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Improvements Needed
In Motor Vehicle Management
By The Forest Service And
The Soil Conservation Service

B-114833

Department of Agriculture

*UNITED STATES
GENERAL ACCOUNTING OFFICE*

AUG. 13, 1971



UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

CIVIL DIVISION

B-114833

Dear Mr. Secretary:

1 This is our report on the improvements needed in motor
2 vehicle management by the Forest Service and the Soil Conservation
3 Service. The report contains recommendations for attaining the im-
4 provements.

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337

5 Your attention is invited to section 236 of the Legislative Reor-
6 ganization Act of 1970 which requires that you submit written state-
7 ments of the action taken with respect to the recommendations. The
8 statements are to be sent to the House and Senate Committees on Gov-
9 ernment Operations not later than 60 days after the date of this report
10 and to the House and Senate Committees on Appropriations in connec-
11 tion with the first request for appropriations submitted by your agency
12 more than 60 days after the date of this report. We shall appreciate
13 receiving copies of the statements sent to these Committees.

10/3 a
10/30

14 Copies of this report are being sent today to the Chairmen, House
15 and Senate Committees on Government Operations; the Chairmen,
16 House and Senate Committees on Appropriations; and Congressman L. H.
17 Fountain, pursuant to his request. Copies are also being sent to the
18 Administrator, Soil Conservation Service; the Chief, Forest Service;
19 the Inspector General, Department of Agriculture; the Director, Office
20 of Management and Budget; and the Administrator, General Services
21 Administration.

Sincerely yours,

A. T. Samuelson

Director, Civil Division

The Honorable
The Secretary of Agriculture

D I G E S T

WHY THE REVIEW WAS MADE

The General Accounting Office (GAO) evaluated the procedures and practices followed by the Forest Service and the Soil Conservation Service, Department of Agriculture, in limiting the number of motor vehicles to needs. GAO also obtained information concerning wide variances in vehicle maintenance costs among the Forest Service regions.

The Forest Service and the Soil Conservation Service spend about \$20 million a year--including amortization of vehicle acquisition costs--in operating and maintaining about 25,000 vehicles.

FINDINGS AND CONCLUSIONS

Improvements needed in
analysis of vehicle use

General Services Administration guidelines to assist Federal agencies in controlling their vehicle fleet costs state that reviews of time-of-use data--the number of days vehicles on hand have been used--are necessary for evaluating vehicle needs. (See p. 9.)

Although Forest Service policy provides that analyses of time-of-use data be made by its field offices

- two of the Forest Service's nine regional offices did not establish written criteria and procedures for making time-of-use analyses and
- only one of three Forest Service regions (two that had established written criteria and procedures and one that had not) where GAO made its review was using time-of-use analyses in evaluating vehicle needs. (See p. 9.)

The Soil Conservation Service did not provide, as a matter of policy, that its field offices make time-of-use analyses in evaluating vehicle needs. GAO's review at selected Soil Conservation Service field offices in three States showed that it was not their normal practice to make such analyses. (See p. 11.)

GAO analyses of time-of-use data for general-purpose vehicles showed that:

- At selected field offices that normally did not make time-of-use analyses, the equivalent of 123, or about 26 percent, of the 473 vehicles

included in the GAO analyses had not been used at all on 70 percent or more of the weekdays covered by the GAO analyses. The equivalent of 39 vehicles (more than 8 percent) had not been used at all on any of the weekdays covered. (See p. 13.)

--At the selected offices in the Forest Service region which had been using time-of-use analyses in evaluating vehicle needs, the equivalent of less than 5 percent of the 202 general-purpose vehicles included in the GAO analyses had not been used at all on 70 percent or more of the weekdays covered. Of 2,077 general-purpose vehicles in that entire region, the equivalent of less than 3 percent were not used at all on 70 percent or more of the weekdays covered. (See p. 15.)

The time-of-use data used in GAO's analyses covered weekdays during peak working seasons, except for one Forest Service region where vehicle use was relatively constant throughout the year.

The small percentage of idle vehicles in the Forest Service region that did use time-of-use data, compared with the large percentage of idle vehicles in the Forest Service and Soil Conservation Service locations that did not use this data, indicates the positive benefits which can result from the use of periodic analyses of such data by field offices to provide for better control of vehicle fleet sizes. In this regard GAO believes that periodic analyses of time-of-use data would be helpful in identifying situations where a vehicle could be shared by two or more employees. (See p. 17.)

Need for Forest Service to review
its vehicle maintenance practices

GAO believes that wide variances in average vehicle maintenance costs among Forest Service regions without verified explanations point up a need for the Forest Service to review, compare, and evaluate the vehicle maintenance practices in various regions.

Annual average maintenance costs varied from a low of \$182 a vehicle in one Forest Service region to a high of \$481 a vehicle in another region. (See p. 19.)

GAO's comparative analysis of annual maintenance costs in two west coast regions where average maintenance costs a vehicle were \$302 and \$481, respectively, showed that differences in the average number of maintenance labor hours per vehicle had been the major cause of the variance. (See p. 21.)

Although differences in roads and other driving conditions may contribute to the cost variances, such wide variances may also indicate significant differences in maintenance practices or operating efficiency of the various field offices. (See p. 26.)

RECOMMENDATIONS OR SUGGESTIONS

The Secretary of Agriculture should have the Forest Service and the Soil Conservation Service require

- their field offices to make regular periodic reviews of time-of-use data and
- their respective regional and State offices to use the results of such reviews, along with other pertinent information, in approving the retention of vehicles on hand and requests for additional vehicles and to give consideration to greater sharing of vehicles wherever possible. (See p. 17.)

