## TRANSPORTATION CUTEAR RESEAR

Changes in funding for highway and other transportation programs and a shifting of fund allocation among transportation programs and activities are causing major changes in the manpower requirements of state and local transportation agencies. In responding to these changes, state highway and transportation departments and other public works agencies must be furnished the best available information on the development and utilization of manpower. Therefore, the Transportation Research Board held a workshop at Woods Hole, Massachusetts, from July 24 to July 26, 1974. The objective of this workshop was to assemble information from the experiences of representatives of state highway and transportation departments, federal agencies, consulting firms, and industry into a synthesis on the handling of reductions and increases in manpower.

The case studies and papers presented at the workshop provided a basis for formulating techniques to accomplish reductions in-force and incorporated the following areas of concern: (a) reasons for reduction, (b) timing and methods for implementing reductions, (c) preplanning considerations, (d) impact and follow-up, and (e) hindsight.

## INTRODUCTION

## Communication to Employees

One of the most important variables of a plan for manpower reduction is the communications effort. The timing of the release of information is of the utmost importance, i.e., by waiting to inform employees of the cutback, the risk of suffering additional personnel losses is increased. The longer some type of communication is delayed, the more likely "information leaks" will occur and the more likely some distortion of the message will occur. In addition, there will always be the problem of mistrust of management, a drop in morale, etc., which are often the direct result of poor communications timing. Although these types of problems can not be entirely eliminated, prompt release of information is a step in the right direction. The method of the communications effort will depend on the level of the people within the organization, the nature of their jobs, and the reason for the impending reduction.

While it is possible to share too much information with employees, it is more common to underestimate the information needs of people in the organization. In some cases ignorance may indeed be bliss. This will be true, for example, within a department that will not be affected either directly or indirectly by a manpower reduction. However, even in such circumstances it is well to inform them of what is going on within the organization and to assure them that there are no planned reductions within their department.

## Planning for Employee Reductions

Although communications is an important aspect of planning for reductions, the most critical variable is the method by which the actual reduction is achieved. To illustrate this point, three case studies are presented that emphasize the different processes involved.

## PART I

## Case Study I-Nevada

Early in 1973, the Nevada state highway management determined that, due to budgetary limitations imposed through restrictions of federal funding for highway projects, the Nevada State Highway Department was faced with reducing its manpower. Management first
became aware of this problem in late 1972, but it was hoped, at that time, that through a limited hiring program and normal attrition, the work force would be reduced to an acceptable level. This simply did not prove to be possible.

Once the decision was made by management that a layoff of staff was necessary, highway personnel were kept well-informed on the process of reduction. There were two reasons for making this decision:

1. The effect would not only be upon those who, unfortunately, would be layed off, but also upon those who would be left to continue the work of the Department.
2. At the time of the layoff, the Department numbered some 1600 employees and was a small, close-knit organization. Even had management desired to maintain confidentiality concerning the layoff, there simply was too much possibility of leaks to employees, which in turn would cause wild rumors.

Further, because Nevada did not have a severance pay plan, every employee to be layed off would be given a minimum of 60 days' notice prior to the date the layoff would take effect. This would enable employees sufficient time to attempt to find other employment. At the same time, the entire resources of the Department would be placed at the disposal of those affected employees to assist them in finding other employment.

The State of Nevada clearly defines the layoff procedure in the Rules for State Personnel Administration. These rules have the same force and effect as law. The rule is quite clear that layoffs are to take place within major divisions within an agency, and within that division, on the basis of need to be determined by class series and class level to be effected. In the case of the Highway Department, the Department was broken down into four major divisions: Operations, Engineering and Planning, Management Services, and Office of the Highway Engineer.

Each employee received 1 point for each month of service in the classification to be effected, and $3 / 4$ point for every month of service in other classifications within the state service. The points had to be carried out to the month and day. The employee development reports (Job Performance Reports) would also be reviewed. While standard or better performance reports would
have no effect, a below-standard rating would result in the employee losing 12 points. Once the points had been established for each employee in the effected classification, bumping then could take place in each major division. However, there could be no bumping across major divisional lines. Naturally, all temporary, part-time, and probationary employees were to be laid off before any permanent state employee.

