Appendix C

Amounts and Distribution of Recreational Horse Trails on Federal and State Lands in the Coterminous 48 States

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Introduction

Traditional discussions of recreational horse trails in a national perspective have lacked information on two basic questions: How much mileage is available for recreational saddle and pack stock use? And, how is it distributed over the American landscape?

We have attempted to gain insight into these questions with respect to Federal and State managed public lands. In addition, we have used the data available from the American Horse Council (AHC) (Deloitte 2005) to compare the distribution of horses in the nation with the distribution of trail mileage. It seems reasonable to expect that the ratio of total number of horses in a state or region to the corresponding total availability of trail miles could be one of the indicators of a demand and supply situation that needs address. At the other end of the spectrum, it seems reasonable to expect that states and regions with vast amounts of trail mileage are going to need substantial budgets just to maintain what they have.

This survey was restricted to inquiry on Federal and State lands. There are trails on municipal government lands, but they tend to be largely in urban and suburban environments. We were focused on rural and wildland areas. Also, there are significant amounts of trail mileage in rural and wildland settings on large private holdings, particularly in the South and Southwest. However, we had no way to locate and survey those landowners.

The Survey

Our attempt to create an initial data base for recreational saddle and pack stock trail mileage began with a search of websites. Trail mileages were published on agency websites in a few instances, but mostly those sites provided information for direct contact of personnel that could eventually give us the appropriate data.

Our contact with each land management agency began at the regional level in the case of Federal agencies, and at the State level in the case of state agencies, and then working down to individual units as was necessary. In the case of the National Forest System, we started at the regional level, and then went to the Forest and Ranger District levels as was necessary. For state parks and forests, it was often necessary to contact the individual units. All National Parks were contacted individually. However, in the case of Bureau of Land Management lands, the data were available for all units at the national level. Army Corps of Engineers units managed for recreational use were individually contacted.

All contacts with the agencies were made either by e-mail or phone or both. It was often necessary to get clarifications of information received by e-mail. Also, it was not uncommon for agency personnel to be confused about what we wanted, thus further phone conversations were needed for clarification.

There are several limiting criteria in this data set. First, there was a wide array of quality conditions for data from various sources. Some units simply said their data were old or outdated, but this was the best they had. Some entities volunteered that their data were really best guesses. On the other hand, others had very good recent data based on Global Positioning System survey efforts.

One of the problems that plagued the process was the separation of actual trails from roads open to horse use. This appeared to be more of a problem in the eastern National Forest units than elsewhere. We emphasized

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to the agencies that our interest was in travelways managed and maintained as trails. However, we did accept mileage of gated roads that were significantly used as trails.

Another major problem that confronted the process was that of dispersed riding. Most of the National Grasslands allow dispersed riding. Some have small amounts of designated trails as well as dispersed riding. Most of the western National Parks allow dispersed riding in addition to their designated trails. Of course, the designated trails were the only entities that could be quantified in these circumstances. Obviously, in portions of the nation with substantial amounts of allowable dispersed riding, the recreational trail horse use opportunities are considerably underestimated by thinking only in terms of designated trails.

In surveying state lands, we were confronted with the problem of varying configurations of land management agencies. Some states had State parks and State forests under one parent agency and the data were given to us at the parent agency level. In other states, the agencies were more autonomous, and we were able to separate State forests from parks. In other instances, we went directly to park and forest units for the data. We have kept the file data as we received it, but for the purposes of this chapter, we have combined all State lands under one heading.

We were interested primarily in trail mileage open for recreational saddle and pack stock use. This included trails that were designated for shared-use (multiple-use) as well as trails designated for horse use only.

Finally, estimates of the kind that we sought have to be viewed as a moving target. Procedures as simple as resurveying trail systems on the ground can result in significant changes in mileage estimates, particularly when surveying techniques change dramatically. In addition, the closing of some trails and the opening of new ones obviously makes a difference, and this is not an uncommon process. Several of the survey respondents mentioned that they were preparing to add more mileage to their existing trail systems, so in the future their mileage will be greater than is shown here for the current condition. In summary, the estimates offered here are the best that we could get from the people who were managing the trails at this point in time.

To get individual State reviews of our data sets, we asked the State Trails Coordinator and the State horse council in each state to review the data that applied specifically to them. State Trail Coordinators were contacted in all 48 states surveyed. Review responses were received from 28. Of the 44 State horse councils contacted, 13 responded with review comments. (Note: The states of Montana, North Dakota, Rhode Island, and Wyoming did not have a State horse council of record with the American Horse Council. In addition, a web search revealed no State horse council organizations in these states.)

