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Report to James T. McIntyre, Acting Director, Office of Management and Budget; by H. L. Krieger, Director, Federal Personnel and Compensation Div.

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For many years, considerable attention has been paid to estimating overall work in determining the Federal Government's civilian personnel requirements. However, little attention has been paid to the availability of the work force--the portion of time that workers are available to perform their primary duties after deducting the time they are unavailable because of absence. Eight Federal agencies were surveyed to determine the reliability of the processes and data used to estimate the availability of Federal civilian workers. Findings/Conclusions: The Office of Management and Budget has not provided guidance on how to estimate worker availability in computing personnel requirements. Estimates are often inconsistent and are based on old, incomplete, and unsupported data. The eight agencies surveyed differed in the absences they recognize in estimating availability: two account for annual leave earned rather than that taken, two do not account for administrative or other leave, and one does not account for training. Requirements may be either overstated or understated due to the lack of consistent, current, and reliable availability estimates. While the total number of workers estimated may not be understated or overstated, they may not be properly distributed if variances in availability among groups of workers within the agency are not accounted for. Recommendations: The Office of Management and Budget should provide guidance to agencies for estimating the availability of workers. Circular A-11 could be expanded to: provide a definition of availability; require agencies to validate or adjust their estimates annually; require that agencies document and retain supporting data used to estimate availability in order to justify personnel requirements; and require that availability be analyzed by organization, location, or function and that any significant differences be recognized

in estimating personnel requirements and distributing the work force. (RES)

5603

REPORT BY THE U.S.

General Accounting Office

Estimates Of Federal Employees Available Time For Work Distort Work Force Requirements

The size of the Federal work force is based, in part, on the time workers are available to perform their primary duties after deducting time for absences, such as leave and training. But, due to the lack of overall guidance, agencies do not account for the same kinds of absences and do not use current and reliable data to estimate availability. As a result, personnel requirements may be overstated, understated, or improperly distributed.





UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

FEDERAL PERSONNEL AND
COMPENSATION DIVISION

B-183124

The Honorable James T. McIntyre
Acting Director
Office of Management and Budget

Dear Mr. McIntyre:

This report discusses the need for guidance to agencies for estimating the availability of Federal civilian workers, a key factor in determining personnel requirements. We have discussed the information in this report with representatives from your Office, the Department of Defense, and eight other agencies.

Our recommendations to you are set forth on page 15. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs no later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Chairmen, House Committee on Government Operations, Senate Committee of Governmental Affairs, and House and Senate Committees on Appropriations, and to the heads of departments and agencies included in our study.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "H. L. Krieger".

H. L. Krieger
Director

D I G E S T

The following equation depicts how agencies determine civilian staffing needs.

$$\frac{\text{Work hours required}}{\text{Available hours per worker}} = \text{Number of workers}$$

The General Accounting Office (GAO) has issued seven reports during the past 2 years on how selected agencies could improve their estimates of staffing needs with better estimates of required work hours. (See app. I.)

This report shows the need for more consistent and reliable estimates of the hours employees are available for work.

To improve estimates of staffing needs, GAO recommends (see p. 15) that the Office of Management and Budget provide agencies guidance on:

- Identifying the kinds of absences to consider in estimating staff availability.
- Validating or adjusting their estimates annually.
- Documenting and retaining their estimates as part of their justification for staff needs.
- Recognizing differences in availability by organization, location, or function.
(See p. 15)

The Departments and agencies of the Federal Government estimate the number of workers needed to do their work. The credibility of those estimates depends equally on the reliability of estimated workload and estimated work force availability. Errors in estimating work

FPCD-78-21

force availability can have a major impact on the number and costs of personnel. For example, an error of 1 day a month in the estimated availability for work of the average civilian employee would create an annual estimating error of about 114,500 staff-years and could cost about \$1.7 billion. (See p. 2.)