The Secretary should also have the Forest Service require its vehicle management staff to

- make a review of the maintenance practices of the Forest Service regions to identify the causes of the variances in vehicle maintenance costs and
- take appropriate action to improve the vehicle maintenance program. (See p. 25.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Forest Service generally agreed with GAO's recommendations. The Forest Service was revising directives to further define vehicle utilization studies and to establish uniform periods of time for data collection and a follow-up procedure. These revisions were expected to be completed by July 1971. (See p. 18 and app. I.)

A detailed study of maintenance cost variances in at least two Forest Service regions is expected to be completed by June 1972, at which time appropriate action will be taken. (See p. 26 and app. I.)

The Soil Conservation Service believes that recording and analyzing time-of-use data for all vehicles at all locations would cost more than any savings that would result.

The Service stated, however, that it had agreed, after consultation with Department of Agriculture officials, to make time-of-use analyses at locations where there were seven or more vehicles for a 4-month period that was representative of vehicle needs. (See p. 18 and app. II.)

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ABBREVIATIONS

GAO General Accounting Office
GSA General Services Administration
SCS Soil Conservation Service

D I G E S T

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GAO analyses of time-of-use data for general-purpose vehicles showed that:

- At selected field offices that normally did not make time-of-use analyses, the equivalent of 123, or about 26 percent, of the 473 vehicles

included in the GAO analyses had not been used at all on 70 percent or more of the weekdays covered by the GAO analyses. The equivalent of 39 vehicles (more than 8 percent) had not been used at all on any of the weekdays covered. (See p. 13.)

--At the selected offices in the Forest Service region which had been using time-of-use analyses in evaluating vehicle needs, the equivalent of less than 5 percent of the 202 general-purpose vehicles included in the GAO analyses had not been used at all on 70 percent or more of the weekdays covered. Of 2,077 general-purpose vehicles in that entire region, the equivalent of less than 3 percent were not used at all on 70 percent or more of the weekdays covered. (See p. 15.)

The time-of-use data used in GAO's analyses covered weekdays during peak working seasons, except for one Forest Service region where vehicle use was relatively constant throughout the year.

The small percentage of idle vehicles in the Forest Service region that did use time-of-use data, compared with the large percentage of idle vehicles in the Forest Service and Soil Conservation Service locations that did not use this data, indicates the positive benefits which can result from the use of periodic analyses of such data by field offices to provide for better control of vehicle fleet sizes. In this regard GAO believes that periodic analyses of time-of-use data would be helpful in identifying situations where a vehicle could be shared by two or more employees. (See p. 17.)

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- their field offices to make regular periodic reviews of time-of-use data and
- their respective regional and State offices to use the results of such reviews, along with other pertinent information, in approving the retention of vehicles on hand and requests for additional vehicles and to give consideration to greater sharing of vehicles wherever possible. (See p. 17.)

The Secretary should also have the Forest Service require its vehicle management staff to

- make a review of the maintenance practices of the Forest Service regions to identify the causes of the variances in vehicle maintenance costs and
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The Forest Service generally agreed with GAO's recommendations. The Forest Service was revising directives to further define vehicle utilization studies and to establish uniform periods of time for data collection and a follow-up procedure. These revisions were expected to be completed by July 1971. (See p. 18 and app. I.)

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The Soil Conservation Service believes that recording and analyzing time-of-use data for all vehicles at all locations would cost more than any savings that would result.

The Service stated, however, that it had agreed, after consultation with Department of Agriculture officials, to make time-of-use analyses at locations where there were seven or more vehicles for a 4-month period that was representative of vehicle needs. (See p. 18 and app. II.)

CHAPTER 1

INTRODUCTION AND SCOPE

The Department of Agriculture operates a fleet of about 30,000 Government-owned vehicles, of which 25,000 are in the Forest Service and the Soil Conservation Service (SCS). Although the fleet includes various types of heavy equipment, it consists primarily of general-purpose sedans and light trucks having capacities of a ton and under. The annual costs of operating and maintaining the Department's fleet, including amortization of vehicle acquisition costs, total about \$24 million, of which about \$20 million is for Forest Service and SCS vehicles.

The General Accounting Office made a review to evaluate the procedures and practices followed by the Forest Service and SCS in limiting vehicle fleet sizes to actual needs. We also obtained information concerning wide variances in vehicle maintenance costs among the Forest Service regions.

We reviewed applicable equipment management policies and directives of the Department of Agriculture, the Forest Service, SCS, and the General Services Administration (GSA). We reviewed also pertinent motor vehicle records and interviewed vehicle management employees. Our work was done at the Forest Service and SCS headquarters offices in Washington, D.C., at three Forest Service regional offices, at three SCS State offices, and at several selected Forest Service and SCS suboffices within those regions and States.

The Forest Service uses its vehicles for the management of about 187 million acres of land in 154 national forests and 19 national grasslands which are under the jurisdiction of nine Forest Service regional offices. SCS uses its vehicles for soil and water conservation assistance programs carried out by about 3,150 State and local offices located throughout the United States and in Puerto Rico and the Virgin Islands. The Forest Service has about 13,000 vehicles and SCS has about 12,000.

Both the Forest Service and SCS have equipment management staffs in Washington, D.C., who have responsibilities

for overall direction of motor vehicle fleet operations. Day-to-day vehicle management functions have been assigned to engineering or administrative services employees in the field offices of the two agencies.

CHAPTER 2

PERIODIC REVIEWS OF DAILY VEHICLE USE

COULD PROVIDE FOR BETTER CONTROL OF FLEET SIZE

GSA, in its guidelines issued to Federal agencies for controlling their motor vehicle fleet costs, has stated that reviews of time-of-use data--the number of days vehicles on hand have been used--are necessary for evaluating vehicle needs.