We have no way of evaluating the accuracy of these data, but it seems logical to believe they are reasonably accurate as they came directly from the responsible management agencies, and in some cases the individual managers themselves.

The Results

There are approximately 123,799 miles of trail open to use by recreational saddle and pack stock on the nation's Federal and State agency managed lands (Table C.1). Of this amount, 85% is under Federal management and 15% is under State management. About 69% of all recreational stock trail mileage on State and Federal lands combined is managed by the USDA-Forest Service. Thus this agency carries the bulk of the nation's recreational horse trail management responsibilities.

Most of the nation's stock trail mileage is in the West. In this survey, eight states accounted for about 66.8% of all mileage on Federal and State lands combined: Idaho (13.2%), California (10.5%), Montana (10.1%), Colorado (9.3%), Wyoming (7.4%), Oregon (5.5%), Utah (6.4%), and Washington (4.4%).

Table C.2 combines the individual states into USDA-Forest Service regions (Figure C.1). Three of the eight regions, all in the West, accounted for 49.4% of the total mileage: Region 4 (20.7%), Region 2 (15.3%), and Region 1 (13.4%). Regions 8 and 9 combined were considered to be the eastern U. S. and accounted for 22.4% of the mileage in the nation.

State managed trail systems were most important in the eastern U. S. In Region 8, 34% of the mileage was on State managed lands, while in Region 9, State managed lands accounted for 72% of all trail mileage available for horse use. In Pennsylvania, 91% of 5,258 total system miles was under State management. This was the highest relative importance of State management in the nation.

Table C.3 combines total trail mileage and total number of horses by region to get a perspective of where the

Table C1. Recreational saddle and pack stock trail milege on Federal and State lands.

State	National Forest System (mi.)	National Parks (mi.)	Bureau of Land Management (mi.)	Army Corps of Engineers (mi.)	Total Federal (mi.)	State Lands (mi.)	Total (mi.)
Alabama	46	19			65	10	75
Arizona	4,228	300	1,118		5,646	46	5,691
Arkansas	384	129			513	97	609
California	8,492	1,988	1,641		12,121	840	12,961
Colorado	9,516	292	1,593		11,401	154	11,555
Connecticut		0			0	150	150
Delaware		0			0	136	136
Florida	229	40			269	1,029	1,298
Georgia	186	30		18	234	105	339
Idaho	14,096	17	2,114		16,227	100	16,327
Illinois	270	0			270	733	1,003
Indiana	211	6			217	475	692
Iowa		0			0	227	227
Kansas	30	0			30	140	170
Kentucky	519	285		18	822	284	1,106
Louisiana	253	0			253	3	257
Maine		45			45	300	345
Maryland		6			6	628	634
Massachusetts		0			0	90	90
Michigan	417	8			425	500	925
Minnesota	313	0			313	672	985
Mississippi	67	0			67	27	94
Missouri	520	31			551	838	1,389
Montana	10,423	740	956		12,119	0	12,119
Nebraska	95	0			95	64	159
Nevada	1,800	52	787		2,639	185	2,824
New Hampshire	1,383	0			1,383	40	1,423
New Jersey		37			37	310	347
New Mexico	2,715	0	1,159		3,874	34	3,908
New York	25	2			27	869	896
North Carolina	210	338			548	205	753
North Dakota	120	212			332	78	410
Ohio	74	47			122	829	950
Oklahoma	0	35			35	148	183
Oregon	5,802	60	795		6,657	186	6,843
Pennsylvania	467	27			494	4,765	5,258
Rhode Island		0			0	60	60
South Carolina	109	0		105	214	348	562
South Dakota	418	0			418	157	576
Tennessee	117	243		45	405	363	768
Texas	211	45			256	293	549
Utah	6,463	106	1,266		7,835	100	7,935
Vermont	14	7			21	35	56
Virginia	2,463	155			2,618	289	2,907
Washington	4,583	494			5,077	372	5,449
West Virginia	835	10			845	441	1,286
Wisconsin	327	5			332	1,058	1,389
Wyoming	6,779	1,215	1,100		9,094	39	9,133
Total	85,211	7,024	12,529	186	104,950	18,849	123,799