In a survey of eight agencies, GAO found that availability estimates vary (see app. II) and that agencies, in determining staffing needs, are not accounting for absences consistently. Six of the eight agencies accounted for annual leave on the basis of leave used; the other two accounted for it on the basis of leave earned. The latter method tends to understate availability and overstate requirements because Federal employees use only about 93 percent of their accrued leave. For example, if leave earned were used for one-fourth of all Federal employees, the result would overstate requirements about 3,700 staff-years and about \$54 million. (See pp. 3 to 4.)

Two of the agencies did not account for administrative leave in determining availability. This tends to overstate availability and understate requirements. (See pp. 4 to 5.)

Four of the eight agencies are not using current data on absences to estimate employee availability. For example, the Army is using a 1952 study as a basis for estimating employee availability. As a result, it considered 204 leave hours a year per employee even though reported leave from 1972 through 1975 averaged between 264 and 300 hours a year. This tended to understate the number of workers needed and contribute to borrowing of military personnel which adversely affects military readiness and morale. (See pp. 7 to 8.)

Two agencies did not consider the variations in staff availability between groups of workers within the agencies. For example, the Air Force specified that its organizations use 144 hours a month to estimate staff availability, although available hours had ranged from 140 hours at one organization to 149 hours at another. Such variations are normal for a variety of reasons including differences in age, leave categories,

and types of work. To test the potential effect of the Air Force method, GAO applied it to the employees of an agency which recognizes such variations. The Air Force method would misallocate about 500 workers. Accordingly, GAO believes availability should be analyzed by organization, location, or function and significant differences should be recognized in estimating staff requirements and distributing the work force. (See pp. 12 to 13.)

GAO discussed its findings with officials of the eight agencies, who said they would take action to improve their estimates of staff availability. (See pp. 15 to 16.)

GAO also discussed its recommendations--particularly the need for overall guidance to agencies--with officials of the Office Management and Budget. These officials said they would consider GAO's recommendations but did not wish to comment on them pending further study. (See p. 16.)

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DVB	Department of Veterans Benefits, Veterans Administration	
GAO	General Accounting Office	
SSA	Social Security Administration	

CHAPTER 1

INTRODUCTION

The 1978 Federal budget included about \$48 billion for more than 2 million civilian employees, exclusive of the United States Postal Service. For many years, much attention has been paid to processes for estimating overall work in determining personnel requirements. But, little attention has been paid to the availability of the work force--the portion of time that workers are available to perform their primary duties after deducting the time they are unavailable because of absences, such as leave and training. Both are major elements in estimating work force requirements and costs.

In 1975 civilian workers were not available an average of 31 days each because of annual, sick, and administrative leave--about 12 percent of the time after deducting weekends and holidays. This amounts to an estimated cost of \$4.6 billion a year. The additional time away from primary duties for training is not available, but it is also significant in some agencies.

There is no Government-wide standard definition of staff availability. Different agencies refer to it in various ways, such as "productive time" or "on-the-job time." For purposes of this survey, we considered available time to be that amount of time in a year remaining after deducting weekends, holidays, leave, and training. Available time includes all time spent on the job although some of it may be used for personal needs, rest, unavoidable delays, coffee breaks, or special duties. 1/

Reliable estimates of the number of Federal workers needed are important because they are used by the agencies and the Congress to determine the size and distribution of the Federal work force. The availability of workers and the estimated work to be done are used to compute the number of workers needed. Credible estimates of personnel requirements cannot be prepared without reliable and

1/Some agencies consider these activities in computing personnel requirements. These kinds of diversions do occur and they increase the number of workers needed. Agencies do not uniformly account for them, and we found no reliable basis for estimating their impact.

accurate data on both workload and availability, as shown by the following formula.

$$\frac{\text{Work hours required}}{\text{Available hours per worker}} = \text{Number of workers}$$

Changes in availability, or errors in estimating it, can have a major impact on the number of workers needed. For example, an average error of 1 day of available time per month for Federal civilian workers would create an annual estimating error of about 114,500 staff-years costing about \$1.7 billion.

