

Manti – La Sal National Forest Plan Revision Drivers and Stressors

Recreation

Prepared by:

Bill Broadbear, Autumn Ela, Jessica Jewkes, Brian Murdock
Recreation Staff

for:

The Manti – La Sal National Forest

1-17-2017



In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov. USDA is an equal opportunity provider, employer and lender.

Table of Contents

Recreation – Increasing Human Populations and Forest Use	2
1. Stressor or Driver Description	2
2. Indicators	2
3. Scale.....	2
4. Existing Condition of the Indicators	2
Increased demand for recreation	2
Developed Recreation Facilities	4
Motorized use.....	4
Recreation Special Uses.....	6
5. Trends and Data Sources	8
Trends in Visitor Use	8
Trends related to Climate Change.....	9
Trends related to Developed Recreation Facility Water Systems.....	10
Trends Related to Campground Reservations.....	10
6. Resources Affected.....	11
7. Management Tools.....	11
8. Stressor Accumulation.....	12
9. Identify any Data Gaps	12
10. Literature Cited	12

Tables

Table 1. Changes in motorized use levels over nine years in the Arapeen OHV Trail System.....	4
Table 2. Inventory of user-created routes.....	5
Table 3. Group site occupancy over eight years.....	8
Table 4. Top 15 activities visitors participated in by percentage of estimated visitors per year (28 activities could be chosen from on the survey forms).....	9
Table 5. Recreation zones—current impact of stressors for the Wasatch Plateau (northern portion of the Forest).....	11
Table 6. Recreation zones—current impact of stressors for the Abajo and La Sal mountains (southern portion of the Forest).....	11

Figures

Figure 1. Recreation special use permits issued by year since 1993	7
Figure 2. Campground reservations by year since 2008.....	10

Recreation – Increasing Human Populations and Forest Use

1. Stressor or Driver Description

Increasing human populations in Utah and increasing tourism to Utah are contributing to increasing use of the Manti-La Sal National Forest for a multitude of consumptive and recreational uses.

Increased demand for recreation includes participation of forest visitors in specific activities such as camping, hunting, fishing, family gatherings, ATV/UTV riding, hiking, backpacking, horseback riding, rock climbing, mountain biking (some of the most prevalent pursuits during the summer and fall seasons); snowmobiling, cross country skiing, back-country skiing, snowshoeing, and kite-boarding (prevalent during the winter season). Increased demand for recreation areas across the forest includes developed campgrounds, dispersed campsites, reservoirs, lakes and streams, motorized and non-motorized trails, roadless areas, the wilderness area, and trailheads.

Motorized use ties closely to recreation demand and habitat fragmentation. It includes miles of existing roads and trails, miles of unauthorized user created roads and trails, changes in technology driving demand for wider OHV trails, and aging of the population using the forest.

2. Indicators

Indicators of demands for recreation related to increased populations include activities visitors elect to participate in, number of outfitter guide permits, number of recreation events, campground reservations, condition of recreation infrastructure including water systems, and reduced season for winter recreation due to climate change.

Indicators of motorized use include trends in overall numbers of OHV vehicles being registered, road and trail use counts, inventory of user created routes, and professional observation.

3. Scale

The scale of analysis is the six recreation zones established for the Wasatch Plateau and Sanpitch Mountains (North Zone) and the seven recreation zones established for the La Sal and Abajo Mountains (South Zone) of the Manti-La Sal National Forest.

Each zone has distinctive terrain characteristics which entice visitors to participate in specific recreation activities. For instance, the open rolling nature of the Wasatch Plateau provides access to many miles of roads, thousands of dispersed campsites, desirable OHV routes, and premier snowmobile terrain. The lofty peaks and deeply incised canyons of the La Sal and Abajo Mountains attract adventure seekers and peak bagging, mountain biking, rock climbing, and back country skiing.

