

APPENDIX I

Actual and Potential Use of Trails Subject to the Santa Rosa and San Jacinto Mountains Trails Plan

Prepared by

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NOTICE ON APPENDIX REDUCTION

This technical appendix has been reduced by 50% and printed double-sided to conserve paper and to allow the technical appendices to be incorporated into the EIR/EIS. If you wish to have a full-sized copy of this appendix, please contact the CVAG at 760-346-1127.

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Bureau of Land Management

Santa Rosa and San Jacinto Mountains Trails Plan

Analysis of **Actual and Potential Use of Trails Subject to the Permit** **Program**

Trail use data were collected by the Bureau of Land Management (BLM) from January through June, 2001 through 2003 (except for June 2003 when no data were collected). During this period, individuals were requested to voluntarily refrain from using trails. “Observed use” is the number of individuals who chose not to comply with the request, whether made by BLM staff (“Sheep Ambassadors”) or as posted on signs, and were actually seen using trails. “Potential use” is based on observed (or actual) use and the number of individuals contacted by BLM staff who chose to comply with the request to avoid use of the selected trails. Potential use is a prediction of demand for use of trails.

These data were not collected using a statistically valid sampling scheme. They are intended to provide the reviewer with an estimate of observed and potential use to ascertain possible impacts to recreation that may result from implementation of a permit program that would limit the number of available permits for use of selected trails. Potential use is based on an assumption that average use per hour of observation would have continued during the remainder of the 8- or 10-hour period when BLM staff was not on-site and observations did not occur.

Table 4: Observed (Actual) and Extrapolated Use for Trails Subject to the Permit Program

Trail	Observed use / hours of observation / average users per hour of observation, January-April 2001-2003	Extrapolated use per 8-hour day / per 10-hour day, January-April	Observed use / hours of observation / average users per hour of observation, May-June 2001-2003	Extrapolated use per 8-hour day / per 10-hour day, May-June	Total extrapolated use per year: January-April / May-June / January-June*
Art Smith	1,385 users / 1,923 hours of observation / 0.7 users per hour	5.6 users per 8-hr day / 7.0 users per 10-hr day	151 users / 843 hours of observation / 0.2 users per hour	1.6 users per 8-hr day / 2.0 users per 10-hr day	<i>Based on 8-hour days</i> 594 users Jan-Apr / 98 users May-June 692 users Jan-Jun
					<i>Based on 10-hour days</i> 742 users Jan-Apr / 122 users May-June 864 users Jan-Jun
Clara Burgess	248 users / 306 hours of observation / 0.8 users per hour	6.4 users per 8-hr day / 8.0 users per 10-hr day	13 users / 89 hours of observation / 0.1 users per hour	0.8 users per 8-hr day / 1.0 users per 10-hr day	<i>Based on 8-hour days</i> 678 users Jan-Apr / 49 users May-June 727 users Jan-Jun
					<i>Based on 10-hour days</i> 848 users Jan-Apr / 61 users May-June 909 users Jan-Jun
Skyline	Data for Skyline Trail are available for January-May 2003 only. Data for May are likely skewed due to use by a single large group of hikers during a period of limited observation. Therefore, observed (actual) and extrapolated use of the trail are based on the entire period (167 days from January 1 through June 30).	85 users 160 hours of observation 0.5 users per hour 4.0 users per 8-hr day			<i>Based on 8-hour days</i> 424 users Jan-Apr / 244 users May-June 668 users Jan-Jun

Trail	Observed use / hours of observation / average users per hour of observation, January-April 2001-2003	Extrapolated use per 8-hour day / per 10-hour day, January-April	Observed use / hours of observation / average users per hour of observation, May-June 2001-2003	Extrapolated use per 8-hour day / per 10-hour day, May-June	Total extrapolated use per year: January-April / May-June / January-June*
	5.0 users per 10-hr day				<u>Based on 10-hour days</u> 530 users Jan-Apr / 305 users May-June 835 users Jan-June
Bear Creek Canyon / Oasis	182 users / 599 hours of observation / 0.3 users per hour	2.4 users per 8-hour day / 3.0 users per 10-hour day	5 users / 198 hours of observation / 0.03 users per hour	0.2 users per 8-hr day / 0.3 users per 10-hr day	<u>Based on 8-hour days</u> 254 users Jan-Apr / 12 users May-June 266 users Jan-June
					<u>Based on 10-hour days</u> 318 users Jan-Apr / 18 users May-June 336 users Jan-June
Boo Hoff	163 users / 559 hours of observation / 0.3 users per hour	2.4 users per 8-hour day / 3.0 users per 10-hour day	4 users / 237 hours of observation / 0.02 users per hour	0.2 users per 8-hr day / 0.2 users per 10-hr day	<u>Based on 8-hour days</u> 254 users Jan-Apr / 12 users May-June 266 users Jan-June
					<u>Based on 10-hour days</u> 318 users Jan-Apr / 12 users May-June 330 users Jan-June
Cathedral Canyon	32 users / 717 hours of observation / 0.04 users per hour	0.3 users per 8-hr day / 0.4 users per 10-hr day	2 users / 232 hours of observation / 0.01 users per hour	0.1 users per 8-hr day / 0.1 users per 10-hr day	<u>Based on 8-hour days</u> 32 users Jan-Apr 6 users May-June 38 users Jan-June

