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Cost-Keeping for National Forests

BY DAVID HARTMAN

The United States Forest Service is developing a fund-cost-accounting system. Fund accounting has of necessity existed from the early days of the service. The cost-keeping element is of more recent origin; in fact it is now in process of development. It is the purpose of this article to give a brief picture of the system.

Entries to record funds are made in two registers. The allotment register is little more than a small ledger containing a dozen or more accounts, one for each fund or appropriation. As notification is received of an addition to or deduction from an appropriation, an entry is made directly in the ledger account, which, by the way, shows at all times the total of the appropriation to date by means of a balance column. The official notices of changes in appropriations are the supporting vouchers for all entries in the allotment register.

For every expenditure from an appropriation a voucher is prepared. Before this is submitted for payment, it is entered in the voucher register, which is like a cheque register for a firm doing business with a dozen banks and having a cheque column in its cheque register for each bank—in the present case a column for each appropriation. The total of any particular column gives the expenditures from that appropriation. The differences between the totals of the voucher register and the allotment register give the appropriation balances. The two books have some elements in common with a cash-receipts book and a cash-payments book.

But the lack of complexity of the fund bookkeeping is inversely proportional to the restrictions on the use of funds; and it is this which keeps a forest service accounting office on its toes. Funds, or appropriations, are designated for special purposes and can not be used otherwise. At present there are more than a dozen funds available for the use of the service; the number varies in the different regions. "Salaries and expenses" and "forest road development" are examples of what might be termed regular forest service appropriations. The former is set aside to meet the salaries of regular employees and all expenses incident to their work. "Forest road development," as the name suggests, is for the building of roads and trails on the national forest lands.

Besides the regular funds there are at present or have been in the recent past several special funds which have come to the service under the various relief appropriations made by congress. For instance, the work of the civilian conservation corps has required additional money. While the wages of the members of the C.C.C. are not paid by the forest service, yet C.C.C. men work for the forests and under the direction of forest service men. The service furnishes material, equipment and the necessary supervision. To meet such outlays additional appropriations have been provided. Part of the 1935 federal appropriation of over four billions came to the forest service for the employment of men who were on the relief rolls. These men were used on all types of maintenance and construction work in the forests. Ranger stations have been built, telephone lines constructed, firebreaks made and varied other improvements brought about.

The regulations governing all these funds, both regular and special, are numerous and rigid. Each forest service regional office has a regional fiscal agent, whose duty it is to review all vouchers submitted for payment by the various forests in his district. Of course, payment of vouchers is not made by the accounting offices of the forests; vouchers, including salaries and wages, are paid by cheque from the regional offices.

As an example of a common task in fund disbursement, let us suppose that an employee of the engineer's office of a forest is out on a truck trail-locating job. His salary would properly be chargeable to a road fund, forest road development, for instance. But let a forest fire start near the truck trail-locator's vicinity and he will be summoned by the forest fire chief for fire duty. Spending road money for fighting fires is taboo. So our truck trail-locator's salary for, say sixteen hours, must come out of "fighting forest fires," a subappropriation of salaries and expenses. Many similar problems in disbursements faced by the accounting office of a local forest and the regional fiscal agent could be cited.

As previously stated, the cost part of the accounting is of recent origin. In fact, it is still in flux. A manual, *Cost Accounting*, was published not so long ago and has already been revised and supplemented several times. Plans for further revision and simplification are under way. The system is built around the resources of the forest. By resources is to be understood, not assets in a balance-sheet sense, but things in the national forests which yield a benefit to the public whether the benefit be of a commercial

nature, such as grazing, or recreational, as fishing, camping, sight-seeing, etc. It is not possible to state the value of the forest "resources" in dollars. Some of the values are monetary, but obviously there are others upon which no monetary value can be placed. At present the resources are divided into six classes: (1) timber, (2) grazing, (3) water, (4) recreation, (5) fish and game and (6) land.

In theory all expenditures have to do with these resources. Some expenditures apply to a particular resource; others apply to more than one. At present the classification of the expenditures, or "activities," as the cost accounting classification designates its accounts, is not complete. Some of the activities overlap as far as their relation to the resources are concerned. As the system is worked out in use, further classifying of the cost accounts in their relation to resources will take place. Activities may be expense accounts, investment accounts—that is, assets—or of an unclassified nature, somewhat like deferred items and organization expense found in the commercial world. This lack of classification as between expense and asset is, likewise, due to the experimental state of the system.

The activity expenditure accounts are—

A. Indirect accounts

1. General overhead (If a charge does not belong to any particular activity or activities, the entry is made to activity No. 1, general overhead. At the end of the fiscal period, the total of this account is prorated over the other activities.)

B. Expense accounts (The reader will be less mystified if he supplies the word "expense" after some of the accounts in Group B.)