Although the Forest Service policy provides for analyses of time-of-use data by its field offices, two of the Forest Service's nine regional offices did not establish written criteria and procedures for making such analyses. Further our review at three Forest Service regions--two that had established written criteria and procedures and one that had not--showed that only one regional office actually was using time-of-use analyses in evaluating vehicle needs.

SCS does not provide, as a matter of policy, that SCS field offices make time-of-use analyses in evaluating their needs for vehicles. Our review at selected SCS field offices in three States showed that it was not their normal practice to make such analyses.

At selected Forest Service field offices in the two regions and at selected SCS field offices in the three States, which normally did not use time-of-use data for evaluating their vehicle needs, we analyzed daily-use data for 473 general-purpose vehicles which represented about 2 percent of the 25,000 vehicles in the Forest Service and SCS fleets. Our analyses covered weekdays during peak working seasons, except for one Forest Service region where vehicle use was relatively the same throughout the year.

The data showed that, of the 473 vehicles, the equivalent of 123 vehicles, or about 26 percent--representing an acquisition cost of \$237,000--had not been used at all

during 70 percent or more of the weekdays covered by our analyses.¹ The equivalent of 39 vehicles, or over 8 percent--representing acquisition costs of \$78,000--were not used at all during any of the weekdays covered by our analyses.

At the one Forest Service region which used time-of-use data in evaluating its need for vehicles, there were considerably less idle vehicles than at the other Forest Service field offices and SCS field offices. In 1958 this region established procedures for making annual analyses of the days during the peak working season that vehicles had been used and not used. The region used the results of these analyses to question requests for additional vehicles. On the basis of the region's study data for fiscal year 1969, we concluded that, regionwide, less than 3 percent of 2,077 general-purpose vehicles had not been used during 70 percent or more of the weekdays during the 3-month peak working season.

As a basis for a comparison with our analyses at other selected Forest Service and SCS locations, we analyzed data included in the regionwide study data for 202 vehicles at selected offices. Our analyses showed that less than 5 percent of the 202 vehicles had not been used during 70 percent or more of the weekdays during the peak working season.

The small percentage of vehicles idle at least 70 percent of the time in the one Forest Service region that did use time-of-use data (3 percent regionwide and 5 percent at the selected locations), compared with the large percentage of idle vehicles identified in our analyses at the selected Forest Service and SCS field offices that did not use such data in evaluating vehicle needs (26 percent), indicated to us that periodic reviews of time-of-use data for all field offices--as suggested by GSA guidelines and Forest

¹Not necessarily the same vehicles were idle from day to day. The 70 percent cutoff point is not intended as a criterion for identifying excess vehicles but is used in this report for showing the extent that vehicles were idle and for comparing vehicle usage at different locations.

Service policy--would provide for a better management control to limit vehicle fleet sizes to actual needs.

Details on these matters follow.

TIME-OF-USE DATA NOT CONSIDERED IN
DETERMINING AND REVIEWING VEHICLE NEEDS

GSA's guidelines to assist Federal agencies in determining their vehicle requirements state that:

"A detailed record of daily use of the vehicles currently on hand is a necessity. Miles (or hours) alone do not constitute a basis for unequivocal appraisal.

"*** A vehicle which is idle a significant percentage of time represents the best opportunity for improvement of utilization. The need for retention of such a vehicle must be thoroughly justified."

Although Forest Service policy provides that time-of-use data be analyzed by its field offices, the Forest Service has not established or required its field units to establish criteria and procedures for making such analyses. SCS policy does not call for any analyses of the number of days that vehicles are used.

The results of our examination of the procedures and practices followed in the Forest Service and in SCS are discussed in the following sections.

Forest Service

Forest Service headquarters officials advised us that vehicles initially were assigned to Forest Service field units on the basis of the number of employees in certain positions. They advised us also that vehicle replacements and additions to the fleet were based on work-load requirements and that consideration was given to past utilization of existing vehicles. Concerning reviews of past utilization of existing vehicles, the Forest Service management handbook states that annual mileage is not in itself an adequate criterion by which to measure vehicle use and that:

"*** the number of 'days not used' which occur within a (management) unit or subunit fleet should

be analyzed. Instances where 'days not used' are excessive point directly to the need for improved planning and dispatching of fleet vehicle use. Seldom should an increase in fleet numbers be approved under these circumstances."

The handbook does not define the point at which "days not used" should be considered excessive but states that individual Forest Service regions and stations will define the system to be used to measure fleet utilization.

For eight of the nine Forest Service regions,¹ we inquired into whether the regional offices had established written procedures and criteria for making time-of-use studies as called for in the Forest Service handbook quoted above. We were advised that six regions had done so and that two had not.

We visited two regions--regions 5 and 6--which had established written procedures and criteria for making time-of-use studies and one region--region 8--which had not established such written procedures and criteria, to ascertain whether time-of-use studies were being made. These three regions had 54 percent of the vehicles in the Forest Service fleet.

Although region 5 had established procedures and criteria for analyzing time-of-use data, it did not put them into practice. Region 8 had not established procedures and criteria for making time-of-use analyses. Some individual forest units in both regions 5 and 8 were collecting time-of-use data, but little or no use was being made of the data.

Forest Service officials at regions 5 and 8 advised us that they relied primarily on annual mileage standards, rather than on time-of-use data, in reviewing vehicle needs. As previously discussed, GSA guidelines and Forest

¹We excluded one region, Alaska, which had only 106 vehicles on hand at June 30, 1969.

