or receive reports of this management issue
(n = 2)		
1	50.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
1	50.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondent said it differed:

◇	Winter—avalanche conditions
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Dangerous Driving Routes Actions Used

<i>Indirect actions used by those reporting dangerous driving routes</i>						(n = 3)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
3	100.0	posters or signs	2	66.7	maps	
1	33.3	brochures	2	66.7	public service announcements	
1	33.3	other educational materials	2	66.7	local newspaper articles	
0	0	user ethics	1	33.3	bulletin boards	
0	0	etiquette	1	33.3	trail descriptions	
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting dangerous driving routes (n = 3)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	33.3	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	1	33.3	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
0	0	relocate or designate OHV trails	0	0	separate trails
1	33.3	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting dangerous driving routes (n = 3)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? n/a			
0		Specify a <u>minimum</u> grade	0	0	lengthened trails to disperse riders
		What percent? n/a			
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting dangerous driving routes (n = 3)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	66.7	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	2	66.7	volunteer patrols
0	0	meetings with	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	1	33.3	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Dangerous Driving Routes
Actions Reported Used Most Often**

Actions reported "used most often" (n = 3)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	33.3	posters or signs
1	33.3	other educational materials
1	33.3	public service announcements

**Dangerous Driving Routes
Actions Reported Most Effective**

Actions reported “most effective” (n = 3)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	33.3	posters or signs	◇ Designated routes with lots of signs and monitoring...the paradigm on the [name of forest] is closed unless designated open...this is the most effective way to provide the use and keep it concentrated.
1	33.3	other educational	◇ SUV guide (25 pages, glossy publication) has history of driving routes, difficulty of trails. Many agencies involved, third printing, very popular.
1	33.3	public service announcements	◇ Users can take the easy trail route.

**Dangerous Driving Routes
Seasonal Differences of Actions**

			(n = 3)
Number of respondents	Percent of respondents	Seasonal nature of actions	
1	33.3	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
2	66.7	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
◇ Do public service announcements only in the winter and daily.			

11: Too Many Four-Wheelers on Roads or Trails

There were two respondents (4 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Too Many Four-Wheelers on Roads or Trails Issue Observed or Reports Received

Number of respondents	Percent	
		(n = 2)
2	4.4	respondents observed or received reports of this management issue
43	95.6	respondents <i>did not</i> observe or receive reports of this management issue
1	50.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
1	50.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
For those who reported the issue differed by season, how the respondent said it differed:		
◇	Opening week of deer season	

**Too Many Four-Wheelers on Roads or Trails
Actions Used**

Indirect actions used by those reporting too many four-wheelers on roads or trails						(n = 2)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
2	100.0	posters or signs	2	100.0	maps	
1	50.0	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
1	50.0	user ethics	1	50.0	bulletin boards	
1	50.0	etiquette	1	50.0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	1	50.0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting too many four-wheelers on roads or trails						(n = 2)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
2	100.0	close or limit use	1	50.0	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	1	50.0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
1	50.0	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting too many four-wheelers on roads or trails**(n = 2)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? n/a			
0	0	Specify a <u>minimum</u> grade	0	0	lengthened trails to disperse riders
		What percent? n/a			
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting too many four-wheelers on roads or trails (n = 2)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	100.0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	2	100.0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
1	50.0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire	1	50.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Too Many Four-Wheelers on Roads or Trails
Actions Reported Used Most Often**

Actions reported used most often" (n = 2)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	50.0	personal contacts
1	50.0	etiquette

**Too Many Four-Wheelers on Roads or Trails
Actions Reported Most Effective**

Actions reported “most effective” (n = 2)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	50.0	personal contacts	◇ Due to the interaction with visitors, chance to explain in more detail why there are rules, answers visitors’ questions, etc.
1	50.0	user ethics	◇ Get them to do it on their own means more than a ticket. Shows more of a responsibility of the individual—if they get it, ceases to be

Too Many Four-Wheelers on Roads or Trails

(n = 2)		
Number of respondents	Percent of respondents	Seasonal nature of actions
1	50.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
1	50.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

For those who reported their actions differed by season, how the respondent said they differed.

◇ Areas are closed to ATVs in winter where we don’t want them damaging trails that could be a safety hazard to others (rutting).

12: Lack of Safety Flags

There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Lack of Safety Flags Issue Observed or Reports Received

Number of respondents	Percent	
(n = 1)		
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Lack of Safety Flags Actions Used

<i>Indirect actions used by those reporting a lack of safety flags</i>						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	100.0	posters or signs	0	0	maps	
0	0	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
1	100.0	user ethics	1	100.0	bulletin boards	
1	100.0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting a lack of safety flags**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
0	0	relocate or designate OHV	0	0	separate trails
0	0	seasonal closures trails	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting a lack of safety flags (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting a lack of safety flags**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	0	0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
1	100.0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department.*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Lack of Safety Flags
Actions Reported Used Most Often**

Actions reported "used most often"			(n = 1)
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action	
1	100.0	education, including campfire programs	

**Lack of Safety Flags
Actions Reported Most Effective**

(n = 1)			
Actions reported “most effective”			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	100.0	education, including campfire programs	◇ The public needs to be informed.