SCOPE OF SURVEY

The objective of our survey was to determine the reliability of the processes and data used to estimate the availability of Federal civilian workers. Our work consisted of reviewing agency regulations and records and talking to agency officials about their practices for determining availability. We performed most of our work at the headquarters level and selected locations of eight agencies.

- Army
- Navy
- Marine Corps
- Marine Corps Finance Center
- Air Force
- Air Force Management Engineering Agency
- Agricultural Stabilization and Conservation Service
- Federal Aviation Administration
- Social Security Administration (SSA)
- Veterans Administration--Department of Veterans Benefits (DVB)

We discussed the issues in this report with officials of the Office of Management and Budget and the Office of the Secretary of Defense.

CHAPTER 2

NEED FOR GUIDANCE

IN DETERMINING AVAILABILITY

The Office of Management and Budget has not provided agencies guidance on how to estimate worker availability in computing personnel requirements. Estimates are often inconsistent and are based on old, incomplete, and unsupported data. Some agencies do not acknowledge that availability varies among sites and types of workers, and therefore the work force may not be properly distributed according to needs within such an agency.

Office of Management and Budget Circular A-11 emphasizes the need for Federal agencies to use properly developed work measurement procedures to compute personnel requirements, but it does not address availability. The Office needs to provide guidance to Federal agencies on availability because:

- Agency needs cannot be evaluated on a consistent or equitable basis without such guidance.
- Without current and complete information on availability to insure that the estimated number of workers is reliable, agencies may need fewer or more workers than estimated.
- Imbalances may occur within an agency unless procedures are specified for accurate, localized availability estimates.

Agency estimates of availability are shown in appendix II.

AVAILABILITY NOT CONSISTENTLY ESTIMATED

The eight agencies in our survey differ in the absences they recognize in estimating availability.

- Two account for annual leave earned rather than that taken.
- Two do not account for administrative or other leave.
- One does not account for training.

Because of these inconsistencies the personnel needs of these agencies cannot be evaluated with confidence.

Annual leave

The Agricultural Stabilization and Conservation Service and the Federal Aviation Administration account for annual leave their employees earn.

At the time the Agricultural Stabilization and Conservation Service established its policy in 1973, annual leave taken amounted to only 91 percent of leave earned. Thus, requirements were overstated by 9 percent of the annual leave earned for about 13,000 workers. At the minimum earned rate for annual leave, this amounts to an overstatement of about 88 staff-years, costing about \$1.2 million annually. Agency officials said they would reexamine their policy.

Information was not available in the Federal Aviation Administration to show the extent that requirements were overstated as a result of this policy, but the potential is there. Since 1974 the Federal Aviation Administration has considered 23 days of annual leave earned in estimating availability of controllers. Data is not available to show the average annual leave being taken by controllers. However, in 1975 and 1976, all Federal Aviation Administration employees used an average of only 21 and 22 days of annual leave, respectively. If representative of controllers, this difference results in overstated requirements of 185 and 92 staff-years, respectively, in these 2 years.

On the average, Federal workers used only about 93 percent of the annual leave earned in 1975. Using earned leave rather than leave taken to estimated availability overstates requirements. If this practice was followed in determining personnel requirements for only one-fourth of the workers in all Federal agencies, requirements would be overstated by 3,700 staff-years and \$54 million annually.

Administrative leave

The Army and the Agricultural Stabilization and Conservation Service do not account for administrative leave in their estimates of availability. This can result in understated requirements. Army workers, for example, used an average of 3 days administrative leave per worker in 1975 or a total of about 3,700 staff-years. Information

was not available to show the amounts used by Agricultural Stabilization and Conservation Service workers.

The omission of administrative leave may also apply to Federal Aviation Administration employees other than air traffic controllers and airway facilities sector technicians. Availability for these workers was established over 18 years ago, and agency officials do not know what leave was accounted for.