Service policy clearly state that mileage alone is not an adequate criterion.

A Forest Service official at region 6 told us that the procedures and criteria for analyzing time-of-use data were established by that region in 1958. Under the procedures annual studies are made of daily vehicle use at each organizational unit or subunit during the 3-month peak working season. For each organizational unit the number of days that each available vehicle is not driven at least 10 miles is ascertained and totaled. The total nonuse days for all vehicles are used to compute the number of vehicles that might be in excess of needs.

The data developed was used by region 6 primarily to question requests for additional vehicles, including commercial rentals. The time-of-use studies, however, did not include vehicles rented on a long-term basis from commercial firms and from GSA. Region 6 officials advised us that future studies would include GSA vehicles and that data developed by the studies would be used to question the retention of low-use vehicles, as well as requests for additional vehicles.

Soil Conservation Service

SCS uses a quota system--a suggested ratio of vehicles to employees whose duties require local travel--in determining the number of vehicles to be assigned to its field offices. SCS advised us that the vehicle-to-employee quotas were general guides and that the actual number of vehicles at a given field unit, whether above or below the quota, should be based on real needs. Further SCS requires that any vehicles in excess of the established quotas be justified in writing to the SCS State office.

SCS policy, however, does not provide for periodic reviews of time-of-use data as an aid in evaluating vehicle needs, even for justifying vehicles above the quotas. Officials of the SCS Washington headquarters office told us that the primary tools used for identifying field units which possibly had too many vehicles were periodic inspections and periodic computer reports showing the annual mileage for each vehicle.

We visited SCS State offices and selected area offices in California, Georgia, and Oregon to see whether they were using time-of-use data in reviewing vehicle needs. Although some offices made special vehicle-use studies, it was not their normal practice to make regular periodic studies nor did they all make the special studies on the basis of data showing the number of days that vehicles had been used and not used. The studies that had been made were not always useful.

For example, in June 1969, the SCS California State office asked its seven area offices to make vehicle-use studies for the 2 peak months of fiscal year 1969 but did not say how to make them. An official of the State office told us that three area offices had not responded, that two had reported overall-use percentages, and that another simply had submitted its opinion that utilization was good. Only one office reported the number of vehicles not used each day by location.

VEHICLES IDLE A SIGNIFICANT AMOUNT OF TIME
AT FIELD OFFICES NOT USING TIME-OF-USE DATA

Our analyses of time-of-use data at selected offices in two Forest Service regions and at SCS field offices in three States, which did not periodically analyze such data in evaluating their vehicle needs, showed that they had a considerable number of idle vehicles, as summarized below.

<u>Location</u>	Number of vehicles in GAO analyses (note b)	Equivalent vehicles not used at all on 70, 80, 90, and 100 percent of the weekdays covered by GAO analyses (note a)			
		70 percent or more	80 percent or more	90 percent or more	100 percent
Forest Service:					
Region 5 (California)	265	67	60	46	29
" 8 (Southern)	126	36	30	21	4
Soil Conservation Service:					
California	27	6	6	2	1
Georgia	19	3	1	1	-
Oregon	<u>36</u>	<u>11</u>	<u>11</u>	<u>7</u>	<u>5</u>
Total	<u>473</u>	<u>123</u>	<u>108</u>	<u>77</u>	<u>39</u>
Percent of total		26.0	22.8	16.3	8.3

^aNot necessarily the same vehicles were idle from day to day.

^bAt each Forest Service and SCS location, our analyses included general-purpose vehicles (sedans, sedan deliveries, and light trucks) which were usable by different types of employees and which were in operable condition. We did not include vehicles assigned to fire-fighting employees; heavy equipment; or vehicles with special equipment, such as slip-on pumps for fire fighting, fuel and lube rigs, and radio shop equipment.

The above table is a summary of separate analyses of time-of-use data for general-purpose vehicles at

- four national forest supervisors' offices and eight ranger districts in each of the two Forest Service regions,
- the regional office in Forest Service region 5,
- one SCS area office and four SCS work units in California, and

--one SCS area office and two SCS work units each in Georgia and Oregon.

The numbers of equivalent vehicles not used were determined separately for each field location.¹ Our analyses covered the weekdays during the three most recent peak-use months for which data was available,² except for the selected offices in region 8 of the Forest Service. In region 8 of the Forest Service, where vehicle use was nearly the same throughout the year, our analyses covered the weekdays for all of fiscal year 1969.

The number of SCS vehicles included in our analyses was somewhat limited because of the amount of time required to obtain time-of-use data and because of similar analyses of SCS vehicle use that we had made previously. In a report to the Congress on opportunities for reducing the number of vehicles maintained in fleet (B-114833, May 24, 1966), we stated that, of 453 vehicles included in our analyses at selected SCS offices in California, Kansas, and Texas, 84 vehicles (about 19 percent) did not appear to be needed.

As a result of our 1966 review, SCS made a nationwide survey of its vehicle needs and reduced its fleet by 71 vehicles, of which 26 were in two of the three States included in our 1966 review. The SCS survey did not consider actual time-of-use data or possible sharing of vehicles among SCS offices close to one another but was based on a strict application of the SCS quota system.

The Department of Agriculture's Office of the Inspector General, in a summary report on its review of SCS motor vehicle operations during May 1967 to January 1968, pointed

¹In two towns where SCS had both an area office and a work unit, we pooled the vehicles of both units for the purpose of our analyses.

²In region 5 of the Forest Service, the three most recent peak-use months for which data was available were August and September 1968 and July 1969. In all SCS offices our analyses covered the 3 summer months of 1969.

out that the SCS quota system frequently had resulted in low vehicle utilization.