**Lack of Safety Flags
Seasonal Differences of Actions**

(n = 1)		
Number of respondents	Percent of respondents	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

13: Multiple Land Jurisdictions

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Multiple Land Jurisdictions Issue Observed or Reports Received

Number of respondents	Percent	
		(n = 1)
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Multiple Land Jurisdictions Actions Used

<i>Indirect actions used by those reporting multiple land jurisdictions</i>						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	100.0	posters or signs	1	100.0	maps	
0	0	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
0	0	user ethics	0	0	bulletin boards	
0	0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting multiple land jurisdictions						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	close or limit use	1	100.0	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
0	0	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting multiple land jurisdictions**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting multiple land jurisdictions (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	1	100.0	volunteer patrols
1	100.0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	1	100.0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Multiple Land Jurisdictions
Actions Reported Used Most Often**

Actions reported "used most often" (n = 1)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	posters or signs

**Multiple Land Jurisdictions
Actions Reported Most Effective**

Actions reported “most effective” **(n = 1)**

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	100.0	nothing works	◇ Politics—City refuses to take part in fixing the problem.

**Multiple Land Jurisdictions
Seasonal Differences of Actions**

(n = 1)

Number of respondents	Percent of respondents	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

14: Non-Manageable Wilderness Boundaries

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Non-Manageable Wilderness Boundaries Issue Observed or Reports Received

Number of respondents	Percent	
(n = 1)		
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Non-Manageable Wilderness Boundaries Actions Used

<i>Indirect actions used by those reporting non-manageable wilderness</i>						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	100.0	posters or signs	1	100.0	maps	
0	0	brochures	1	100.0	public service announcements	
1	100.0	other educational materials	1	100.0	local newspaper articles	
0	0	user ethics	0	0	bulletin boards	
0	0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting non-manageable wilderness</i> (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
1	100.0	relocate or designate OHV trails	0	0	separate trails
0	0	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting non-manageable wilderness (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting non-manageable wilderness (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	1	100.0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Non-Manageable Wilderness Boundaries
Actions Reported Used Most Often**

Actions reported "used most often" (n = 1)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	posters or signs

**Non-Manageable Wilderness Boundaries
Actions Reported Most Effective**

(n = 1)

Number of respondents reporting action "most effective"	Percent reporting "most effective"	Action	Why "most effective"
1	100.0	local newspaper articles	◇ peer pressure

**Non-Manageable Wilderness Boundaries
Seasonal Differences of Actions**

(n = 1)

Number of respondents	Percent of respondents	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

15: Lack of Consistent Funding

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Due to this small number, we advise caution in interpreting the results in this section.

Lack of Consistent Funding Issue Observed or Reports Received

Number of respondents	Percent	
(n = 1)		
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.

For those who reported the issue differed by season, how the respondent said it differed:

◇ Most use November through May (winter)

Lack of Consistent Funding Actions Used

<i>Indirect actions used by those reporting a lack of consistent funding</i>						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	posters or signs	0	0	maps	
0	0	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
0	0	user ethics	0	0	bulletin boards	
0	0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations	
1	100.0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting a lack of consistent funding (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	0	0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
0	0	relocate or designate OHV trails	0	0	separate trails
0	0	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting a lack of consistent funding (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting a lack of consistent funding (n = 1)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	personal contacts	1	100.0	partner with different groups
0	0	local OHV club meetings	0	0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	1	100.0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Lack of Consistent Funding
Actions Reported Used Most Often**

Actions reported "used most often" (n = 1)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	partner with different groups

**Lack of Consistent Funding
Actions Reported Used Most Often**

(n = 1)			
Actions reported “most effective”			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	100.0	partner with different groups	◇ Need to augment funding.

**Lack of Consistent Funding
Seasonal Differences of Actions**

(n = 1)		
Number of respondents	Percent of respondents	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.
For those who reported their actions differed by season, how the respondent said they differed.		
◇ Most use occurs November through May and on weekends—also trail maintenance period. More money at that time.		

Appendix D—Social Conflict Issues and Management Actions

This appendix provides information about the actions in use on National Forests in California for each of the management issues identified under the *Social Conflict* category.

Five issues were asked of all respondents, and some managers included additional issues. These were conflicts with skiers/snowshoers, conflicts with owners of private lands, and OSV-OHV conflicts. These small percentages reflect the responses of only those respondents who added them to the list. If they had been on the original list to all respondents, then the numbers might be different.

1: Conflicts with Hikers or Backpackers on the Trails

There were eight respondents (18 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Conflicts with Hikers or Backpackers on the Trails Issue Observed or Reports Received

Number of respondents	Percent	
8	17.8	respondents observed or received reports of this management issue
37	82.2	respondents <i>did not</i> observe or receive reports of this management issue
(n = 8)		
5	62.5	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
3	37.5	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
For those who reported the issue differed by season, how the respondents said it differed:		
◇		All in summer
◇		Concentration of use in winter
◇		Conflicts between snowmobilers and skiers
◇		Hiker-OHV and skier/snowshoer-OSV
◇		More in summer