The remaining five agencies that consider administrative leave do not recognize the same absences. The Air Force has the most definitive approach for identifying and recognizing the various types of such absences affecting availability. According to the Air Force, the following average absences per worker reduce overall availability by about 1,500 staff-years annually costing about \$19 million.

<u>Absence</u>	<u>Hours per staff-month</u>
Court leave	0.203
Administrative--weather	0.200
Military leave	0.192
Civilian personnel office contacts	0.075
Blood donations	0.068
Emergency rescue	0.054
Permanent-change-of-station travel	0.050
Voting and registration	0.043
Onduty injury	0.036
Labor management relations	0.033
Permanent-change-of-station processing	0.029
Administrative-breakdown	0.022
Appeals and hearings	0.017
Protective work	0.008
Military registration	0.004
Civil defense activities	0.003
Military examinations/funerals	0.002
Equal Employment Opportunity programs	<u>0.001</u>
Total	<u>1.040</u>

Other agencies considered administrative leave for weather, court duty, and military service. As indicated, the Air Force approach goes much further.

Training

Formal training is defined by the Civil Service Commission as training in excess of 8 hours or a series of

courses on the same subject. Such training must be reported to the Commission. There is no uniform definition of other types of training; but they may include actions to develop or improve job skills, such as reviewing procedures, instructions, public laws, or professional publications, and on-the-job training.

Agencies use different terminology and approaches to account for training in estimating availability and in computing personnel requirements. As noted in a prior GAO report, "Training is treated differently from agency to agency because of varied definitions of 'job-relatedness' of training and differing tuition-assistance policies." ^{1/} Because of these differences, we could not determine whether agencies were accounting for the same, different, or all training activities in computing requirements.

For example, the Army excludes training from estimates of available time. Officials at one major command and one installation said training time was included as part of workload requirements; but headquarters officials believed it was excluded. Therefore, the extent that training time is identified and considered in determining requirements is not clear. Army headquarters officials agreed to revise their procedures to show specifically how training time should be accounted for.

In fiscal year 1976 the Army reported about 2,900 staff-years of formal training. The amount of other training is unknown. Such training should be identified and considered in requirements because it can be significant. For example, SSA has identified other operational training requirements at an annual average of 17 days per technical employee--a total of about 5,700 staff-years. Officials said this training is necessary to maintain employee proficiency. They said they are one of the few agencies required to show such other training as a separate line item in their budget and justify it to the Congress.

^{1/}"The Government Employees Training Act of 1958: A Progress Report" (FPCD-77-66, Nov. 17, 1977).

AVAILABILITY ESTIMATES ARE
NOT CURRENT NOR SUPPORTED

Of the eight agencies reviewed, only two--SSA and DVB--routinely estimate availability at least annually for computing staffing requirements. Of the other six agencies, four do not develop current information on availability to estimate the number of workers needed. The use of outdated estimates can cause substantial error in the estimated number of workers needed. Estimates in two of the six agencies were less current than SSA and DVB. None of these six agencies have complete documentation to support the availability factors used.

Current estimates are needed because availability changes over time. A worker's age and length of service affects the amount of leave used and training received. Changes in legislation and in the policies governing leave, training, and other personnel matters affect availability. New policies allowing flexible work hours, for example, may reduce sick leave in some agencies and increase availability. Curtailed activities because of the energy crisis in some parts of the country will, on the other hand, decrease it.

Army

Army requirements for civilian workers are understated partly because of a lack of a current and complete estimate of availability. The Secretary of the Army has stated that the lack of sufficient civilian workers has resulted in offices' borrowing military personnel from their units to perform civilian tasks. This reduces readiness and decreases soldier job satisfaction.

The Army based its estimate of availability on a 1952 study. Studies in 1969 and 1970 recommended that determinations of availability recognize training time and more current experience, but the recommendations were never implemented. An Army official said implementing them would have resulted in increased requirements, something which is not desired. Since then, the Army has not directed further studies or periodic assessments of availability.