4. Existing Condition of the Indicators

Increased demand for recreation

Outdoor recreation is extremely popular and important to people living near the Manti-La Sal National Forest and to visitors. The Utah Statewide Comprehensive Outdoor Recreation Plan (SCORP, 2013) states “Outdoor recreation in Utah is extremely important throughout the state. Public opinion surveys showed that about 50 percent or more of residents in each area of the state rate recreation as “Extremely

Important.” Most residents travel more than 25 miles to participate in recreational activities, indicating that it’s “worth the drive.”

From a regional perspective visitation to public lands surrounding the Forest (both BLM and National Parks) have seen increases in visitation. In the case of the National Parks this increase has been significant. In 2013 the State of Utah implemented a marketing campaign called the “Mighty Five” to showcase Utah’s unique national parks. This campaign has been incredibly successful, increasing use at Arches National Park 20% in the first year of the campaign.

The Forest Service National Visitor Use Monitoring program (NVUM) is a measure of visitors to the Forest. The NVUM has two concurrent goals: to produce estimates of the volume of recreation visitation to National Forests and Grasslands, and to produce descriptive information about visitation, including activity participation, demographics, visit duration, measures of satisfaction, and economic spending connected to the visit.

Surveys are conducted every 5 years for the NVUM. The Manti –La Sal National Forest just completed its 4th round of surveys in 2016. Data was evaluated from 2001, 2006, and 2011. The data from the 2016 surveys is not yet available, but is expected by late 2017.

While NVUM data will be used throughout the Plan Revision Process it does have limitations. Visitor use data from the last three MVUMs have shown decreases in overall use across the forest. This trend is not consistent with other direct indicators of use (campground reservations, Outfitter and Guide Actual Use Reports and Trail Counters) or with what is being observed on the ground by Forest Staff. These other indicators all show increases in overall forest use. It is assumed that the trend showing decreasing use numbers in the NVUM data is probably associated more with the refining of the sampling methodology that occurs for each NVUM round than with an actual decrease in use. Another feature of the NVUM data that makes it difficult to use is that it is lumped together on a forest level and is not district specific. Because recreation use on the North and South Zones is so different, lumping the use data together has led to cases where specific activities, such as mountain biking, which is one of the fastest growing and most popular activities on the Moab portion of the forest, shows up in the data as a minor use on the forest overall.

Recent technological changes that impact recreation use on the forest include: the popularity of wider UTVs, many of which are not allowed on Forest Service trails designed for vehicles 50 inches or less; lighter, more powerful snowmobiles and motorized snowbikes that can reach areas once never considered to be accessible to over-snow vehicles; and lighter mountain bikes with high quality suspension and extremely wide tires allowing mountain bikes to travel in terrain once impassable to bikes, including snow covered terrain.

Another change in technology impacting the amount of use and altering use patterns is the availability of information on the internet and the popularity of social media. Directions to areas that were once well kept secrets are now being published on line and marketed. This information has led to increases in use to sensitive areas like remote cultural sites and sensitive riparian areas.

With increased use, changing technologies, and more specified expectations, an increase in user conflicts is also becoming evident. Popular mountain bike trails in the La Sal Mountain portion of the Forest, which experience high levels of use, are becoming difficult for hikers and equestrian users due to conflicts with heavy mountain bike use. An increase in motorized (snowmobiles and snowbikes) and non-motorized winter uses (cross country and backcountry skiing and snowshoeing) is leading to conflicts between those seeking solitude and quiet and those wanting more motorized recreation opportunities.

Motorized vehicles (OHVs and UTVs) are routinely used by the majority of hunters, conflicting with those seeking a more traditional experience (foot and horseback).

Developed Recreation Facilities

The Recreation Activity Schedule (A-2) in the current Forest Plan (Forest Plan, 1986), lists projects recommended for construction to provide additional capacity as follows: expand eight developed recreation sites, construct 3 new trailheads, build two new trail bridges, and reconstruct 11 miles of trails over a 10-year period (1986-1995). Expansion of developed recreation sites as recommended in the Forest Plan, was never undertaken as the Forest shifted focus to managing the impacts of dispersed recreation along major road corridors and around reservoirs and riparian areas.