**Conflicts with Hikers or Backpackers on the Trails
Actions Used**

<i>Indirect actions used by those reporting conflicts with hikers or backpackers on the trails</i> (n = 8)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
7	87.5	posters or signs	5	62.5	maps
3	37.5	brochures	0	0	public service announcements
1	12.5	other educational materials	1	12.5	local newspaper articles
4	50.0	user ethics	6	75.0	bulletin boards
2	25.0	etiquette	4	50.0	trail descriptions
0	0	manufacturers' stickers on ATVs*	6	75.0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting conflicts with hikers or backpackers on the trails</i> (n = 8)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	25.0	close or limit use	1	12.5	provisions for special use permits
2	25.0	non-issuance of outfitter, guide, or event permits	6	75.0	law enforcement
1	12.5	organized events to do trail maintenance	1	12.5	users ride in dispersed patterns
3	37.5	relocate or designate OHV trails	1	12.5	separate trails
1	12.5	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	1	12.5	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting conflicts with hikers or backpackers on the trails (n = 8)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	1	12.5	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	1	12.5	lengthened trails to disperse riders
2	25.0	drain dips (meaning a reversal of grade)	1	12.5	staging areas with parking facilities
0	0	flexible water bars	1	12.5	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
1	12.5	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting conflicts with hikers or backpackers on the trails (n = 8)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
8	100.0	personal contacts	4	50.0	partner with different groups
3	37.5	local OHV club meetings	3	37.5	volunteer patrols
8	100.0	meetings with state OHV groups	1	12.5	partner with OHV shops
4	50.0	adopt-a-trail program	2	25.0	workshops
1	12.5	trail safety evaluation form	1	12.5	committees with different groups
0	0	education, including campfire programs*	3	37.5	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Conflicts with Hikers or Backpackers on the Trails
Actions Reported Used Most Often**

Actions reported "used most often" (n = 8)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
6	75.0	personal contacts
1	12.5	posters or signs
1	12.5	trail design

**Conflicts with Hikers or Backpackers on the Trails
Actions Reported Most Effective**

Actions reported “most effective” (n = 8)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
5	62.5	personal contacts	<ul style="list-style-type: none"> ◇ Can explain why, instead of just what rule is—goes a long way. ◇ Combine FS presence with signs for enforcement of rules and regs. ◇ Deal with people one-on-one and discuss issues and send letters to OHV groups about it. ◇ Due to the interaction with visitors, chance to explain in more detail why there are rules, answers visitors’ questions, etc ◇ User conflicts are often isolated incidents.
1	12.5	law enforcement	<ul style="list-style-type: none"> ◇ Educate/provide consequence for actions.
1	12.5	partner with different groups	<ul style="list-style-type: none"> ◇ Each group complains about the other—so get the groups TOGETHER. Explain to each other what their experiences are.
1	12.5	trail design	<ul style="list-style-type: none"> ◇ Thoughtful trail layout and design affects user experiences in many ways including conflicts. A good design may substantially reduce conflicts.

**Conflicts with Hikers or Backpackers on the Trails
Seasonal Differences of Actions**

			(n = 8)
Number of respondents	Percent of respondents	Seasonal nature of actions	
3	37.5	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
5	62.5	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
<ul style="list-style-type: none"> ◇ Areas are closed to ATVs in winter where we don’t want them damaging trails that could be a safety hazard to others (rutting). ◇ No hikers in winter. ◇ Summer only 			

2: Conflicts with Mountain Bikers on the Trails

There were seven respondents (16 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Conflicts with Mountain Bikers on the Trails Issue Observed or Reports Received

Number of respondents	Percent	
7	15.6	respondents observed or received reports of this management issue
38	84.4	respondents <i>did not</i> observe or receive reports of this management issue
(n = 7)		
5	71.4	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
2	28.6	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ All in summer
- ◇ No mountain bike use in winter
- ◇ Summer
- ◇ Summer only—no mountain biking in winter
- ◇ Winter—more

**Conflicts with Mountain Bikers on the Trails
Actions Used**

<i>Indirect actions used by those reporting conflicts with mountain bikers on the trails</i>						(n = 7)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
4	57.1	posters or signs	4	57.1	maps	
2	28.6	brochures	1	14.3	public service announcements	
1	14.3	other educational materials	1	14.3	local newspaper articles	
4	57.1	user ethics	4	57.1	bulletin boards	
3	42.9	etiquette	3	42.9	trail descriptions	
0	0	manufacturers' stickers on ATVs*	2	28.6	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting conflicts with mountain bikers on the trails</i>						(n = 7)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	14.3	close or limit use	0	0	provisions for special use permits	
1	14.3	non-issuance of outfitter, guide, or event permits	4	57.1	law enforcement	
0	0	organized events to do trail maintenance	1	14.3	users ride in dispersed patterns	
1	14.3	relocate or designate OHV trails	2	28.6	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	1	14.3	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting conflicts with mountain bikers on the trails (n = 7)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	14.3	Specify a maximum grade on trails What percent? mean = 10.0 (only response)	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	1	14.3	lengthened trails to disperse riders
1	14.3	drain dips (meaning a reversal of grade)	1	14.3	staging areas with parking facilities
0	0	flexible water bars	1	14.3	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
1	14.3	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting conflicts with mountain bikers on the trails (n = 7)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
6	85.7	personal contacts	3	42.9	partner with different groups
3	42.9	local OHV club meetings	3	42.9	volunteer patrols
1	14.3	meetings with state OHV groups	1	14.3	partner with OHV shops
2	28.6	adopt-a-trail program	1	14.3	workshops
0	0	trail safety evaluation form	1	14.3	committees with different groups
0	0	education, including campfire programs*	3	42.9	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Conflicts with Mountain Bikers on the Trails
Actions Reported Used Most Often**