As discussed on pages 7 and 11, region 6 of the Forest Service has been using yearly analyses of daily-use data since 1958 to exercise control over its vehicle fleet. Under the region 6 procedures, daily-use data is analyzed for each field unit or subunit in the following manner.

- The number of days that each general-purpose vehicle on hand is not driven at least 10 miles a day is ascertained and totaled for all vehicles at a location, the result being the total number of idle-vehicle days at that location during the 3-month period.
- The total idle-vehicle days is reduced by one half the workdays in the 3-month period to allow for idle days that normally would be tolerable, the remainder being the total idle-vehicle days that might be excessive.
- The possibly excessive idle-vehicle days then are divided by the total number of workdays during the 3-month period to indicate the number of vehicles that might not be needed.

As previously stated the regional office has been using the results of the analyses to question requests from its field units for additional vehicles, including commercial rentals. The analyses excluded vehicles rented on a long-term basis from commercial firms and from GSA. Regional officials advised us that future analyses would include GSA vehicles and would be used to question retention of vehicles, as well as requests for additional vehicles.

On the basis of the overall region 6 analyses for fiscal year 1969, as adjusted by us to include vehicles rented from commercial firms and from GSA, we concluded that less than 3 percent of 2,077 general-purpose vehicles had not been used during 70 percent or more of the weekdays during the 3-month peak working season.

To provide a basis for comparing the region 6 study results with the results of our analyses at other selected

Forest Service and SCS locations, we analyzed the time-of-use data for 202 general-purpose vehicles in use at selected forest supervisors' offices and ranger districts within region 6. Our analyses showed that the equivalent of less than 5 percent of the 202 vehicles had not been used during 70 percent or more of the weekdays during the 3-month peak working season.

The region 6 criteria and procedures differed in several respects from the criteria and procedures that we used in our analyses at other Forest Service and SCS locations. Our comparison of the two methods, however, showed that the end results would be nearly the same, i.e., the number of vehicles identified under the region 6 criteria as possibly not needed would be nearly the same as the number of vehicles identified under our method as not used on 70 percent or more of the weekdays covered by the analyses.

CONCLUSION

The small percentage of idle vehicles in the Forest Service region that did use time-of-use data, compared with the large percentages in the Forest Service and SCS locations that did not use such data, is indicative of the positive benefits which can result from the use of periodic analyses of time-of-use data by field offices to control vehicle fleet sizes. The need to limit vehicle fleet sizes to actual needs in both the Forest Service and SCS becomes readily apparent when the fleet sizes and annual fleet costs are considered--about 25,000 vehicles and \$20 million a year, respectively.

In view of the number of vehicles idle for a significant percentage of time at locations not using time-of-use data, we believe that there may be many situations where a vehicle can be shared by two or more employees, although the vehicles may be assigned to a specific employee for control and servicing purposes. In commenting on this conclusion, the Forest Service advised us that, where groups of vehicles were located at field offices, such as forest supervisors' or district rangers' offices, the vehicles were available for use by more than one employee.

As stated on page 13, the vehicles that we identified as idle for a significant percentage of time were located at forest supervisors' and district rangers' offices. We believe that periodic analyses of time-of-use data would be helpful in identifying situations where joint utilization could be increased.

RECOMMENDATION

To provide for improved control over their vehicle fleets, we recommend that the Secretary of Agriculture have the Forest Service and SCS require (1) their field offices to make regular periodic reviews of time-of-use data and (2) their respective regional and State offices to use the results of such reviews, along with other pertinent information, in approving the retention of vehicles on hand and requests for additional vehicles and to give consideration to the sharing of vehicles wherever possible.

AGENCY COMMENTS

The Forest Service advised us by letter dated March 26, 1971 (see app. I), that it generally agreed with our recommendation and that it was in the process of revising directives to further define vehicle utilization studies and to establish uniform periods of time for data collection and a follow-up procedure. The Forest Service expected to complete this job by July 1971.

SCS, in a letter dated April 5, 1971 (see app. II), stated its view that recording and analyzing time-of-use data for all vehicles at all locations would cost more than could be saved. SCS stated also, however, that it had agreed after consultation with Department of Agriculture officials, to make time-of-use analyses at locations where there were seven or more vehicles for a 4-month period that was representative of SCS vehicle needs.

CHAPTER 3

NEED FOR FOREST SERVICE TO REVIEW

ITS VEHICLE MAINTENANCE PRACTICES

Wide variances in average maintenance costs of vehicles among Forest Service regions, without verified explanations, indicate a need for the Service to review, compare, and evaluate the motor vehicle maintenance practices of its various regions.

The following table shows the wide variances in vehicle maintenance costs reported for fiscal year 1969 by the nine Forest Service regions.

<u>Region</u>	<u>Area</u>	Vehicles on hand June 30, <u>1969</u>	Maintenance cost (note a)	
			<u>Total</u>	<u>Average per ve- hicle</u>
5	California	3,205	\$1,541,455	\$481
10	Alaska	106	49,692	469
4	Intermountain	1,319	588,859	446
1	Northern	1,706	559,270	328
3	Southwestern	875	276,718	316
6	Pacific North- west	2,564	774,623	302
2	Rocky Mountain	1,175	330,699	281
9	Eastern	1,554	383,502	247
8	Southern	<u>2,185</u>	<u>397,502</u>	182
Total		<u>14,689</u>	<u>\$4,902,320</u>	\$334

^aIncludes cost of mechanics' labor; cost of replacement parts; and related costs incurred in keeping vehicles in proper working condition, excluding operating costs for such items as gasoline and tires.