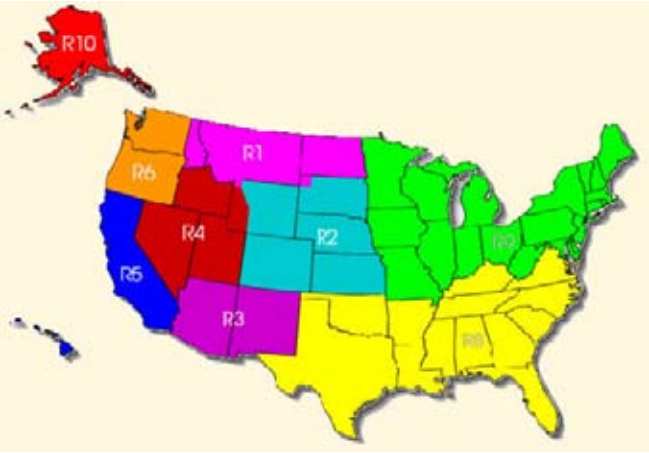

Figure C.1. USDA-Forest Service regions. (From http://www.fs.fed.us/contactus/regions.shtml)

trails are located relative to where the horses are. While the eastern U. S. (regions 8 and 9 combined) has only 22.4% of the nation's trail mileage, it has about 70% of the nation's horses. This perspective might be improved somewhat by subtracting Texas and Oklahoma from Region 8 because they have large numbers of horses (978,822 and 326,134, respectively), but low designated trail mileage (549 and 183 miles, respectively), possibly because most of the public lands trail opportunities may be in dispersed riding on National Grasslands. Furthermore, they are not traditionally thought of as eastern states. However, even after this adjustment, the eastern U.S. has 21.8% of the trail mileage and 55.8% of the nation's horses.

The AHC estimated that there are 9,203,331 horses in the nation. The ratio of number of horses per available trail mile on public lands nationwide is therefore about 74.3. The AHC also estimated that about 3,906,923 horses (42.4% of the total number) were used primarily or entirely for recreational purposes. Therefore, for the nation as a whole, the ratio of recreational horses to available trail mileage is 31.6:1.

The published AHC data did not provide a basis for a more detailed examination of ratios of recreational horse numbers to available trail mileage. However, it can be seen that after discounting horses in Texas and Oklahoma, if only 42.4% of the horses in regions 8 and 9 combined were used primarily as recreational stock, there would be 80.6 recreational horses per available trail mile on public lands in this portion of the nation. This is 2.6 times the national average.

Finally, Table C.4 shows the percentage distribution of the nation's trail mileage and horses by state, as well as national rankings of the individual states. Several of the states in Region 2 were particularly interesting as they led the nation by a substantial margin in per capita ownership of horses (horses per 100 people): Wyoming (19.6), South Dakota (15.7), Montana (14.0), and Idaho (11.4). The Great Plains states had very high densities of horses relative to the available trail mileage in part because of the amount of dispersed riding allowed on areas that have only small amounts of quantifiable trail. On the other hand, states such as Alabama and Mississippi simply have substantial numbers of horses but very limited recreational opportunities on public lands.

Summary

In the coterminous 48 states of the nation, there exists approximately 123,799 miles of trail available for recreational saddle and pack stock use on Federal and State public lands. The USDA-Forest Service has responsibility for 69% of this mileage. About 85% of the mileage is on Federal lands. Only about 22% of horse trail mileage

Table C.2. Recreational saddle and pack stock trail mileage by USDA-Forest Service Region.

USDA-Forest Service Region	National Forest System (mi.)	National Park (mi.)	Bureau of Land Management (mi.)	Army Corps of Engineers (mi.)	Total Federal (mi.)	State Lands (mi.)	Total (mi.)
1	14,600	952	956	0	16,508	78	16,586
2	14,184	1,507	2,693	0	18,383	554	18,937
3	6,942	300	2,277	0	9,519	80	9,599
4	20,958	175	4,167	0	25,300	385	25,685
5	8,492	1,988	1,641	0	12,121	840	12,961
6	10,385	554	795	0	11,734	558	12,292
8	4,794	1,318	0	186	6,299	3,200	9,499
9	4,856	231	0	0	5,086	13,154	18,241
Total	85,211	7,024	12,529	186	104,950	18,849	123,799

Table C.3. Comparison of percentage distribution of recreational stock trails with distribution of horses in the nation by USDA-Forest Service region. (All horses in Idaho were attributed to Region 4. All horses in Wyoming were attributed to Region 2.)

Region	Total Trail Miles in U.S.	% of Total Trail Miles in U.S.	Total Number of Horses in U.S.[a]	% of all Horses in U.S.
1	14,600	13.4	189,388	2.1
2	18,937	15.3	654,289	7.1
3	9,599	7.8	324,305	3.5
4	25,685	20.7	481,151	5.2
5	12,961	10.5	698,345	7.6
6	12,292	9.9	417,892	4.5
8	9,499	7.7	3,582,048	38.9
9	18,241	14.7	2,855,913	31.0
Total	123,799	100.0	9,203,331	100.0

[a]DeLoitte 2005 in L. C.

exists in the eastern U. S. as defined by the boundaries of the USDA-Forest Service regions 8 and 9 (Southern and Eastern regions) combined.