While expansion was not undertaken, several developed recreation sites did receive significant investments to replace deteriorating infrastructure and meet visitor needs. Joes Valley, Maple Canyon, Indian Creek, Potters Pond, and Buckeye Reservoir Campgrounds were reconstructed. Substantial investments to manage dispersed recreation and address the need for increased group site capacity occurred along Huntington Canyon and at the Lake Canyon Recreation Area. It is expected that the trend of managing for increasing dispersed recreation will continue.

Nearly \$800,000 in deferred maintenance costs were described in the Forest’s 2013 Recreation Facility Analysis. Of the total 151 developed recreation sites, 8 sites were identified for decommissioning/closure, 26 sites for increased or improved services, 23 sites for replacement/repair of infrastructure, and 94 sites had no changes recommended. This document will need to be re-visited and updated periodically to validate and guide future infrastructure priorities and investments.

Motorized use

Motorized recreation use has grown exponentially across the West since the time the last Forest Plan was written in 1986. According to a paper prepared by the Institute of Outdoor Recreation and Tourism the use of off-highway vehicles (OHVs) for recreation and other outdoor activities has exploded in popularity over the past two decades. The number of registered OHVs in Utah more than tripled in eight years alone, from 51,686 in 1998, to 172,231 in 2006, a 233% increase (Smith, Burr, Reiter, Zetlin, 2009). This use peaked at 232,000 OHV’s and has since declined to 187,000 in 2015 (Haller, 2016). Motorized use over nine years (2005-2013) on four trails included in the Arapeen OHV Trail System on the Wasatch Plateau, reflects motorized use levels on the North Zone of the Forest.

Table 1. Changes in motorized use levels over nine years in the Arapeen OHV Trail System.

Trail Name	Number of Days Monitored 2005	Number of Riders 2005	Number of Days Monitored 2013	Number of Riders 2013
Reeder Canyon	105	1708	92	1908
Lake Canyon #10	125	4258	130	4406
George’s Fork	90	1456	86	2047
Black Fork	115	1239	105	1284

Local communities have also played a role in actively promoting and marketing OHV use. The Arapeen System is featured in Sanpete County’s website and in YouTube videos. The county also produces maps of the system, allows visitors to access the system directly from their motels on city streets, and sponsors annual events such as the Manti Mountain ATV Run and Drive 4 Food.

Concurrent with the increase in registered OHV's, an increase in new trail construction has occurred to manage motorized use demands. Unauthorized user-created motorized routes have also increased dramatically. Currently there are 3,418 inventoried unauthorized routes across the forest totaling 1008 miles.

Many of these routes have been closed, signed, and rehabilitated. However, the open terrain present over much of the forest has made it difficult to keep many of them closed. In 2011, an inventory of 341 closed routes showed that 105 of them (30%) had been reopened. Some routes have been closed 2-3 times and still experience unauthorized use.

A Transportation Analysis Plan (TAP) was completed for the forest in 2015. It identified 615 miles of road and 120 miles of trail "likely not needed" across the forest. Implementation of TAP will require extensive public involvement and NEPA analysis. This analysis will be deferred until after the forest plan revision process.

Table 2. Inventory of user-created routes

District	Zone	miles	sq miles	Miles per sq mile
1	Sanpete North	78.8	133.05	0.59
1	Sanpete South	128.02	153.06	0.84
1	Sanpitch	61.85	119.29	0.52
2	Ferron/ Muddy Creek	168.88	307.37	0.55
3	Millers Flat/ Joes Valley/ Huntington Canyon	221.71	445.26	0.50
3	Spanish Fork/ Scofield	108.57	201.89	0.54
4	Carpenter Ridge/ Buckeye	14.78	50.15	0.29
4	Gateway	15.37	33.49	0.46
4	La Sal Loop/ Moab Front	34.71	138.09	0.25
4	Two Mile	87.49	50.72	1.72
5	Abajo/ Hearts Draw	49.2	177.19	0.28
5	Dark Canyon Wilderness	0	72.39	0.00
5	Elk Ridge	39.12	326.09	0.12
	Total miles	1008.50		