Once a listing of employees who were to be layed off was made, letters were prepared to go to the employees. First it had to be determined in writing if employees who had bumping. rights within their class series desired to exercise that right or be layed off. This process was continued until the end of the "bumping ladder" was reached, and at that point the most recently hired person, that is, the one with the least points, would receive a notice that he was to be layed off. As stated earlier, each employee was given 60 days' notice that he was to be laid off.

Naturally when an organization goes through a layoff, many employees on their own initiative attempt to seek other employment. There were other vacancies caused through normal attrition. It was decided by management that, should an employee leave who had not received a layoff notice, and who was in a classification where a layoff was to take place, a layoff letter would be withdrawn from the most senior person being layed off within that classification, who could then continue in employment in lieu of the person who had left.

There was a total freeze placed on hiring after the layoff. Any vacancies that occurred through normal attrition would have to be filled through internal departmental transfer and then only with approval of the State Highway Engineer. Very few employees were interested in applying for transfers, and in many instances there was simply no one working for the Department who possessed the qualifications necessary to fill the vacancies. In May 1974, management decided that there could be limited hiring allowed in certain selected job classifications but only after the state Highway Engineer had personally reviewed and approved the method of filling the vacancy (internal transfer or outside hire).

Any time a layoff takes place it has a significant impact on morale of all those who are employed by an agency, particularly a public agency where many people are lulled into a false sense of security by thinking that once they have a job it is secure forever. Layoffs have taken place before within the Nevada State Government, but it is always a shock to employees when it occurs.

It is hoped that by continued attrition in areas where the Department feels it can continue to lose staff, and with only limited hiring in other areas, future layoffs will be avoided.

## Case Study II-Wyoming

In the late sixties, the first positive action to manpower surpluses was to substantially cut back the temporary work force. Because overtime pay was available to field construction technicians, permanent employees were allowed longer work hours during the construction season. A hiring moratorium was imposed throughout the Department and any new hiring had to be approved by the appropirate staff level manager with concurrence by the Superintendent and Chief Engineer.

In 1971, as a result of a preliminary analysis, it became apparent that, although there was a surplus of manpower, there was also a serious manpower shortage in certain areas. To better understand the problem, the factors that had led up to the manpower surplus were listed. The interstate program was the prime cause, but the following factors also had to be considered:

1. Reaction to more stringent inspection, sampling, documentation, etc.;
2. The public hearing process;
3. Strengthening of the 3-C planning process;
4. Highway safety;
5. Automation (data processing);
6. Environmental assessments;
7. A state law limiting the work day to only 8 hours on public works projects (since contracters double-shifted, crew size increased accordingly);
8. Additional design requirements (aerial photography, hydraulics, etc.);
9. Increase in maintenance activities; and
10. Increase in administrative activities and required reporting.

The factors that were felt to be forcing a reduction in manpower were listed next. They included:

1. Amendment of 8 -hour work day limitation on public works projects, permitting overtime payment to certain classes of employees working on public works projects;
2. Centralization of many departmental functions, both internally and externally;
3. Reduction in federal-aid funds;
4. Inflation; and
5. Better utilization of manpower, equipment, and financial resources through new management techniques.

The excess was easily identified in field construction activities. The practice in construction had been to permanently assign crews to given towns or geographical areas. This had proved valuable because of increased morale and pride of workmanship; which resulted from making the employee a permanent part of the community. However, as the result of the unpredictability of the highway program and the fact that some crews were relatively inactive during some construction seasons, employees were transferred temporarily to other stations. This proved to be an extremely expensive venture. Therefore, some crews were eliminated, particularly where there were multiple crews in a community. The surplus employees were placed at other stations; but, in many cases, because the employee desired to remain in his community, he found work outside government.