Actions reported "used most often" (n = 7)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
2	28.6	personal contacts
2	28.6	posters or signs
1	14.3	user ethics
1	14.3	trail descriptions
1	14.3	volunteer patrols

**Conflicts with Mountain Bikers on the Trails
Actions Reported Most Effective**

Actions reported “most effective” (n = 7)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	14.3	posters or signs	◇ Discourages the honest people—tend to follow previous users
1	14.3	user ethics	◇ Needs a lot of work—new group. Ethics need to be ingrained. Mountain bikers causing problems for OHVers. Do have it—“feeling the fear” or get restrictions.
1	14.3	trail use recommendations	Seems to work.
1	14.3	law enforcement	◇ If we write them a ticket, it tells them that we mean business.
1	14.3	partner with	◇ Each group complains about the other—so get the groups TOGETHER. Explain to each other what their experiences are.
1	14.3	volunteer patrols	◇ Teaching personal responsibility (user-to-user contact)
1	14.3	trail design	◇ Thoughtful trail layout and design affects user experiences in many ways, including conflicts. A good design may substantially reduce conflicts.

**Conflicts with Mountain Bikers on the Trails
Seasonal Differences of Actions**

			(n = 7)
Number of respondents	Percent of respondents	Seasonal nature of actions	
3	42.9	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
4	57.1	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	

For those who reported their actions differed by season, how the respondents said they differed.

- ◇ n/a in winter
- ◇ Summer only
- ◇ Winter increases use.

3: Conflicts with People on Horseback on the Trails

There were six respondents (13 percent of the sample) who said they observed or received reports of this management issue. Because of this small number, we advise caution in interpreting the results in this section.

Conflicts with People on Horseback on the Trails Issue Observed or Reports Received

Number of respondents	Percent	
6	13.3	respondents observed or received reports of this management issue
39	86.7	respondents <i>did not</i> observe or receive reports of this management issue
(n = 6)		
4	66.7	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.
2	33.3	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.
For those who reported the issue differed by season, how it differed.		
◇		On roads/summer
◇		Summer only
◇		Summer problem—no winter horseback—working with user group
◇		Very little equestrian use in winter

**Conflicts with People on Horseback on the Trails
Actions Used**

<i>Indirect actions used by those reporting conflicts with people on horseback on the trails</i> (n = 6)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
3	50.0	posters or signs	3	50.0	maps
1	16.7	brochures	0	0	public service announcements
1	16.7	other educational materials	0	0	local newspaper articles
3	50.0	user ethics	5	83.3	bulletin boards
3	50.0	etiquette	4	66.7	trail descriptions
0	0	manufacturers' stickers on ATVs*	3	50.0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting conflicts with people on horseback on the trails</i> (n = 6)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
3	50.0	close or limit use	1	16.7	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	3	50.0	law enforcement
1	16.7	organized events to do trail maintenance	1	16.7	users ride in dispersed patterns
2	33.3	relocate or designate OHV trails	2	33.3	separate trails
0	0	seasonal closures	2	33.3	separate user groups
0	0	make repairs as soon as located*	1	16.7	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting conflicts with people on horseback on the trails (n = 6)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails? What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade? What percent? n/a	1	16.7	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	2	33.3	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
1	16.7	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various erosion controls*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting conflicts with people on horseback on the trails (n = 6)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
4	66.7	personal contacts	3	50.0	partner with different groups
2	33.3	local OHV club meetings	4	66.7	volunteer patrols
0	0	meetings with state OHV groups	1	16.7	partner with OHV shops
4	66.7	adopt-a-trail program	1	16.7	workshops
0	0	trail safety evaluation form	1	16.7	committees with different groups
1	16.7	education, including campfire programs*	3	50.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Conflicts with People on Horseback on the Trails
Actions Reported Used Most Often**

Actions reported "used most often" (n = 6)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
2	33.3	personal contacts
1	16.7	trail use recommendations
1	16.7	law enforcement
1	16.7	partner with different groups
1	16.7	education, including campfire programs

**Conflicts with People on Horseback on the Trails
Actions Reported Most Effective**

Actions reported “most effective” (n = 6)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
2	33.3	partner with different groups	<ul style="list-style-type: none"> ◇ By getting groups to work together. ◇ Each group complains about the other—so get the groups TOGETHER. Explain to each other what their experiences are.
1	16.7	trail use recommendations	<ul style="list-style-type: none"> ◇ Minimizes contact.
1	16.7	law enforcement	<ul style="list-style-type: none"> ◇ Type of visitor—young males—care mostly about their experience, not the NF. They will pay attention if prosecution is result of their bad actions.
1	16.7	personal contacts	<ul style="list-style-type: none"> ◇ Due to the interaction with visitors, chance to explain in more detail why there are rules, answers visitors’ questions, etc.
1	16.7	trail design	<ul style="list-style-type: none"> ◇ Thoughtful trail layout and design affects user experiences in many ways, including conflicts. A good design may substantially reduce conflicts.