New trails constructed since 1986 when the Forest Plan was put into place, include 53.1 miles of motorized trail, all within the North Zone of the Forest, 38.7 miles of non-motorized trails all within the La Sal Loop/Moab Front area of the South Zone, and 26.5 miles of non-motorized trails on the North Zone. It is projected that future new trail construction will be restricted to key connections forming loops and reconstruction following major disturbances, such as the 2012 Seeley Fire. Emphasis will instead be placed on maintaining and improving the existing trail system and right-sizing the existing system including decommissioning some trails or managing them as primitive routes with minimal or no maintenance.

Non-motorized trail use has grown substantially on some trails since the 1986 Forest Plan was put into place. The most heavily used non-motorized trail on the forest is the popular "Whole Enchilada" Mountain Bike Trail in the La Sal Mountains. Trail register data for the Hazard County and Burro Pass Trailheads which are the two access points for the Whole Enchilada Trail were compiled for the Moab Non-Motorized

Trail Project in 2013. From 2008 (when the trail was authorized) to 2013, approximately 430 people registered per year at the Hazard County Trailhead with 95% of the use being mountain bikers. Approximately 228 users per year registered at the Burro Pass Trailhead with use of those registering at approximately 50% foot travel and 50% mountain biking. The numbers of users actually registering on this trail is probably very low compared to actual use numbers, since very few people register at the trailhead.

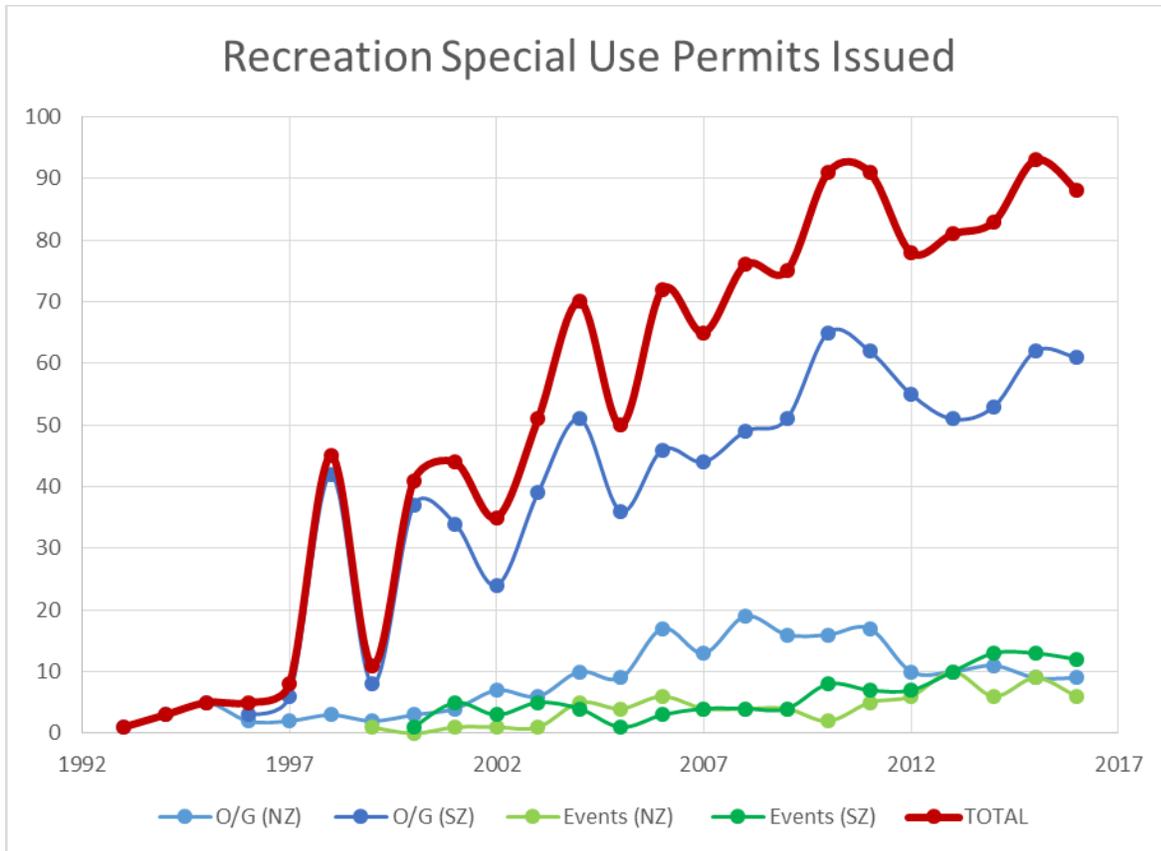
The majority of use along the “Whole Enchilada” is associated with one of the authorized shuttle companies operating on the Forest. Approximately 70%-90% of mountain bikers on the trail use one of the shuttle companies. This commercial use has seen a steady increase since completion of the “Whole Enchilada” and is probably a better indicator of usage on the trail than the voluntary registration numbers. Authorized shuttle companies reported shuttling 1,506 users (mountain bikers) to trailheads along the “Whole Enchilada” in 2008. In 2012 reported use had risen to 4,065, with 4,575 users in 2010. In 2014 reliable trail counters were installed on the Whole Enchilada Trail at the Hazard County Trailhead. In 2014 the counters showed that 9,396 mountain bikes used the trail and in 2015, 9,919 bikes came through. In 2015 an additional counter was added to the trail lower down and 12,781 mountain bikes were counted using the trail during that year.