We compared the leave in the 1952 availability factor with the current annual, sick, and administrative leave reported to the Office of Management and Budget. The comparison in the

following chart shows that leave calculations used in estimating availability are understated in relation to leave actually taken.

Average leave hours per worker per year

Considered in determining availability	Reported			
	<u>1952</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
204	264	288	300	a/264

a/The difference between 204 and 264 hours per year represents about 10,000 staff-years of which about 3,700 are attributable to administrative leave not recognized in determining availability. The remaining 6,300 staff-years are apparently attributable to increases in the average amount of leave taken since 1952.

An understatement of leave can result in understated requirements. One result of understated requirements--the borrowing of military personnel--has adversely affected Army operations. A February 1975 Army Audit Agency report points out serious problems in not recognizing and dealing with actual civilian personnel requirements. The report says military personnel were borrowed when civilian personnel requirements were significantly understated and thereby seriously affect readiness and the concept of the volunteer Army. Among the reasons given for the understatements were:

- Manpower requirements for missions directed by higher commands or developed locally were not documented.
- Some requirements had not been included in staffing guides. 1/

We believe the lack of a current and complete estimate of availability has also contributed to the understatements.

The report describes some of the implications of the Army's gap--referred to as the "Grand Canyon"--between requirements and resources.

1/A recent GAO report, "Development and Use of Military Services Staffing Standards: More Direction, Emphasis, and Consistency Needed" (FPCD-77-72, Oct. 18, 1977), also discusses the need for improvement in the Army's process for measuring work. (See app. I.)

"The problem starts with the substantial understatement of documented support requirements, leads to the excessive and continued use of borrowed labor [military personnel from Table of Organization and Equipment units] to meet the shortfall, and results in the unavailability of key personnel for participation in unit training.

* * * * *

"* * * extensive diversion of personnel is not compatible with combat readiness and the volunteer Army. * * * non-availability of personnel for unit training has increased from 25 to 30 percent.

* * * * *

"Total base support requirements, including the impact on mission accomplishment, must be identified and presented to Congress. If relief is not obtained, then Army systems must be geared to better controlling and managing the shortfall * * *."

Navy

A Navy official said that the published Navy availability factor is based on a 1969 study. Officials could not locate the study and supporting documentation; as a result they could not explain leave and training time developed in the 1969 study. The Navy has not assigned responsibility for updating the availability factor.

Because the Navy does not report separate leave data for the Navy and the Marine Corps to the Office of Management and Budget, we could not evaluate the reliability of the leave accounted for in the Navy's availability factor.

The Navy is implementing a new work measurement system for shore activities in 1979 in response to a congressional commitment. This system will not produce credible personnel requirements unless current availability determinations are used.

Navy officials agreed that availability should be estimated periodically.

Marine Corps

Each major Marine Corps command determines the availability of its workers. Marine Corps headquarters has not provided guidance for making these determinations current and consistent. A Marine Corps official said each command normally makes an availability study every 2 years and retains the supporting documentation.

To determine whether availability was periodically determined and supported, we visited one command and found that studies were made in 1972 and 1974. Adequate documentation for the 1974 study is available. Because of a major reorganization, the command made no study in 1976.

Marine Corps headquarters officials advised us at the conclusion of our study that they were drafting guidance to insure that availability is currently and consistently estimated. A headquarters official has been designated to see that the guidance is implemented and to review availability data developed by the commands.

Air Force

The Air Force Management Engineering Agency is responsible for making studies and periodically estimating availability of military and civilian personnel. Our survey showed that a 1973 Air Force study gave considerably more attention to availability than the other military services. Officials said that in 1975 the factors in the 1973 study were reviewed and found to be unchanged. In 1976 they reviewed civilian personnel policies that affect availability and found them unchanged. Leave recognized in the 1973 study agrees with leave reported to the Office of Management and Budget for 1975.

The Air Force could not provide documentation supporting the 1973 study or subsequent reviews. Air Force officials said the documentation had been lost or destroyed as a result of reorganization and relocation of activities. They agreed that documentation for the studies should be retained.