**Conflicts with People on Horseback on the Trails
Seasonal Differences of Actions**

			(n = 6)
Number of respondents	Percent of respondents	Seasonal nature of actions	
3	50.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
3	50.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
<ul style="list-style-type: none"> ◇ Areas are closed to ATVs in winter where we don’t want them damaging trails that could be a safety hazard to others (rutting). ◇ Little or no problem with winter use. Summer use getting out of control. Law enforcement and personal I&E contacts only strategy at this time. ◇ n/a in winter 			

4: Conflicts with Other Four-Wheelers on the Trails

There were two respondents (4 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Conflicts with Other Four-Wheelers on the Trails Issue Observed or Reports Received

Number of respondents	Percent	
2	4.4	respondents observed or received reports of this management issue
43	95.6	respondents <i>did not</i> observe or receive reports of this management issue
2	100.0	of those respondents who observed or received reports of this management issue indicated that the issue <i>did not</i> differ by season.

Conflicts with Other Four-Wheelers on the Trails Actions Used

<i>Indirect actions used by those reporting conflicts with other four-wheelers on the trails</i> (n = 2)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	posters or signs	0	0	maps
0	0	brochures	0	0	public service announcements
0	0	other educational materials	0	0	local newspaper articles
0	0	user ethics	0	0	bulletin boards
1	50.0	etiquette	0	0	trail descriptions
0	0	manufacturers' stickers on ATVs*	2	100.0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

<i>Direct actions used by those reporting conflicts with other four-wheelers on the trails</i>						(n = 2)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	close or limit use	0	0	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	1	50.0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
0	0	relocate or designate OHV trails	1	50.0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting conflicts with other four-wheelers on the trails (n = 2)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/ use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting conflicts with other four-wheelers on the trails (n = 2)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	50.0	personal contacts	1	50.0	partner with different groups
0	0	local OHV club meetings	1	50.0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	2	100.0	workshops
0	0	trail safety evaluation form	1	50.0	committees with different groups
0	0	education, including campfire programs*	1	50.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Conflicts with Other Four-Wheelers on the Trails
Actions Reported Used Most Often**

Actions reported "used most often" (n = 2)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	50.0	partner with different groups
1	50.0	law enforcement

**Conflicts with Other Four-Wheelers on the Trails
Actions Reported Most Effective**

Actions reported “most effective” **(n = 2)**

Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	50.0	committees with different groups	◇ Group reps. hear concerns from other reps. and return information to their groups— improved communication and understanding and potential group sport benefits.
1	50.0	law enforcement	◇ If we write them a ticket, it tells them that we mean business.

**Conflicts with Other Four-Wheelers on the Trails
Seasonal Differences of Actions**

(n = 2)

Number of respondents	Percent of respondents	Seasonal nature of actions
2	100.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.

5: Conflicts with Cattle on or near Roads or Trails

There were two respondents (4 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Conflicts with Cattle on or near Roads or Trails Issue Observed or Reports Received

Number of respondents	Percent	
2	4.4	respondents observed or received reports of this management issue
43	95.6	respondents <i>did not</i> observe or receive reports of this management issue
2	100.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Limited conflict when cattle let out, OHVs come up on them quickly.
- ◇ Spring—Cattle create lots of trail damage on soft trail treads.

Conflicts with Cattle on or near Roads or Trails Actions Used

<i>Indirect actions used by those reporting conflicts with cattle on or near roads or trails</i> (n = 2)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	50.0	posters or signs	1	50.0	maps
0	0	brochures	0	0	public service announcements
0	0	other educational materials	0	0	local newspaper articles
0	0	user ethics	1	50.0	bulletin boards
0	0	etiquette	1	50.0	trail descriptions
0	0	manufacturers' stickers on ATVs*	1	50.0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting conflicts with cattle on or near roads or trails						(n = 2)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
1	50.0	close or limit use	1	50.0	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	1	50.0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
1	50.0	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting conflicts with cattle on or near roads or trails (n = 2)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting conflicts with cattle on or near roads or trails (n = 2)

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	100.0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	1	50.0	volunteer patrols
0	0	meetings with state OHV shops	0	0	partner with OHV groups
1	50.0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	1	50.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Conflicts with Cattle on or near Roads or Trails
Actions Reported Used Most Often**

Actions reported "used most often" (n = 2)

Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
2	100.0	personal contacts

**Conflicts with Cattle on or near Roads or Trails
Actions Reported Most Effective**

Actions reported “most effective” (n = 2)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	50.0	personal contacts	◇ Due to the interaction with visitors, chance to explain in more detail why there are rules, answers visitors’ questions, etc.
1	50.0	nothing works	◇ None seem very effective.

**Conflicts with Cattle on or near Roads or Trails
Seasonal Differences of Actions**

			(n = 2)
Number of respondents	Percent of respondents	Seasonal nature of actions	
1	50.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
1	50.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
◇ Areas are closed to ATVs in winter where we don’t want them damaging trails that could be a safety hazard to others (rutting).			

6: Conflicts with Skiers/Snowshoers

This issue was added by the respondent(s) and was not included in the set of issues available to all respondents. There were two respondents (4 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Conflicts with Skiers/Snowshoers Issue Observed or Reports Received

Number of respondents	Percent	
2	4.4	respondents observed or received reports of this management issue
43	95.6	respondents <i>did not</i> observe or receive reports of this management issue
(n = 2)		
2	100.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.