Recreation Special Uses

Commercial outfitting and guiding companies operate on the Forest under special use permits. The number of permits in place provide information on the recreation demands from increased populations. Special use permits have been issued since the 1990s in two primary categories relevant to recreational users: outfitting and guiding services and recreational events.

Records of permits issued for these purposes indicate a strong increase in outfitting and guiding permits with the bulk of the increase occurring on the South Zone of the Forest between 2000 and 2010. In 2000 the number of recreation permits issued was 41, by 2010 it had risen to 91 and has continued to increase. The number and types of Recreation Special Use Permits vary greatly between the North and South Zones. Permits on the North Zone primarily consist of hunting guides along with some climbing and outdoor schools. Permitting on the South Zone is driven by the tourist economy centered in Moab, Utah. Permits for the South Zone include motorized jeep and OHV tours, numerous mountain biking guides and shuttles, climbing, backcountry skiing, horseback riding, hiking, hunting and wilderness oriented backpacking.

The Forest prepared a Needs Assessment for Recreation Special Use Permits in 2012-13. During preparation of the Assessment, a moratorium on outfitting and guiding permits was put in place. The moratorium, accounts for the reduction in permits during those years as some permit holders did not renew their permits and no new permits were issued.



	O/G (NZ)	O/G (SZ)	Events (NZ)	Events (SZ)	TOTALS
1993	1				1
1994	3				3
1995	5				5
1996	2	3			5
1997	2	6			8
1998	3	42			45
1999	2	8	1		11
2000	3	37	0	1	41
2001	14	34	1	5	44
2002	7	24	1	3	35
2003	6	39	1	5	51
2004	10	51	5	4	70
2005	19	36	4	1	50
2006	17	46	6	3	72
2007	13	44	4	4	65
2008	19	49	4	4	76
2009	16	51	4	4	75
2010	16	65	2	8	91
2011	17	62	5	7	91
2012	10	55	6	7	78
2013	10	51	10	10	81
2014	11	53	6	13	83
2015	9	62	9	13	93
2016	9	61	6	12	88

Figure 1. Recreation special use permits issued by year since 1993

5. Trends and Data Sources

Data sources for recreation demand include National Visitor Use Monitoring (NVUM) surveys completed in 2001, 2006, and 2011; use of social media to identify and popularize sites; the 2013 Recreation Facility Analysis; reservation data from recreation.gov, trail plans and counters, Special Uses database (SUDS) , and professional observations.

