United States
Department of
Agriculture

Forest Service Lolo National Forest (406)329-3750 Building 24 Fort Missoula Missoula, MT

59801

File Code: 2520/2210

Route To: Andy Kulla, D-3

Date: April 1, 1997

Subject: South Fork - East Fork Lolo Range Allotment

To: District Ranger, Missoula RD

On September 1, 1994, this range allotment was visited to determine the existing situation and effects of cattle grazing. It was agreed that where the cattle were able to gain access to the riparian zone, severe compaction was noted. This was determined by visual observation. During the review five locations were visited with similar observations.

After the day in the field it was agreed that actual compaction readings would be taken to determine if the compaction observed was within or outside of the Forest Plan Monitoring Item 4-3 on page V-10 of "The Lolo National Forest Plan".

On September 7, 1994, equipped with a SOILTEST INC., CL-700 pocket penetrometer the sites in question were visited to determine the actual compaction that existed at these sites. The readings are as follows and are in "Unconfined Strength" (Tons per Square Foot) or (Kilograms per Square Centimeter).

On October 11, 1996, the second follow-up set of readings were taken and the results are as follows:

Location:1			2		3		4		5	
*	Cont.	Comp.	Cont.	Comp.	Cont.	Comp.	Cont.	Comp.	Cont.	Comp.
Α.	1.0	3.6	0.8	3.2	0.8	3.3	0.5	2.8	0.8	2.3
В.		3.0		3.0		3.1		3.2		2.8
C.		3.5		2.4		2.6		2.8		2.4
D.		3.0		3.3		3.0		3.4		2.5
ave	rage	3.28	<u> </u>	2.98		3.0		3.05		2.5

^{*} Cont. - Control This was an area that cattle could not access.

Comp. - Compaction This was an area that the cattle could access.

The locations of the sample sites are noted on the initial map of the area that was sent with the September 21, 1994, letter.

It should be noted that the actual compacted areas range from approximately 1.5 to 2.55 times as much compaction as the control areas. When a soil becomes compacted by 50 percent or more it will reduce the productivity of a site. The readings at the examined locations are at least 2 times as compacted. Therefore, these sites are compacted beyond the Forest Plan Standards. It will be important to begin to affect improving conditions in these riparian zones so that the present trend is reversed.

District Ranger, Missoula RD

As can be seen by the 1996 numbers the trend seems to continue a slow improvement. The readings for 1996 may be a result of wetter conditions then those that were present at the time of monitoring in 1994. The Forest Soil Scientist will continue to monitor these sites to assure that the existing compaction continues to dissipate. This can be determined by seeing rooting changes, continued reductions in compaction readings and further observations.

If there are additional questions, please contact me.

/s/ Skip Barndt SKIP BARNDT Soil Scientist

cc: Barndt Bessler-Hackett, D-3

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