As shown in the preceding table, fiscal year 1969 maintenance costs in region 5 of the Forest Service exceeded the maintenance costs in region 6 by an average \$179 a vehicle,

or about 59 percent. Data obtained for about one third of the vehicles in these two regions indicated that the wide variance was not attributable to differences in vehicle mileages.

Our detailed comparison of the costs in regions 5 and 6, which are on the west coast and which have fleets of comparable size, showed that the major part of the variance was attributable to differences in the average number of maintenance labor hours per vehicle. This situation indicates possible significant differences in either the vehicle maintenance practices or the operating efficiency of the two regions.

Forest Service guidelines provide that cumulative maintenance costs on a vehicle generally not exceed its acquisition cost. The cumulative maintenance costs on a number of vehicles in region 5 exceeded their acquisition costs. Further, in the region 5 offices covered by our review, there were several instances in which major repairs had been made on vehicles on which cumulative maintenance costs already had exceeded acquisition costs, without assurance that such repairs were justified economically in accordance with region 5 vehicle management procedures.

The Forest Service's internal reporting system for some time has disclosed wide variances in vehicle maintenance costs. Forest Service officials have recognized that such variances point up a need for the Forest Service to review its vehicle maintenance program. At the time of our review, however, the Forest Service had not made the reviews necessary to adequately identify the causes of the maintenance cost variances.

We did not review vehicle maintenance cost variances among SCS field offices because SCS records showed that both the average costs per vehicle and the variances among field offices were far lower than those in the Forest Service. The Department's Office of the Inspector General audited the SCS vehicle costs data for fiscal year 1967 and concluded that the data was generally reliable.

COMPARISON OF MAINTENANCE COSTS
FOR REGIONS 5 AND 6

We compared cost data for 2,658⁽¹⁾ vehicles in region 6 with cost data for the same number and comparable type of vehicles in region 5. The comparative costs of maintaining 2,658 vehicles in each of the two regions in fiscal year 1969 were:

	<u>Total cost</u>
Region 5--California	\$1,223,000
Region 6--Pacific Northwest	<u>827,000</u>
Difference (48 percent)	<u>\$ 396,000</u>

The \$396,000 difference between region 5 and region 6 costs for maintaining 2,658 vehicles is accounted for as follows:

	<u>Fleet maintenance costs</u>		<u>Region 5 costs over or under(-) region 6 costs</u>	
	<u>Region 5</u>	<u>Region 6</u>	<u>Amount</u>	<u>Percent</u>
Shop costs (note a):				
Labor and other				
shop expenses	\$ 747,000	\$421,000	\$326,000	78
Parts	268,000	183,000	85,000	47
Travel	<u>29,000</u>	<u>16,000</u>	<u>13,000</u>	82
	1,044,000	620,000	424,000	69
Nonshop costs				
(note b)	<u>179,000</u>	<u>207,000</u>	<u>-28,000</u>	-13
Total	<u>\$1,223,000</u>	<u>\$827,000</u>	<u>\$396,000</u>	48

^aCost of work done in Forest Service maintenance shops.

^bRelates primarily to maintenance work done by commercial shops.

¹This includes the 2,564 region 6 vehicles shown on page 19 plus vehicles maintained for the Job Corps by region 6.

Of the \$326,000 difference in costs of labor and other shop expenses shown in the above table, about \$211,000 was attributable to region 5's charging more labor hours than those charged by region 6 to vehicle maintenance. The remainder of the \$326,000 (about \$115,000) was attributable to differences in mechanics' salaries and miscellaneous shop expenses.

On the basis of average labor rates, we estimated that region 5 charged 98,000 shop labor hours to maintain 2,658 vehicles, compared with an estimated 65,000 labor hours charged by region 6 for the same number of vehicles.

The difference in the number of labor hours charged to maintain the same number of vehicles may be indicative of significant differences in the vehicle maintenance practices or in the operating efficiency of the two regions.

Information obtained from regions 5 and 6 indicated that differences in the number of miles that vehicles had been driven had not caused the wide variance in average maintenance costs for those two regions. For example, about one third of the vehicles in the two regions are 1/2-ton and 1-ton pickup trucks. In fiscal year 1969 1/2-ton and 1-ton pickup trucks in region 6 were driven an average 1,500 miles per truck more than those in region 5. The region 5 maintenance costs for those trucks, however, averaged \$125 per truck more than the costs in region 6.

REGION 5 MAINTENANCE COSTS EXCEED GUIDELINE LIMITATIONS

To assist in controlling maintenance costs and in disposing of defective equipment before maintenance costs become excessive, Forest Service vehicle management directives provide that, as a general rule, the total maintenance cost during the life of any vehicle not exceed its acquisition cost.

Of a total of 2,352 region 5 vehicles (1-ton or less) on hand as of June 30, 1969, about 22 percent, or 526 vehicles, had accumulated maintenance costs in excess of their acquisition costs. The accumulated maintenance costs on those 526 vehicles exceeded the acquisition costs by \$310,000, or an average \$589 a vehicle.

In contrast, of 2,190 region 6 vehicles of the same type on hand as of June 30, 1969, only 83 vehicles, or about 4 percent, had accumulated maintenance costs in excess of their acquisition costs. The maintenance costs on the 83 vehicles exceeded the acquisition costs by about \$28,000, or an average \$337 a vehicle.

Region 5 vehicle management procedures provide that repairs not be made to a vehicle without the approval of the regional office if the cost of the proposed repairs, plus accumulated repair costs, exceeds the vehicle's acquisition cost.