Data sources for motorized use includes miles of motorized trail, miles of unauthorized user created motorized trails, road and trail use counts, and registration of OHV's and snowmobiles.

Trends in Visitor Use

The estimated number of visitors is based on random samples of road traffic, site visitation records, and surveys. Confidence intervals for each of the survey years varies greatly and does not reflect actual visitation numbers to the National Forest. For example, the NVUM data shows a decline in visitation on the Manti-La Sal NF between 2001 and 2011 of 128%, whereas the Forest experienced an increase in use. Therefore, evaluating visitor number trends between 2001 and 2011 does not yield reliable information.

The top 15 recreation activities visitors report engaging in has remained fairly consistent since 2001 and more closely matches what the Forest has experienced. These activities are listed in Table 1 along with percentage of visitors per year measured, and include: Hiking / Walking, Viewing Natural Features, Relaxing, Driving for Pleasure, Viewing Wildlife, Motorized Trail Activity, Developed Camping, Fishing, Primitive Camping, Hunting, OHV Use, Picnicking, Bicycling, and Visiting Historic Sites.

Activities which show an increase in popularity are motorized trail use, OHV use and bicycling. However, important user groups on the Forest are not being accounted for with this nationwide survey; specifically bouldering and rock climbing, each of which has experienced significant increases since 2001.

Another trend experiencing significant growth is the use of developed group sites as well as large dispersed areas for family reunions. These gatherings often exceed 50 or more people and commonly occur over 2-3 days. Data collected from recreation.gov for reservation of the following group sites for 2008 and again in 2016 shows group site visitation trends.

Table 3. Group site occupancy over eight years.

Group Site Location	Nights Occupied 2008	Nights Occupied 2016
Warner Lake	30	58
Potters Pond	53	86
Lake Canyon	160	230
Joes Valley	22	45

Table 4. Top 15 activities visitors participated in by percentage of estimated visitors per year (28 activities could be chosen from on the survey forms).

Activity	2001	Activity	2006	Activity	2011
Viewing Natural Features	70.6%	Viewing Natural Features	63.6%	Hiking / Walking	41%
Viewing Wildlife	56.7%	Relaxing	36.2%	Viewing Natural Features	37.9%
Relaxing	56.2%	Viewing Wildlife	34.4%	Relaxing	32.4%
Hiking / Walking	47%	Hiking / Walking	33.4%	Driving for Pleasure	31.9%
Driving for Pleasure	32.7%	Driving for Pleasure	32.9%	Viewing Wildlife	27.5%
Developed Camping	28.6%	Fishing	16.3%	Motorized Trail Activity	24.7%
Picnicking	28.1%	Motorized Trail Activity	13.9%	Developed Camping	24.1%
Other Non-motorized	21.3%	Snowmobiling	13%	Fishing	22.3%
OHV Use	20.4%	Picnicking	11.4%	Primitive Camping	18.3%
Fishing	17%	Hunting	10%	Hunting	17.8%
Bicycling	13.1%	Developed Camping	9.5%	OHV Use	13.6%
Primitive Camping	12.9%	Some Other Activity	8.1%	Picnicking	12.6%
Gathering Forest Products	7%	Primitive Camping	7.4%	Bicycling	8.3%
Hunting	6.1%	Gathering Forest Products	6.1%	Other Non-motorized	6.6%
Snowmobiling	5.6%	Visiting Historic Sites	5.6%	Visiting Historic Sites	6.5%

While data on overall visitation to the forest is not reliable, data on campground reservations, specific trail and road use numbers and the number of commercial recreation permits show increases in use, more reflective of actual use.