Trail	Observed use / hours of observation / average users per hour of observation, January-April 2001-2003	Extrapolated use per 8-hour day / per 10-hour day, January-April	Observed use / hours of observation / average users per hour of observation, May-June 2001-2003	Extrapolated use per 8-hour day / per 10-hour day, May-June	Total extrapolated use per year: January-April / May-June / January-June*
					<i>Based on 10-hour days</i> 42 users Jan-Apr 6 users May-June 48 users Jan-June
Lower Dunn Road	438 users / 833 hours of observation / 0.5 users per hour	4.0 users per 8-hr day / 5.0 users per 10-hr day	61 users / 305 hours of observation / 0.2 users per hour	1.6 users per 8-hr day / 2.0 users per 10-hr day	<i>Based on 8-hour days</i> 424 users Jan-Apr / 98 users May-June 522 users Jan-June <hr/> <i>Based on 10-hour days</i> 530 users Jan-Apr / 122 users May-June 652 users Jan-June
North Lykken	No Data				

* Extrapolations of trail users per year are based on the following parameters: 106 days from January 15-April 30; 61 days from May 1-June 30.

Table 5: Summary of Observed (Actual) and Extrapolated Use for Trails Subject to the Permit Program

Trail	Data Summary	Total extrapolated use per year: January-April / May-June / January-June* (from Table 4)
All Trails	<p><u>Data for January to April period</u> -- 870 users observed per year (average)** -- 1,616 hours of observation per year (average)***</p> <p><u>Data for May to June period</u> -- 110 users observed per year (average)** -- 693 hours of observation per year (average)***</p>	<p><u>Based on 8-hour days</u> 2,660 users Jan-Apr 519 users May-June</p> <p>3,179 users January-June</p> <p><u>Based on 10-hour days</u> 3,328 users Jan-Apr 646 users May-June</p> <p>3,974 users January-June</p>

* Extrapolations of trail users per year are based on the following parameters: 106 days from January 15-April 30; 61 days from May 1-June 30.

** Does not include data for the North Lykken Trail as none were collected. Data for the Skyline Trail for January-April (an estimate of 54 trail users during this 106-day period) is 63.5% of the actual use from January-June (a total of 85 trail users); 106 days comprises 63.5% of the 167 days within this period. Data for the Skyline Trail for May-June (an estimate of 31 trail users during this 61-day period) is 36.5% of the actual use from January to June; 61 days comprises 36.5% of the 167 days within this period.

*** Does not include hours of observation for the North Lykken Trail as Sheep Ambassadors were not deployed on this trail. Hours of observation for the Skyline Trail for January-April are based on the total number of hours of observation for the January-June period (160 hours). Consistent with the manner in which actual trail use for the two periods is calculated, 102 hours are attributed to the January-April period, while 58 hours are attributed to the May-June period.

Table 6: Compliance with Voluntary Trail Avoidance Program for Trails Subject to the Permit Program*

Trail	Number of Individuals								Compliance Percentage
	January-June 2001		January-June 2002		January-June 2003		Total		
	C**	NC**	C**	NC**	C**	NC**	C**	NC**	
Art Smith	524	351	819	443	678	329	2,021	1,123	64%
Clara Burgess	50	41	9	37	39	51	98	129	43%
Skyline	No Data				63	72	63	72	47%
Bear Creek Canyon/Oasis	52	33	137	46	71	28	260	107	71%
Boo Hoff	70	34	49	43	23	11	142	88	62%
Cathedral Canyon	5	0	3	9	4	2	12	11	52%
Lower Dunn Road	56	81	69	158	20	61	145	300	33%
North Lykken	No Data								
TOTAL	757	540	1,086	736	898	554	2,741	1,830	60%

* Compliance and noncompliance data are based on direct contacts by on-site BLM staff (“Sheep Ambassadors”) requesting individuals to refrain from using trails. Compliance with indirect requests to refrain from using trails (e.g., through posted sign messages, newspaper articles) or other direct requests (e.g., via telephone conversations) are not included in the data.