The region 5 equipment management chief told us that he depended on the region's three area superintendents to approve or disapprove repairs in excess of acquisition costs. One of the area superintendents told us that he approved such repairs by telephone conversations with maintenance shop foremen. Another area superintendent said that such decisions were made at the national forest level. The decisions are not documented.

Examples of questionable major repairs to vehicles which already had accumulated maintenance costs in excess of their acquisition costs were

- a \$700 commercial repair job, including a new engine, on a 5-year-old truck which had been driven 67,000 miles;
- an \$800 annual service and repair job on a 5-year-old truck having 83,000 miles; and
- a \$700 annual service and repair job on a 6-year-old truck having 65,000 miles, which had been earmarked for replacement.

Repair jobs such as those could have contributed to the comparatively high maintenance costs in region 5.

In its letter commenting on the draft of this report, the Forest Service stated, in part, that:

"The Report refers to instances in Region 5 in which the cost of vehicle repairs exceeded the administrative limitations established by the Forest Service. We feel that such instances would require an analysis of the specific factors involved in the local management decision to make the repairs before concluding that they were not economically justified. As one example, there can be instances in which equipment that is approaching the point of replacement must be held over and repaired to meet special or unexpected needs."

We agree that there may be instances where the immediate need for a vehicle may warrant repair work that ordinarily would not be justified economically. As described previously, however, region 5 exceeded the administrative limitation on maintenance costs on 22 percent of its 2,352 vehicles in the 1-ton and under class, whereas region 6 exceeded the limitation on only 4 percent of its 2,190 vehicles in the same class.

Because the decisions by region 5 employees to make repairs that resulted in cumulative maintenance costs exceeding the administrative cost limit had not been documented, there was no way to evaluate the justification for so many vehicles in region 5 having accumulated maintenance costs in excess of the limitation.

CONCERN OF FOREST SERVICE OFFICIALS
OVER REGIONAL MAINTENANCE COST VARIANCES

The Acting Director of the Forest Service's Division of Engineering in Washington, D.C., made the following comments in a letter dated June 11, 1968, to the Forest Service regional offices.

"We have reviewed the Forest Service Annual Motor Vehicle Reports for Fiscal Years 1966 and 1967, and find questionable cost variations or questionable report accuracy. Steps should be taken to improve either situation."

* * * * *

"The most alarming part of these figures is the extreme variance in maintenance costs. The total cost of the Materials and Labor and Contractual Services (operation plus maintenance) cost appears to be in direct relationship with the number and size of force account maintenance shops in the individual Regions. This in itself indicates that a review of our present usage and manning of Forest Service shops is needed."

At the time of our fieldwork, the Forest Service had not made the review that was suggested in the letter quoted above. Region 5 officials advised us that they would make a more detailed analysis in an effort to identify more specifically the reasons for the variance in maintenance costs of regions 5 and 6.

CONCLUSION AND RECOMMENDATION

The wide variances in average vehicle maintenance costs among the various Forest Service regions and the results of our comparative analysis of costs in regions 5 and 6 indicate possible significant differences in the maintenance practices or operating efficiency of the regions. Therefore we recommend that the Secretary of Agriculture have the Forest Service require its vehicle management staff to

- make a review of the vehicle maintenance practices of the Forest Service regions to identify the causes of the variances in maintenance costs and
- take appropriate action to improve the vehicle maintenance program.

AGENCY COMMENTS

In its March 26, 1971, letter to us commenting on a draft of this report, the Forest Service stated that it agreed with our recommendation and that it expected to complete a detailed study of maintenance cost variances in at least two regions by June 30, 1972, and to take appropriate action at that time.

Although it agreed with our recommendation, the Forest Service stated that our comparison of regional maintenance costs on a Service-wide basis (see table on p. 19) and our more detailed comparison of maintenance costs in regions 5 and 6 could be misleading because they did not allow for regional variances caused by organizational, geographic, or other factors. Specific situations or factors cited by the Forest Service as possible causes for part of the cost variances were as follows:

- In some regions the entire job of determining what repairs are needed and then making such repairs is done in Forest Service shops, whereas, in other regions, a mobile equipment inspector determines what repairs are needed but the actual work is done by commercial shops.
- Types of roads and other driving conditions can influence maintenance costs.

The Forest Service stated that, to be meaningful, cost comparisons must involve similar maintenance conditions and practices.

Although we agree that comparisons should involve locations having similar driving conditions, significant differences in maintenance practices among field offices could point up a need for certain field offices to adopt more economical and efficient practices.

APPENDIXES

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Washington, D. C. 20250

March 26, 1971

Mr. Bernard Sacks
Assistant Director of Civil Division
U.S. General Accounting Office
Washington, D. C. 20548



Dear Mr. Sacks:

Thank you for the opportunity to comment on your proposed report to the Secretary of Agriculture on potential improvements in motor vehicle management by the Forest Service (and Soil Conservation Service).

We agree, in general, with the two recommendations in this draft report concerning the operation and management of the Forest Service fleet of motor vehicles. It is important to remember, however, that statistics indicating relative values of such things as equipment utilization and maintenance costs are not, in themselves, solely indicative of the optimum operation of the fleet. The purpose (and the only purpose) of the Forest Service fleet is to provide the best equipment available that will result in the most efficient and most economical means of accomplishing the total Forest Service job. Operating the least expensive fleet is not our primary goal, since a variety of diversified and demanding programs must be served.

Our specific comments on the two recommendations are:

Recommendation 1

To provide for improved control over their vehicle fleets, we recommend that the Chief of the Forest Service and the Administrator of SCS require all field offices to (1) establish procedures and practices for making regular periodic reviews of time-of-use data, and (2) use the results of such reviews along with other pertinent information in justifying the retention of vehicles on hand and approving requests for additional vehicles, giving consideration to the sharing of vehicles wherever possible.