Not only is overall recreation use on the Forest increasing, but users are expecting more diverse and specific recreation opportunities. Trail users expect specific types of trails such as single track mountain bike trails designed specifically for mountain biking. UTV/ OHV riders expect trails wide enough for their specific type of vehicles. Winter users are expecting motorized and non-motorized uses to be separated to reduce conflicts with their chosen recreation pursuit. Innovations and changes in technologies have also created more specific recreation expectations.

Trends related to Climate Change

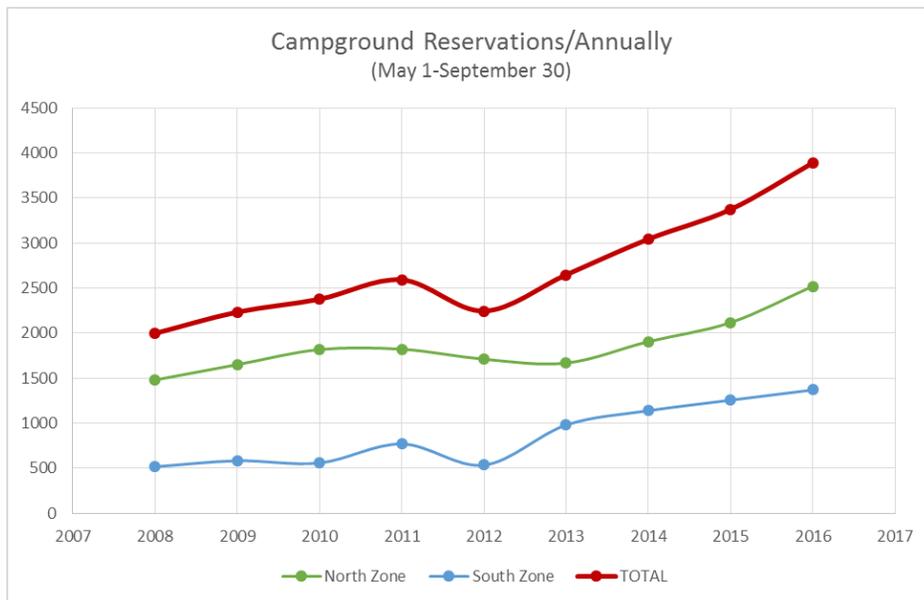
Potential impacts from climate change may exacerbate the impacts of increased recreation demand. Current climate change models predict that the Forest may begin to experience shorter winters and that the residence time for snow may decrease; meaning a reduction in both season and land area suitable for snow-based winter recreation. As the winter season shrinks, more people may expect Forest Service recreation facilities (campgrounds, trails, etc.) to open earlier and stay open longer, putting a financial and staffing strain on the Forest.

Trends related to Developed Recreation Facility Water Systems

Water systems in developed recreation sites are also impacted by increased Forest use. Water systems require a significant investment to operate and maintain each year. Some systems are necessary to operate rental cabins and campground infrastructure, while others could be decommissioned, reducing visitor services and convenience, but also reducing costs. Water systems on the Wasatch Plateau (northern portion of the Forest) have decreased from 13 to 8 since 1986. In the La Sal Mountain and Abajo Mountains (southern portion of the Forest), water systems have been reduced from 6 to 4. Probable reductions in winter snow accumulation has the potential to affect groundwater recharge and output from the spring sources now supplying culinary water. This may make it increasingly difficult to supply drinking water. Water systems will need to be closely evaluated to determine those critical to the recreation program and those that are not. The trend of decommissioning water systems is expected to continue, due primarily to high costs of operation and maintenance.