** C = compliant; NC = non-compliant

Table 7: Potential Use (Demand) for Trails Subject to the Permit Program

Trail	Extrapolated use per year, Jan-June (from Table 4)		Compliance percentage (from Table 6)	Potential use per year, Jan-June*	
	Based on 8-hr days	Based on 10-hr days		Based on 8-hr days	Based on 10-hr days
Art Smith	692	864	64%	1,922	2,400
Clara Burgess	727	909	43%	1,275	1,595
Skyline	668	835	47%	1,260	1,575
Bear Creek Canyon/Oasis	266	336	71%	917	1,159
Boo Hoff	266	330	62%	700	868
Cathedral Canyon	38	48	52%	79	100
Lower Dunn Road	522	652	33%	779	973
North Lykken	No Data		na	No Data	
TOTAL	3,179	3,974		6,932	8,670

* Potential use per year (demand) is the total of (a) extrapolated use per year from Table 4 (which represents actual use), and (b) estimated use per year by previously-compliant individuals based on Table 6, assuming these individuals would use the trail if the opportunity is available. For example, if 692 individuals per year are believed to have used the Art Smith Trail (extrapolated use based on an 8-hour day) and is it assumed this use represents 36% of the potential use (given the 64% level of compliance), then it is estimated that 1,230 previously-compliant individuals would desire to use the trail, thereby resulting in total potential use (or demand for permits) of 1,922. Individuals complying with indirect requests to refrain from using trails (e.g., through sign messages, newspaper articles) or direct requests by other than on-site BLM staff (e.g., via telephone conversations) are not included in the estimate.

**TRAIL USE 15 JANUARY - 30 JUNE 2001
SANTA ROSA AND SAN JACINTO MOUNTAINS, CALIFORNIA**

TIME PERIOD Type of Use	6AM to 8 AM			8 AM to 10 AM			10 AM to Noon			Noon to 2 PM			2 PM to 4 PM			4 PM to 6 PM			COMPLY	NON/COMPLY	%	Trail Use Data		
	H	B	E	H	B	E	H	B	E	H	B	E	H	B	E	H	B	E						
ART SMITH	41			186	2		306	3		218	11		98	1		9			524	351	60.0	204	1	
BEAR CREEK	3			10	2		35			18		2	6			9			52	33	61.2	35		
BOO HOFF	3			9		2	39	2	8	18	1	3	7		5	2	5		70	34	67.3	48	5	11
CATHEDRAL	2			1									2						5	0	100.0	6	2	
CLARA BURGESS				10			25	6		37	6	6	1			na			50	41	54.9	71		3
LOWER DUNN	5	4		19	21		16	20		17	9		6	9		7	4		56	81	40.9	48	63	
MORROW	4			53	3		110	3	12	23	2		25	4	2				142	99	58.9	104	1	4
UPPER DUNN					13		8	8				3							23	9	71.9	46	21	
SKYLINE	No data (Sheep Ambassadors not deployed until 2003)																							
Total																			922	648	58.7	562	93	18

Hours of Observation	6AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	Total
ART SMITH	47.5	223.0	276.1	266.2	90.7	10.2	913.7
BEAR CREEK	8.9	56.6	79.6	70.5	26.9	3.0	245.5
BOO HOFF	9.7	76.4	129.3	125.3	33.2	3.3	377.2
CATHEDRAL	22.2	64.6	68.0	87.9	47.7	7.0	297.4
CLARA BURGESS	2.3	37.2	72.1	44.7	8.3		164.6
LOWER DUNN	29.9	92.5	94.3	109.5	62.8	14.2	403.2
MORROW	7.4	81.5	99.6	88.3	33.2	4.5	314.5
UPPER DUNN	1.0	33.0	63.5	68.2	18.2	1.0	184.9
SKYLINE	No data (Sheep ambassadors not deployed until 2003)						
Total							2901.0

- NOTES:**
- (a) Trail use data were not collected using a statistically valid sampling methodology.
 - (b) "Type of Use": H = hiker; B = bicyclist; E = equestrian
 - (c) "COMPLY" and "NON/COMPLY" show the number of individuals that complied and did not comply with the request by Sheep Ambassadors to refrain from using the subject trails; "NON/COMPLY" data do not include the individuals that were observed using trails prior to contact by Sheep Ambassadors.
 - (d) "%" indicates the percentage of individuals contacted by Sheep Ambassadors that complied with the request to avoid using the subject trails.
 - (e) "Trail Use Data" shows the number of individuals observed using trails prior to contact by Sheep Ambassadors, thereby not complying with posted signs; these data are not included under "NON/COMPLY" and are not used to determine percentage of compliance as shown under "%."
 - (f) "Hours of Observation" shows the number of hours that Sheep Ambassadors were on duty contacting potential trail users and observing trail use.
 - (g) Blank data boxes indicate zero contacts or observations by Sheep Ambassadors, or zero hours of observation.
 - (g) "na" indicates "not applicable" as Sheep Ambassadors were not deployed during the specified hours.