APPENDIX I

This recommendation is timely and we recognize that there is a need to further strengthen the existing Forest Service time-of-use utilization study procedures and their use.

We are currently working on revisions of Forest Service directives which will further define vehicle utilization studies, establish uniform periods of time for data collection, and a followup procedure. We expect to complete this job by July 1971.

These directives will, of course, be for observance by all field offices operating motor vehicles which are included in the fleet. However, in establishing utilization standards and guidelines for their use, we will need to give the field fleet managers some flexibility in applying the standards to meet local conditions and exceptional situations. Actually, this is already expressed in existing directives in Section 411 of Forest Service Handbook 7109.15, the Fleet Equipment Management Handbook, in which we recognize that because of varying working conditions, intensity of use, seasons, and other factors, each fleet manager will need to establish reasonable standards applicable to local conditions.

Plans are being made for ultimate automation of the collection procedure for the data needed for utilization studies. Region 6 has agreed to write an ADP pilot program for this. As a first step, Form 7100-2, which is the Equipment Log Book, was revised in 1970 to contain manual entries that can be used as the source data for the automation process.

The narrative and recommendation on page 19 of the draft imply that vehicles are assigned to specific individuals and are not shared among employees. It is true that in some instances vehicles are assigned to a specific individual for maintenance responsibility. There are also some instances in which special purpose vehicles are required, such as for fire emergency or those which carry special communications equipment. However, where groups of vehicles are located at a field office, such as a Forest Supervisor's or District Ranger's headquarters, the vehicles are available for use by more than one employee.

Another pertinent factor in looking at vehicle utilization is the geographical dispersion of National Forests within Regions, Ranger Districts within Forests, and of Experiment Station project locations. Thus, although for some purposes the fleet is managed on a Region/Station-wide basis, the geographical factors require individual vehicle pools at such locations.

Recommendation 2

The Chief of the Forest Service require his vehicle management staff to make a review of the vehicle maintenance practices of the various Forest Service regions to identify the causes of the variances in maintenance costs, and take appropriate action to improve its vehicle maintenance program.

We feel that many of the statistics upon which this recommendation is based could be misleading. The table on page 20 of your draft report compares maintenance costs on a Service-wide basis. The dollars and hours required to perform maintenance are not specific indicators themselves. We feel that even a limited review of maintenance practices and costs must bring out what is involved and included in these factors, and allowances made for known variances as between Regions because of organizational, geographic or other factors.

Inspection and related costs could, for example, vary as between Regions because of the different methods used. In some of the western Regions which operate large, centralized shops, the entire job of determining what repairs are needed and then making the repairs would be performed in the shop. In other Regions, such as the Southern, the Forest's mobile equipment inspector might determine the extent of repairs required but the actual work would be procured commercially.

Conditions of use influence maintenance costs. We know, for example, that grade, curvature, and the type of road surface over which the vehicle is used create valid variances and influence costs. There is as much difference in maintenance costs between Forests in a Region as there is between Regions. Maintenance costs for vehicles operated over dusty roads may be five times those for similar vehicles operated on paved roads.

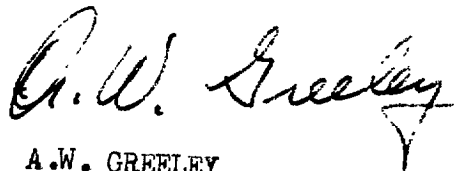
In summary, we feel that comparisons must involve similar maintenance conditions and practices to make them meaningful.

The Report refers to instances in Region 5 in which the cost of vehicle repairs exceeded the administrative limitations established by the Forest Service. We feel that such instances would require an analysis of the specific factors involved in the local management decision to make the repairs before concluding that they were not economically justified. As one example, there can be instances in which equipment that is approaching the point of replacement must be held over and repaired to meet special or unexpected needs.

APPENDIX I

The second portion of this recommendation relates to making a review of the vehicle maintenance practices of our various Regions. We agree with this portion of the recommendation and expect to conclude a detailed study of these variances, in at least two Regions, by the end of fiscal year 1972 and to take appropriate action at that time.

Sincerely,

A handwritten signature in cursive script that reads "A.W. Greeley". The signature is written in dark ink and is positioned above the typed name and title.

A.W. GREELEY
ASSOCIATE CHIEF
FOREST SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Washington, D. C. 20250

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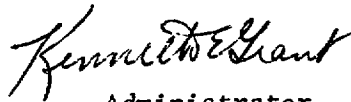
Mr. Bernard Sacks
Assistant Director
Civil Division, General Accounting Office
Room 6641, South Building

Dear Mr. Sacks:

We have your memorandum of January 27, 1971, transmitting copies of the draft of your proposed report to the Secretary of Agriculture on potential improvements in motor vehicle management by the Soil Conservation Service and the Forest Service.

We have reviewed the draft and the recommendation that concerns our Service. It is our belief that recording and analyzing time-of-use data for all vehicles at all locations would result in a far greater cost than any possible savings that will accrue. After consultation with the Office of Plant and Operations of the Department, however, we would agree to make such analysis at those locations where we have seven or more vehicles for a four-month period during the year that is representative of our vehicle needs.

Sincerely yours,



Administrator

Copies of this report are available from the U. S. General Accounting Office, Room 6417, 441 G Street, N W., Washington, D.C., 20548.

Copies are provided without charge to Members of Congress, congressional committee staff members, Government officials, members of the press, college libraries, faculty members and students. The price to the general public is \$1.00 a copy. Orders should be accompanied by cash or check.