For those who reported the issue differed by season, how the respondents said it differed:

- ◇ Winter problem
- ◇ Winter—isolated use areas (groomed trails)

Conflicts with Skiers/Snowshoers Actions Used

<i>Indirect actions used by those reporting conflicts with skiers/snowshoers</i>						(n = 2)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
2	100.0	posters or signs	2	100.0	maps	
1	50.0	brochures	1	50.0	public service announcements	
0	0	other educational materials	1	50.0	local newspaper articles	
2	100.0	user ethics	2	100.0	bulletin boards	
1	50.0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	2	100.0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting conflicts with skiers/snowshoers**(n = 2)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	50.0	close or limit use	1	50.0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	2	100.0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
1	50.0	relocate or designate OHV trails	1	50.0	separate trails
0	0	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	1	50.0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions.

<i>Resource-hardening actions used by those reporting conflicts with skiers/snowshoers</i> (n = 2)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails What percent? n/a	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
0	0	Specify a <u>minimum</u> grade What percent? n/a	0	0	lengthened trails to disperse riders
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

<i>Bridge-building/collaboration</i> actions used by those reporting conflicts with skiers/snowshoers (n = 2)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
2	100.0	personal contacts	2	100.0	partner with different groups
2	100.0	local OHV club meetings	1	50.0	volunteer patrols
1	50.0	meetings with state OHV groups	0	0	partner with OHV shops
1	50.0	adopt-a-trail program	2	100.0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	1	50.0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

Conflicts with Skiers/Snowshoers Actions Reported Used Most Often

Actions reported "used most often" (n = 2)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	50.0	personal contacts
1	50.0	posters or signs

**Conflicts with Skiers/Snowshoers
Actions Reported Most Effective**

Actions reported "most effective" (n = 2)			
Number of respondents reporting action "most effective"	Percent reporting "most effective"	Action	Why "most effective"
1	50.0	personal contacts	◇ Dialog between user and us important. Give them "a why." Explain to them. Let them air out their complaints.
1	50.0	posters or signs	◇ Acknowledges that multiuse is going on to other groups (identifies all of the types of uses allowed) so people know who's around. Gives directions to alternative use trails.

Conflicts with Skiers/Snowshoers

			(n = 2)
Number of respondents	Percent of respondents	Seasonal nature of actions	
1	50.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
1	50.0	of those respondents who observed or received reports of this management issue indicated that their actions <i>did not</i> differ by season.	
For those who reported their actions differed by season, how the respondents said they differed.			
◇ Intensity of issue (higher in wintertime). Solutions differ according to season.			

7: Conflict with Owners of Private Land

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

Conflict with Owners of Private Land Issue Observed or Reports Received

Number of respondents	Percent	
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue
(n = 1)		
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.

For those who reported the issue differed by season, how the respondent said it differed:

◇ More in winter (ATVs going on horse trails, trespass, noise)

Conflict with Owners of Private Land Actions Used

<i>Indirect actions used by those reporting conflicts with owners of private land</i>						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	posters or signs	1	100.0	maps	
0	0	brochures	0	0	public service announcements	
0	0	other educational materials	0	0	local newspaper articles	
0	0	user ethics	0	0	bulletin boards	
0	0	etiquette	0	0	trail descriptions	
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations	
0	0	additional funding, matching funds*				

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting conflicts with owners of private land						(n = 1)
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action	
0	0	close or limit use	0	0	provisions for special use permits	
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement	
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns	
0	0	relocate or designate OHV trails	0	0	separate trails	
0	0	seasonal closures	0	0	separate user groups	
0	0	make repairs as soon as located*	0	0	alternate between user groups	
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*	
0	0	voluntary sound tests*				

*Actions added by respondents in response to open-ended questions.

Resource-hardening actions used by those reporting conflicts with owners of private land**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? n/a			
0	0	Specify a <u>minimum</u> grade	0	0	lengthened trails to disperse riders
		What percent? n/a			
0		drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting conflicts with owners of private land (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	0	0	partner with different groups
0	0	local OHV club meetings	0	0	volunteer patrols
0	0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**Conflict with Owners of Private Land
Actions Reported Used Most Often**

Actions reported "used most often" (n = 1)		
Number of respondents reporting action "used most often"	Percent reporting "used most often"	Action
1	100.0	law enforcement

**Conflict with Owners of Private Land
Actions Reported Most Effective**

Actions reported "most effective" (n = 1)			
Number of respondents reporting action "most effective"	Percent reporting "most effective"	Action	Why "most effective"
1	100.0	law enforcement	◇ Showing public that they respond to complaints. With the landowners' help, identify individuals and contact them.

**Conflict with Owners of Private Land
Seasonal Differences of Actions**

			(n = 1)
Number of respondents	Percent of respondents	Seasonal nature of actions	
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.	
For those who reported their actions differed by season, how the respondent said they differed.			
◇ More complaints in winter.			

8: OSV-OHV Conflicts

This issue was added by the respondent and was not included in the set of issues available to all respondents. There was one respondent (2 percent of the sample) who said they observed or received reports of this management issue. Because of this small number we advise caution in interpreting the results in this section.

OSV-OHV Conflicts Issue Observed or Reports Received

Number of respondents	Percent	
1	2.2	respondents observed or received reports of this management issue
44	97.8	respondents <i>did not</i> observe or receive reports of this management issue missing
(n = 1)		
1	100.0	of those respondents who observed or received reports of this management issue indicated that the issue differed by season.

OSV-OHV Conflicts Actions Used

<i>Indirect</i> actions used by those reporting OSV-OHV conflicts (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	posters or signs	1	100.0	maps
0	0	brochures	1	100.0	public service announcements
0	0	other educational materials	1	100.0	local newspaper articles
0	0	user ethics	1	100.0	bulletin boards
0	0	etiquette	0	0	trail descriptions
0	0	manufacturers' stickers on ATVs*	0	0	trail-use recommendations
0	0	additional funding, matching funds*			

*Actions added by respondents in response to open-ended questions.