**TRAIL USE 1 JANUARY - 30 JUNE 2002
SANTA ROSA AND SAN JACINTO MOUNTAINS, CALIFORNIA**

TIME PERIOD Type of Use	6AM to 8 AM			8 AM to 10 AM			10 AM to Noon			Noon to 2 PM			2 PM to 4 PM			4 PM to 6 PM			COMPLY	NON/COMPLY	%	Trail Use Data		
	H	B	E	H	B	E	H	B	E	H	B	E	H	B	E	H	B	E						
ART SMITH	64	4		363	19		390	8		260	8		111			33	2		819	443	64.9	113	16	
BEAR CREEK	4			63			53			61						2			137	46	74.9	30		
BOO HOFF	2			10			25		10	27	5	12	1						49	43	53.3	13		
CATHEDRAL				3			6			3									3	9	25.0	4		
CLARA BURGESS				7	2		29	2		6						na			9	37	19.6	23	2	
LOWER DUNN	20	8		22	88		19	23		4	18		4	4		15	2		69	158	30.4	29	52	
MORROW	9			81	16		61	1		81	16	4							169	100	62.8	65	4	
UPPER DUNN																na						3	3	
SKYLINE	No data (Sheep Ambassadors not deployed until 2003)																							
Total																			1255	836	60.0	280	77	

Hours of Observation	6AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	Total		
ART SMITH	61.3	266.3	332.3	307.5	133.3	62.8	1163.5		
BEAR CREEK	21.3	115.0	110.3	115.0	27.0	12.8	401.3		
BOO HOFF	11.3	49.3	154.8	99.0	17.5	8.3	340.0		
CATHEDRAL	34.3	132.3	148.0	148.3	46.3	15.8	524.8		
CLARA BURGESS	0.3	23.8	64.5	34.8	7.5		130.8		
LOWER DUNN	35.8	146.5	161.5	160.0	50.8	20.8	575.3		
MORROW	21.0	137.3	87.3	69.0	2.3	0.8	317.5		
UPPER DUNN	1.3	19.8	26.5	18.0	0.5		66.0		
SKYLINE	No data (Sheep Ambassadors not deployed until 2003)								
Total								3519.2	

- NOTES:**
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**TRAIL USE 15 JANUARY - 30 MAY 2003
SANTA ROSA AND SAN JACINTO MOUNTAINS, CALIFORNIA**

TIME PERIOD Type of Use	6AM to 8 AM			8 AM to 10 AM			10 AM to Noon			Noon to 2 PM			2 PM to 4 PM			4 PM to 6 PM			COMPLY	NON/COMPLY	%	Trail Use Data			
	H	B	E	H	B	E	H	B	E	H	B	E	H	B	E	H	B	E							
ART SMITH	55	2		371	5		348	6		210	4		6			na	678	329	67.3	74	5				
BEAR CREEK				42	3		30			24			na			na	71	28	71.7	15					
BOO HOFF				6			4	2		21		1				na	23	11	67.6	2					
CATHEDRAL				2			4									na	4	2	66.7	4	7				
CLARA BURGESS				23	6		42	6		13			na			na	39	51	43.3	28	5				
LOWER DUNN	2	1		22	23		10	14			9					na	20	61	24.7	1	6				
MORROW	No data (Sheep Ambassadors deployed in 2001 and 2002 only)																								
UPPER DUNN	No data (Sheep Ambassadors deployed in 2001 and 2002 only)																								
SKYLINE	2			59			44			26	4		na			na	63	72	46.7	13					
Total																				835	482	63.4	137	23	

Hours of Observation	6AM to 8 AM	8 AM to 10 AM	10 AM to Noon	Noon to 2 PM	2 PM to 4 PM	4 PM to 6 PM	Total
ART SMITH	51.00	225.50	225.50	184.00	1.30		687.3
BEAR CREEK	6.0	53.3	62.0	29.3			150.6
BOO HOFF	0.5	20.0	18.0	36.3	1.0		75.8
CATHEDRAL	9.8	41.6	38.8	32.2	1.5		123.9
CLARA BURGESS		29.3	50.5	18.8			98.6
LOWER DUNN	11.3	53.5	47.3	40.0	3.3		155.4
MORROW	No data (Sheep Ambassadors deployed in 2001 and 2002 only)						
UPPER DUNN	No data (Sheep Ambassadors deployed in 2001 and 2002 only)						
SKYLINE	1.5	56.6	64.8	36.0			158.9
Total							1450.5

- NOTES:**
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