Trends Related to Campground Reservations

Of the 40 developed sites on the forest, 27 of them accept reservations for one or more of the campsites included in each campground. A measure of the growth in recreational users can be gathered by examining campground reservation data records available at www.recreation.gov. Annual data was pulled for May 1-September 30, the season which the campgrounds are generally open. This data does not include walk-in use or the 12 campgrounds on the forest that do not accept reservations. Still, the increasing demand for reservations indicates that recreational demand is increasing. There is a strong likelihood that walk-in campsite occupancy and non-reservation site occupancy would also follow this trend. In 8 years, from 2008 to 2016 the number of reservations has shown a significant increase further indicating that there is a growth trajectory with regard to recreational overnight demand on the forest.



	2008	2009	2010	2011	2012	2013	2014	2015	2016
North Zone	1481	1651	1818	1822	1711	1668	1906	2118	2521
South Zone	517	583	559	770	535	980	1139	1256	1370
TOTAL	1998	2234	2377	2592	2246	2648	3045	3374	3891

Figure 2. Campground reservations by year since 2008

6. Resources Affected

Table 5. Recreation zones—current impact of stressors for the Wasatch Plateau (northern portion of the Forest)

Zones/Stressors	Recreation Demand	Motorized Use
Sanpitch	Moderate Impact	Stable/Low Impact
Spanish Fork/Scofield	Moderate Impact	Stable/Low Impact
Sanpete North	High Impact	Moderate Impact
Miller Flat Joes Valley Huntington Cyn.	Very High Impact	High Impact
Sanpete South	High Impact	High Impact
Ferron Canyon Muddy Creek	Stable/Low Impact	Moderate Impact

Table 6. Recreation zones—current impact of stressors for the Abajo and La Sal mountains (southern portion of the Forest)

Zones/Stressors	Recreation Demand	Motorized Use
Abajo Harts Draw	Moderate Impact	High Impact
Dark Canyon Wilderness	Low Impact	Low Impact
Elk Ridge	Moderate Impact	Moderate Impact
Gateway	Low Impact	Low Impact
La Sal Loop Moab Front	High Impact	High Impact
2-Mile	Low Impact	Low Impact
Carpenter Ridge Buckeye	Low Impact	Low Impact

7. Management Tools

Management tools available to the Forest Service to address the impact of identified stressors include:

- Construct additional group site capacity
- Contain and improve high impact dispersed campsites
- Expand and improve trailhead facilities
- Include additional facilities in the Recreation Enhancement Act (REA) program
- Implement travel analysis plan (TAP) recommendations

- Close and decommission developed sites as per 2013 Recreation Facility Analysis
- Determine critical water systems in developed recreation sites to retain for public use; decommission other systems
- Close and rehabilitate unauthorized user created trails.
- Widen OHV trails to allow use of side by side OHV's (60 inches).
- Limit commercial recreation use/outfitter and guides
- Separate incompatible recreation uses and designate trails and areas for specific recreation opportunities
- Manage recreation use through permit systems

8. Stressor Accumulation

Increasing populations and forest use may affect introduction of invasive species, increase air emissions, and demand for ground water withdrawals.

9. Identify any Data Gaps

Reliable comprehensive data on total visitation to the Forest does not exist and would be very difficult to gather due the large number of entry and exit points across the Forest.

10. Literature Cited

2014 Utah Statewide Comprehensive Outdoor Recreation Plan (SCORP), Utah Department of Natural Resources, September 2013.

Moab Non-Motorized Trail Designation EA , Manti- La Sal National Forest, Moab/Monticello Ranger District, August 2013.

Recreational Off Highway Vehicle Use on Public Lands within Utah, Institute for Outdoor Recreation and Tourism, Smith, Burr, Reiter, Zeitlan, February 2009.

Personal correspondence, Chris Haller, Utah OHV Coordinator. September 26, 2016.

Recreation Facility Analysis, 5-Year Program of Work, Manti-La Sal National Forest, March 2013

National Visitor Use Monitoring (NVUM) data, 2001, 2006, 2011

Recreation.gov, National Recreation Reservation System