Direct actions used by those reporting OSV-OHV conflicts **(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	close or limit use	0	0	provisions for special use permits
0	0	non-issuance of outfitter, guide, or event permits	1	100.0	law enforcement
0	0	organized events to do trail maintenance	0	0	users ride in dispersed patterns
0	0	relocate or designate OHV trails	0	0	separate trails
1	100.0	seasonal closures	0	0	separate user groups
0	0	make repairs as soon as located*	0	0	alternate between user groups
0	0	pick up litter*	0	0	use OHV trail crews to maintain trails*
0	0	voluntary sound tests*			

*Actions added by respondents in response to open-ended questions

<i>Resource-hardening actions used by those reporting OSV-OHV conflicts</i> (n = 1)					
Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
0	0	Specify a maximum grade on trails	0	0	artificial tread (e.g., geofabric with sand and gravel, concrete blocks)
		What percent? n/a			
0	0	Specify a <u>minimum</u> grade	0	0	lengthened trails to disperse riders
		What percent? n/a			
0	0	drain dips (meaning a reversal of grade)	0	0	staging areas with parking facilities
0	0	flexible water bars	0	0	designated campsites
0	0	for events, restricted to one direction (e.g., uphill or downhill)*	0	0	barricades, barriers*
0	0	trail design: limit long straightaways/use all single track/use natural obstacles*	0	0	general trail maintenance including consistent, mechanized & 3-year plan*
0	0	rolling dips, dog bones*	0	0	overflow parking and staging areas*
0	0	various types of erosion control*			

*Actions added by respondents in response to open-ended questions.

Bridge-building/collaboration actions used by those reporting OSV-OHV conflicts**(n = 1)**

Number of respondents using action	Percent using action	Action	Number of respondents using action	Percent using action	Action
1	100.0	personal contacts	0	0	partner with different groups
1	100.0	local OHV club meetings	1	100.0	volunteer patrols
1	100.0	meetings with state OHV groups	0	0	partner with OHV shops
0	0	adopt-a-trail program	0	0	workshops
0	0	trail safety evaluation form	0	0	committees with different groups
0	0	education, including campfire programs*	0	0	maintain trail with local groups and volunteers
0	0	joint clean-ups with BLM*	0	0	working with sheriff's department*
0	0	mine safety evaluation form*	0	0	help from regional office and state*
0	0	find out from users and environmentalists where trails should be*			

*Actions added by respondents in response to open-ended questions.

**OSV-OHV Conflicts
Actions Reported Used Most Often**

Actions reported “used most often” (n = 1)		
Number of respondents reporting action “used most often”	Percent reporting “used most often”	Action
1	100.0	maps

**OSV-OHV Conflicts
Actions Reported Most Effective**

Actions reported “most effective” (n = 1)			
Number of respondents reporting action “most effective”	Percent reporting “most effective”	Action	Why “most effective”
1	100.0	education	◇ Explaining the situation and offering an alternative play area.

**OSV-OHV Conflicts
Seasonal Differences of Actions**

Seasonal Differences of Actions (n = 1)		
Number of respondents	Percent of respondents	Seasonal nature of actions
1	100.0	of those respondents who observed or received reports of this management issue indicated that their actions differed by season.

For those who reported their actions differed by season, how the respondent said they differed.

◇ Snow is a limiting factor. Conditions vary sometimes—not accommodating to OHV use.

Appendix E—General Respondent Comments on OHV Use

This appendix provides respondent comments to the open-ended question, “Are there any other comments you would like to make about OHV use on your District?”

No qualitative analysis has been conducted. Comments were grouped by topic for ease of comprehension.

Comments

Question: Are there any other comments you would like to make about OHV use on your District?

Depreciative Behavior:

- Biggest problem: keeping OHVs on roads and trails.

Larger issue:

- Commercials on TV/media promoting “extreme” experience—promote bad behavior (Hummer commercial).
- We have extremely limited resources and no LEO. Illegal OHV use continues to be a growing problem on District. Resistance from locals to follow regs. because there has been no enforcement for decades. Areas with illegal trails suffer from benign neglect—serious resource damage is likely.
- 4WD vehicles going off established routes—we are signing designated routes and closing new routes created ASAP. We are rehabilitating any new routes to prevent them from becoming established.

Education:

- Public calls Forest Service OHV “OHV parks.” They stress trails-only. “OHV parks” is a state term that means a free-for-all. Need to educate on that.
- In my opinion, it is essential that the land managers establish an education campaign at the manufacture and sales levels so that resource values may be established among OHV users.
- Have to educate them [the new participants]. Problem—state doesn’t want to help with funding. Write ticket for “no Green Sticker”—check every bike/OHV.

- Staging areas—great place to meet people and contact them, set up information and talk to people. In their management of OHV, the 3 Es (a management tool) (1) Education: can't expect much if we don't educate the public, (2) Engineering: put signs up where they are visible, legible, in good place/produce good route plans, and (3) Enforcement: if no compliance with 1 & 2, use enforcement to manage recreation works well.
- OHV users are confused about (or don't care about or support) the rules, and managers are frustrated trying to interpret and implement the rules. When the 3E approach is successfully (and fully) implemented, both users and managers are much happier with the program. We have had several successes with this on the [named] District, [named] National Forest.