Agricultural Stabilization and Conservation Service

Availability estimates are based on a 1973 analysis of 1972 leave experience. In estimating annual work force

availability, officials included annual leave expected to be earned and 6 days sick leave per worker. There is no supporting documentation for this analysis. Officials said they had not determined whether it was still representative.

We compared the actual leave experience for 1976 with amounts estimated for 1977. Actual leave experience was about 7 percent more than the estimate, a difference of 83 staff-years. This difference may have resulted in understated 1977 personnel requirements.

Officials said the difference would not adversely affect their operations because the agency budget includes a 5-percent allowance for contingencies, which can be used for hiring additional staff or meeting other unanticipated program needs. While this allowance may absorb errors in understating personnel requirements, it does not reveal overstatements nor negate the need for accurate estimates of personnel requirements.

Agricultural Stabilization and Conservation Service officials said that they plan every 3 or 4 years to update their leave factors, including administrative leave, and to reevaluate the policy of using leave earned. They plan to reevaluate leave data annually to ascertain whether estimated availability has changed.

Federal Aviation Administration

Availability is estimated separately for (1) Air Traffic Controllers, (2) Airway Facilities Sector Technicians, and (3) other workers. Studies in 1974 and 1976 estimated availability for the controllers and technicians, respectively.

Availability for other workers, representing about 50 percent of the work force, was estimated sometime before 1961 at 1,800 hours annually per worker. Officials had no documentation to support this figure nor to show how it was developed. They said the estimate represents time available after deduction of holidays, leave, and training. They did not have separate leave and training data for this part of the work force to evaluate the 1,800-hour estimate. However, data for the entire work force showed an average availability of 1,711 hours in 1975. Because this is about 5 percent less than the 1,800-hour estimate, personnel requirements may have been understated. Agency officials agreed that they should update the availability estimate.

VARIANCES WITHIN AGENCIES
NOT ACCOUNTED FOR

Five of the eight agencies in our review acknowledged that availability varies among major organizations (group, division, directorate, bureau, etc.) within the agency and consider such variances in computing personnel requirements. Variances occur for many reasons, including differences in average age and length of service of the work force, climate, and type of work. To some extent, the Army acknowledges such variances. The Air Force and Navy do not.

The Office of Management and Budget has questioned the use of a single estimate for availability in the Air Force. A graduate thesis submitted to the Air Force Institute of Technology also highlighted the need to recognize such variances. It states:

"The application of a constant estimate of availability to all work centers when in fact availability is not a homogenous variable results in erroneous requirements determination. Some work centers will receive more [workers] than they require while others will receive less."

To determine the effect of using a single availability estimate throughout an agency when more than one estimate might be more appropriate, we compared both approaches to distributing about 71,000 workers among 5 bureaus of SSA. SSA computes personnel requirements separately for each bureau based on workload and estimates availability within each bureau. Among the bureaus, the availability estimates range from 129 to 149 hours per month per worker.

We computed a single, weighted average availability estimate for all five bureaus and applied it to the estimated workload for each. The use of a single availability estimate would have misallocated about 500 workers by shifting them from 3 bureaus with relatively low availability to 2 others with high availability. Thus, the single estimate would have affected about 1,000 positions, removing workers from bureaus needing them and adding them to bureaus not needing them.

Army

The Army permits some variations in estimated availability. Army regulations governing manpower surveys used

to determine personnel requirements provide that a factor of 11 percent for "nonproductive" time should be added to the productive time of workers. The factor represents annual and sick leave where there is a normal distribution of age groups in the work force. At installations having a larger number of employees earning the maximum annual leave, a higher nonproductive time factor may be documented and recognized. Regulations do not provide for a lower factor at installations having a larger number of employees earning the minimum annual leave.

There is no information at Army headquarters showing to what extent the 11-percent factor is exceeded. Officials cited examples where higher factors were used but said the 11-percent factor is used more often than not.