According to a 2005 survey published by the American Horse Council, there are approximately 9.2 million horses in the nation of which about 3.9 million are used primarily or entirely for recreational purposes. These estimates combined with the trail mileage survey work suggests that for the nation as a whole there are 31.6 head of recreational saddle and pack stock per mile of trail available for their use in the nation. Based on the national average of 42.4% of all horses being owned for recreational use, and after discounting Texas and Oklahoma, in the eastern portion of the nation the ratio of recreational horses to available trail mileage is approximately 80.6:1.

Table C4. Percentage distribution of recreational stock trail mileage and total numbers of horses in the contiguous 48 states along with total horse density per trail mile and per capita ownership expressed as numbers of horses per 100 people. (State populations were based on Bureau of Census data for 2004.)

State	% of Total Trail Miles in U.S.	Rank in Trail Miles in U.S.	% of All Horses in U.S.	Rank in % of Horses in U.S.	Number of Horses per Trail Mile	Rank in Horses per Trail Mile	Per Capita Horse Ownership	Rank in Per Capita Ownership
Alabama	0.06	46	1.61	30	1,975.4	1	3.3	25
Arizona	4.60	8	1.92	23	31.1	40	3.1	29
Arkansas	0.49	39	1.83	24	275.8	18	6.1	12
California	10.47	2	7.59	2	53.9	36	1.9	40
Colorado	9.33	4	2.78	10	22.1	42	5.6	13
Connecticut	0.12	42	0.56	41	346.5	13	1.5	52
Delaware	0.11	43	0.12	47	81.5	33	1.3	43
Florida	1.05	17	5.43	3	385.4	12	2.9	31
Georgia	0.27	36	1.95	20	529.5	9	2.0	39
Idaho	13.19	1	1.72	27	9.7	48	11.4	4
Illinois	0.81	20	20.9	18	191.9	26	1.5	41
Indiana	0.56	27	2.21	15	293.2	16	3.3	26
Iowa	0.18	38	2.16	17	877.6	7	6.7	10
Kansas	0.14	40	1.94	21	1,054.0	5	6.5	11
Kentucky	0.89	19	3.48	5	289.5	17	7.7	9
Louisiana	0.21	37	1.79	26	640.3	8	3.6	22
Maine	0.28	35	0.41	43	109.7	31	2.9	32
Maryland	0.51	28	1.66	28	241.2	21	2.8	33
Massachusetts	0.07	45	0.41	44	417.0	11	0.6	47
Michigan	0.75	23	2.55	13	253.5	20	2.3	35
Minnesota	0.80	21	1.98	19	185.0	27	3.6	23
Mississippi	0.08	44	1.23	35	1,202.8	4	3.9	21
Missouri	1.12	16	3.06	7	202.5	25	4.9	16
Montana	9.79	3	1.41	32	10.7	46	14.0	3
Nebraska	0.13	41	1.64	29	949.0	6	8.6	7
Nevada	2.28	13	0.56	52	18.3	43	2.2	37
New Hampshire	1.15	14	0.16	46	10.3	47	1.1	44
New Jersey	0.28	34	0.90	39	239.5	22	1.0	46
New Mexico	3.16	11	1.60	31	37.7	39	7.7	8
New York	0.72	24	2.19	16	225.5	23	1.1	45
North Carolina	0.61	26	2.78	8	340.2	14	3.0	30
North Dakota	0.33	33	0.65	40	144.8	29	9.4	5
Ohio	0.77	22	3.33	6	322.9	15	2.7	34
Oklahoma	0.15	39	3.54	4	1,782.2	3	9.3	6
Oregon	5.53	7	1.82	25	24.5	41	4.7	17
Pennsylvania	4.25	10	2.78	9	48.6	37	2.1	38
Rhode Island	0.05	47	0.04	48	58.5	35	0.3	48
South Carolina	0.45	31	1.03	37	168.5	28	2.3	36
South Dakota	0.47	30	1.31	33	210.0	24	15.7	2
Tennessee	0.62	25	2.25	14	269.2	19	3.5	24
Texas	0.44	32	10.64	1	1,783.6	2	4.4	18
Utah	6.41	6	1.31	34	15.1	44	5.0	14
Vermont	0.04	48	0.27	45	442.2	10	3.9	20
Virginia	2.35	12	2.60	12	82.3	32	3.2	28
Washington	4.40	9	2.72	11	45.9	38	4.0	19
West Virginia	1.04	18	0.98	38	69.9	34	5.0	15
Wisconsin	1.12	15	1.94	22	128.6	30	3.2	27
Wyoming	7.38	5	1.08	36	10.9	45	19.6	1