Funding:

- Need to find allocated Forest Service funds, not rely on state (amounts go up and down; 2 years without any funding). Need money! So much potential, but no money or personnel. Grants don't help.
- OHV does not get enough support and resources to effectively manage OHV use. Funding relies too much on state funds. Not enough valid OHV opportunities.
- Give us more money so we can do our jobs better.
- Lack of funding. Application for funding is cumbersome. Changes in state program. Didn't apply for funds due to 20% Forest Service charge for overhead. Funding is up for maintenance; "cranked up" details needed by state—makes it hard to participate in application process. Contributing more recreation money to apply than getting back. Forest Service dollars are more flexible, but both are dwindling.
- Summer use exploding. Need funding for a plan and actions.

Land Issues:

- Area needs to be large enough to support use—less land is available and shrinking allocation—compromising quality to meet demands ("saddle time" less—what else do they do with their day?).

Private land

- issues:**
- Too many people at trail access points is also due to limited parking and trail heads. They need to apply for snow parks (need at least one). Middle of public survey needs assessment to determine best use of land. It's also feedback for future planning in [named] Region.
 - Soil erosion—in the short term, we repair damaged areas and rehab them ASAP. In the long term, we are trying to improve trail routings to reduce steep grades and problem areas.
 - Dangerous mines—we have an active mine-closure program.

Law

- Enforcement:**
- Low fines for infractions. Are they accurate? Are they effective?
 - Should they be raised?
 - More users and less people on Forest Service end to deal with issues. They [users] can be out there running amok. Not just “Recreation’s problem.” Need to internally share enforcement. Other Forest Service personnel “pass the violators by,” so users think their behavior is OK.
 - Need more cooperation from county sheriffs to enforce. County receives money; no emphasis on help in drinking, riding in areas without helmets.

- Limitations:**
- Above mileages are not totally accurate. Best guess estimates. To get more accurate count would [require] lots of time and review of old records, etc.

- Maps:**
- Need professionally produced OHV maps to encourage proper use—District by District and one forestwide.

- Policy:**
- 22 years of intensive management using state funded grants for development, operations and maintenance. Largest summer program.
 - Currently receiving Green Sticker money. Have for 20 years. Without it, wouldn't have OHV opportunities that we do. Without funds, can't provide the level of service/keep up trails. OHV recreation, without funds, should be closed.
 - I believe that it is very important to designate OHV routes as closed unless signed open.

- Too much micromanagement at staff levels.
 - More restrictions in each area (more consolidation).
 - More areas being closed outside of District. People come there from closed areas.
 - Since the paradigm on the [named] Forest is closed unless open, I would like to know what the [named] Region OHV mapping exercise funded with Green Sticker state funding will contribute to this forest’s management of OHV areas.
- Politics:**
- Understand need for survey, some factors cannot be quantified—political considerations—private landholders near forest where owners feel OHV lowers land values can make problem for OHV. Those active in the environmental community use influence to reduce funding. Manager can be managing OHV well, but still be opposed to it.
- Process:**
- Most difficult: Lack of continuous loops. Burdensome NEPA requirements—hard to get anything done—leads to a choppy route system which invites people to make their own.
- Regulations:**
- Middle of route inventory—mileage gone up significantly (still in progress).
- Use Levels:**
- OHV use is increasing with the closures in the desert and San Bernardino National Forest.
- New trend:**
- Preloaded trailers from southern California rented and brought up.
- Web sites:**
- On abandoned mines/ghost towns ecotourism.
 - Geocaching—lots of that.
 - Day-use shift ([named] District—people driving in from [named town], etc.)
 - OHV use seems to be growing at an exponential rate, land managers have a responsibility to establish sustainable opportunities and close areas where resource damage is occurring.
 - It is a growing sport.
 - Increase in demand (30 percent) in OHV sales from local shops. Recreation customer seeking extreme challenges—Forest may or may not provide those opportunities. Customers look at Web sites for information.

- Inexperienced drivers in difficult terrain—we sign the commonly used winter route to warn drivers that it is difficult and not a through route.
- OHV use on [named] Ranger District is diverse in a wide variety of forest settings with numerous opportunities for a range of different vehicles year round. AND the sport is growing.

Other:

- OHV use on the District: 90% of use not causing impacts. If can take care of that other 10%, we will be in good shape.
- He recognizes use numbers are low due to lack of OHV opportunities on the District. But, even though small in comparison to other Ranger Districts, provides an important/unique niche that's special: OHV touring for nearby urban populations. Touring for scenery—where folks can take their SUVs and cruise at 20-30 mph and enjoy sights.
- We do not have a big program on District, but does cause an inordinate amount of effort to enforce regs. per visitor than other programs.
- Most OHV is focused here, because [a root disease is] found on Districts north of here.
- OHV is minor component of recreation use and, therefore, a minor problem.
- OHV use is a valid and fun recreational passtime—we need to support it while minimizing damage.
- Cattle conflicts—no current solutions. We just repair damage as we can.
- Soil erosion/compaction—we receive state funding for conservation and prevention of erosion problems. We do monitoring and repairs as needed.
- Small program, limit routes, mostly Level II roads behind locked gates—1.5 miles of single track trail.
- Impact from fire in southern California.

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