Air Force

Estimated availability in individual commands ranges from 140 to 149 hours per month and is statistically different in these organizations. Nonetheless, the Air Force established an estimated availability of 144 hours per month for civilian workers on the 40-hour week. An exception to this rule is the Logistics Command, which is permitted to use 142 hours per month. Officials said that command has a more refined work measurement system than others and is able to substantiate a lower estimate of availability.

At the conclusion of our review in December 1977, Air Force officials said there appeared to be merit for having separate civilian availability estimates for the continental United States and for overseas locations. They plan to evaluate the use of more than one availability estimate during the next study of civilian availability scheduled to begin in March 1978.

Navy

The Navy uses a single availability estimate to determine personnel requirements for shore-based civilian personnel. Officials recognize that a single availability estimate may result in too many or too few people in some activities; therefore, they agreed to look into the possibility of developing the data needed to establish different estimates.

CHAPTER 3

CONCLUSIONS, RECOMMENDATIONS, AND

AGENCY ACTIONS

CONCLUSIONS

Our survey indicates that, in estimating staff availability, many Federal agencies do not

- account for the same kinds of absences,
- use current and complete information,
- document their estimates to support personnel needs, and
- analyze variances by organization, location, or function.

Problems identified in the eight selected agencies indicate that requirements may be either overstated or understated due to the lack of consistent, current, and reliable availability estimates. We believe the inconsistent and unreliable results stem from a lack of overall guidance. Although the Office of Management and Budget provides guidance in Circular A-11 on the importance of reliable estimates of workload, the circular does not provide guidance on estimating staff availability. We believe the latter is equally important.

Understatements of availability, in determining requirements, may result in more workers than are needed. Among the potentially adverse effects of too many workers are unnecessary increases in the Federal payroll, unnecessary or marginal work, loss of efficiency, and idleness.

Overstatements of availability, on the other hand, may result in fewer workers than needed. Potential effects may include reduced readiness in the military services, unfulfilled program objectives, curtailed services, work backlogs, overtime, reduced quality or timeliness, and lowered morale.

While the total number of workers estimated as needed in an agency may not be understated or overstated, they may not be properly distributed if variances in availability among groups of workers within the agency are not accounted for.

RECOMMENDATIONS

We recommend that the Office of Management and Budget provide guidance to agencies for estimating the availability of workers. Guidance could be incorporated in Circular A-11, "Preparation and Submission of Budget Estimates." It requires indexes to determine personnel requirements. Since estimated availability of workers, as well as workload, affects the number of workers needed, the circular could be expanded to:

- Provide a definition of availability. The definition should identify the kinds of leave that must be accounted for in estimating availability. Moreover, it should indicate that leave used rather than leave earned should be considered. Agencies should also be prepared to identify and justify the training accounted for.
- Require agencies to validate or adjust their estimates annually. For most agencies, the data needed is in existing reporting systems. If availability estimates are not changed annually, information should be available to show that the previous estimate continues to be valid.
- Require that agencies document and retain supporting data used to estimate availability in order to justify their personnel requirements.
- Require that availability be analyzed by organization, location, or function and that any significant differences be recognized in estimating personnel requirements and distributing the work force.

Each agency should examine the data resulting from a more accurate reflection of available time to assure itself that available time is used productively and effectively. This will permit each agency to review available time from a perspective of maximizing effective utilization of the work force.

AGENCY ACTIONS

The eight selected agencies have taken or are planning corrective actions where needed to establish and document more current, complete, and reliable availability estimates on a periodic basis.

Officials from the Office of the Secretary of Defense are aware of the need for basic guidance in estimating the availability of military and civilian personnel. They said that they need consistent and reliable data on availability. They have undertaken a comprehensive study of worker availability to implement uniform procedures for measuring and updating available time estimates used for personnel requirements. In fiscal year 1978 they will study the military population and in 1979 civilian employees.