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|-------------------------------|---|
| 2. Timber sales | 14. Land adjustments |
| 3. Forest products sales | 15. Maintenance roads, forest development |
| 4. Timber, non-revenue | 16. Maintenance trails |
| 5. Grazing, C&H, revenue | 17. Maintenance roads, forest high-ways |
| 6. Grazing, S&G, revenue | 18. Maintenance headquarters im-
provements |
| 7. Grazing, non-revenue | 19.1. Maintenance other improve-
ments, structural |
| 8. Fish and game, revenue | 19.2. Maintenance other improve-
ments, roads and trails |
| 9. Fish and game, non-revenue | 19.3. Maintenance other improve-
ments, non-structural |
| 10. Uses, revenue | |
| 11. Uses, non-revenue | |
| 12. Recreation, non-revenue | |
| 13. Water, non-revenue | |

C. Investment accounts

20. Roads and trails, forest development

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|---|--|
| 21. Roads, forest highways | 27. Nurseries |
| 22. Headquarters improvements | 28. Timber surveys and plans |
| 23.1. Other improvements, structural | 29. Grazing surveys and plans |
| 23.2. Other improvements, roads and trails | 30. Fish and game surveys and plans |
| 23.3. Other improvements, non-structural | 31. Recreation surveys and plans |
| 24. Acquisition, exchange and gift | 32.1. General surveys and plans |
| 25. Acquisition, purchase | 32.2. Other investments |
| 26.1. Reforestation, field planting and seeding | 33. Timber stand improvement |
| 26.2. Reforestation, other | 34. Road and trail equipment |
| | 35. Fire equipment |
| | 36. General equipment |
| | 37.1. Stores |
| | 37.2. Stores, roads and trails |
| D. Protection accounts | |
| 38. Fire prevention | 40. Fire suppression |
| 39. Presuppression | 41. Insect control and other timber protection |
| E. Coöperation and miscellaneous accounts | |
| 42. Fire coöperation | 45. Timber disposal, coöperation |
| 43. Reforestation coöperation | 46. Other coöperation |
| 44. Forestry extension, coöperation | 47. Research |
| F. Suspense accounts | |
| 49. Supplies and other suspense | 51.1. Emergency conservation suspense, expense |
| 50. Salaries and wages suspense | 51.2. Emergency conservation suspense, investments |

Protection accounts and coöperation and miscellaneous accounts comprise those previously mentioned as not being at present classified as expenses and investments.

The preparation of time reports and payroll vouchers nicely illustrates some of the workings of the cost system. For example, we take the monthly time reports of (1) a fire guard employed for the summer fire season, (2) a carpenter on a bridge crew and (3) a foreman in charge of a C.C.C. crew which works on the bridge and fights fires as occasion demands. The guard will be paid from the fund "salaries and expenses," the carpenter may be paid from a road fund, the C.C.C. foreman from the special fund for meeting expenditures for C.C.C. projects.

Suppose the fire guard reports (a) ten days fighting fire No. M2, (b) ten days maintenance of roads and (c) ten days telephone line construction, Big B telephone line. (When fire duties do not take his time, a guard assists with other work that may be in

progress near his station.) Let his wages be \$90 a month. The charges to funds and cost activities for the fire guard will be

Fund—salaries and expenses.....	\$90
Act. 15, road maintenance.....	\$30
" 23.1, Big B telephone line.....	30
" 40, fire M2.....	30

The carpenter might report (a) two days on fire M2, (b) twenty-two days on Little Creek bridge. His wages are \$5 a day. If he is paid ordinarily from a road fund, his fire fighting time will be paid from the fire fighting fund. The entries will be

Fund—forest road development.....	\$110
Act. 20, Little Creek bridge.....	\$110
Fund—fighting forest fires.....	10
Act. 40, fire M2.....	10

The fireman may report (a) fifteen days on Little Creek bridge, (b) five days on fire M2 and (c) general supervision, four days. His wages are \$6 a day. Inasmuch as the special fund from which he is paid is usable for fire fighting as well as road work, the entry will be

Fund—special.....	\$144
Act. 1, general overhead.....	\$24
" 20, Little Creek bridge.....	90
" 40, fire M2.....	30

The foregoing charges against the funds will be entered in the voucher register thus:

Vo. No.	To whom	Funds			
		S&E	FFF	FRD	Special
2001	Payroll	\$90	\$10	\$110	
2002	"				\$144

Incidentally, the extra voucher, No. 2002, illustrates another of the numerous regulations: disbursements from this special fund can not appear on a voucher for regular funds.

Previously the voucher register has been compared to a cash-payments book or cheque register having a dozen credit columns for the banks or appropriations. It is evident that such a register would be rather unwieldy if it also contained the debit distribution for the cost charges. To record the cost items or charges to activities each fund has a ledger. The activity charges are entered directly from the voucher into these ledgers. The same activity accounts are found in each ledger. In this way cost elements are segregated by funds.

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In the foregoing time reports it will be noticed that there is a charge to activity 40 for fire M2 under three funds:

Salaries and expenses.....	\$30
Fighting forest fires.....	10
Special.....	30

By preparing a recapitulation of all charges to activity 40 for fire M2 from all fund ledgers there is obtained a total cost of \$70 for labor on this fire. In other words a recapitulation of all activities in all fund ledgers brings together all charges on each activity. The fund feature of the system disappears and the cost part remains. At the end of the fiscal period such a recapitulation is prepared.

Activity 20 includes expenditures for forest road development. It is a control account much like the account "plant" on a balance-sheet of a commercial establishment. The details of the latter would be found in the plant ledger. So the details of activity 20 would be found in an investment ledger in which would be found the cost of each road and trail of the forest. This means several hundred road accounts for each forest. The total of the control account will amount to several million dollars for a forest. At the close of the fiscal year the fund ledgers are posted to the investment ledgers for activities which represent investments. What has been said of activity 20, forest road development, applies to all the investment accounts so far as the control element is concerned.

It is not the purpose of this article to deal with all the features of the fund-cost-accounting system of the United States forest service. Necessarily much must be omitted. No doubt essentials have been left out which should have been included. For example, a unique plan of using journal vouchers is in use. A method of inter-unit accounting between forests exists. Final reports at the end of the fiscal period are not only reports but form part of the accounting system by which the accounts of the entire system are made to form a consolidated one after the order of a national organization with branches throughout the country.