These actions by the military and civilian agencies we reviewed should improve estimates of availability. But other Federal agencies also need guidance to estimate availability. We discussed the results of our review and agency guidance needed with Office of Management and Budget officials at the conclusion of our review in December 1977. They expressed concern that some agencies might develop substantially increased requirements based on new estimates of availability. These officials said they would consider our recommendations but did not wish to comment on them pending further study.

We recognize that agencies could develop requirements for more or fewer workers based on current and reliable data on both workload and the availability of workers. This should not preclude its development. We believe information on availability could help agencies and the Office of Management and Budget to better identify needs and to more effectively distribute the work force.

PRIOR GAO REPORTS

The General Accounting Office in a number of reports has pointed out the need for agencies to develop more reliable methods for estimating their personnel requirements. More recently, these reports pointed out that improvements are needed in the work measurement systems used by agencies in determining personnel requirements.

1. "Development and Use of Military Services Staffing Standards: More Direction, Emphasis, and Consistency Needed" (FPCD-77-72, Oct. 18, 1977). The report discusses the need for ways to measure work that are reliable and useful to the budget process. Staffing standards based on the concept of work measurement offer the potential to do this. Except for the Air Force, the military services have been slow in developing staffing standards, let alone using them.
2. "The Work Measurement System of the Department of Housing and Urban Development Has Potential But Needs Further Work to Increase Its Reliability" (FPCD-77-53, June 15, 1977). This report discusses the need for more objective and systematic ways for Government agencies to reliably estimate their personnel requirements.
3. "Personnel Ceilings--A Barrier to Effective Manpower Management" (FPCD-76-98, June 2, 1977). This report discusses personnel ceilings and suggests that, with direction and guidance, agencies could develop methods for preparing sound estimates of minimum manpower requirements to accomplish authorized programs and functions.
4. "Determining Requirements for Aircraft Maintenance Personnel Could Be Improved--Peacetime and Wartime" (LCD-77-421, May 20, 1977). This report discusses the manpower determination processes used by the various military services, which are based on independently developed systems and assumptions, rules, and policies. In many cases, manpower factors and data used in the individual manpower determination systems are questionable, inaccurate, or outdated.
5. "Improvements Needed in Defense's Efforts to Use Work Measurements" (LCD-76-401, Aug. 31, 1976). This report points out that the military services approach work measurement efforts with different

interests; assign different priorities to these efforts; provide varying degrees of independence to the work measurement staffs; and define the universe for potential application of work measurements differently.

5. "Major Cost Savings Can Be Achieved By Increasing Productivity in Real Property Management" (LCD-76-320, Aug. 19, 1976). This report discusses problems in the system the military services use to measure and evaluate how productive their labor forces are in real property maintenance. These problems have caused the services to fall far short of the achievements possible with an adequate work measurement system.
7. "Navy Aircraft Overhaul Depots Could Be More Productive" (LCD-75-432, Dec. 23, 1975). This report discusses the lack of quality in the work measurement systems at Navy aircraft overhaul depots.

AGENCY AVAILABILITY ESTIMATES

<u>Agency</u>	<u>Hours per month</u>			<u>Available</u>
	<u>Assigned</u>	<u>Leave</u>	<u>Training</u>	
Air Force	167.9	22.6	1.4	143.9
Army	167.3	16.7	(a)	150.6
Navy	167.9	21.9	.9	145.1
Marine Corps	-	-	-	(b)
Veteran's Administration, Department of Veteran's Benefits	168.0	19.8	(c)	148.2
Social Security Administration (technical workers)	168.0	21.5	12.0	134.5
Federal Aviation Administration (except Air Traffic Controllers and Airway Facilities Sector Technicians)	168.0	16.0	2.0	150.0
Agricultural Stabilization and Conservation Service (State and county offices)	-	-	-	(d)

a/Training is not included in unavailable time. Army headquarters officials do not know the extent that it is being included in workload estimates.

b/Each command computes its own availability. It varies between 135 and 150 hours per month.

c/Training is included in workload standards.

d/Availability data is not maintained at headquarters.