Another early action was to use surplus employees in other activities that would eventually face manpower shortages. Some field technical employees were transferred to design and other headquarter activities. All maintenance vacancies were advertised extensively because many of the construction employees were used in off-season as equipment operators during emergencies. Supervisors were notified of the impending manpower problem, although most were already familiar with the problem, and were asked to counsel employees who might be involved in a reduction in force, to encourage them to consider maintenance vacancies.

Although some success was achieved in this program, two factors limited it. First, far higher salaries were paid in construction, and the resultant loss in pay was too much for most employees to consider. Second, technical employees had drawn a definite line between their jobs and what they considered menial labor, and they were not about to take jobs that they considered beneath their capabilities.

It became obvious that internal transfers would not solve the problem. Next, a careful study of the normal attrition rate through the next several years was made. The average employee at that time had more than 10 years of service and was 40 years old. Normal attrition was not going to solve the problem either.

Faced with a formal layoff, the State Personnel Rules and Regulations stated that the time, the order, and the manner of reduction in force would be determined by the State Personnel Commission. However, the State Commission gave no definite ruling but indicated that tenure and service rating should be the top factors. In addition, no permanent employee could be separated while there were temporary employees serving in the same position, or a position within the same grade, providing the permanent employee had the necessary qualifications. It was decided then to examine reduction in force procedure and to recommend a procedure to the State Personnel Commission.

Some system of performance rating had always been used by the department. Although suspicious of these ratings, it was felt that the ratings would have to be considered because they were one of the few measurable factors available.

The wording in the rules and regulations caused consideration of what type of bumping process would work. The decision was that "bumping" was totally unacceptable. In lieu of "bumping," the possibility of laying off entire classes of employees, regardless of service or other factors, was considered. It was understood that this was a fairly common practice under many systems and apparently was void of appeals.

During this period of consideration, other factors entered that were to have more of an effect on reduction than any that might have been purposefully planned. The first was the impoundment of highway funds by the Office of Management and Budget. The constant withholding and then releasing of highway money created an unstable program. Employees lost faith in the future of the highway industry, and many left for private industry.

Other employees naturally felt that, with layoff inevitable, they should also look for outside employment. This is where an error of omission was made. Although supervisors had been counseled about the possibility of reduction in force, the employees were not made to fully understand the problem. The first employees to leave were the younger employees who were in a position to have the most to offer in the labor market. Some of the field technical nucleus for the future was lost as a result of this type of resignation.

As a result of these circumstances, no formal reduction in force program was necessary. However, a problem for the future is evident in that the permanent work force now has a much higher average age and service record, and there will be difficulty in finding vacancies for younger field technicians in the next decade.

In the future, the Wyoming Highway Department will be structured to a "bare-bone" status. If additional funds become available, employees will work overtime, temporary help will be employed, and consultants will be retained to utilize the additional funds. The Department believes that good management of manpower at the beginning of a "crash" program is the only effective method of manpower control. Layoffs destroy morale, lose needed talent, and create serious image problems for future hiring.

## Case Study III-Wisconsin

In July 1972, the Wisconsin State Legislature established a budget for the Wisconsin Department of Transportation that required the department to abolish 229 existing permanent full-time equivalent positions by July l, 1974 and to reduce its man-year employee complement by 286 employees by July 1, 1975.

The position and staff reductions that were imposed on the Department of Transportation were not unexpected. The administrative and management staffs were well aware of the public's adverse feeling toward state grovernment growth. They had extensively discussed and started to prepare for the staff reductions that were imminent. After July l, 1971, a self-imposed austerity program was started that required the Division Administrator's personal review and approval in order to fill any budgeted position. When the reductions were mandated by the Legislature in July 1972, there were approximately 300 vacancies on the books, about 200 of which had been vacant for six months or more and were not in the stage of recruiting. The employee complement had to be reduced by 226 employees and the first year's goal of abolishing 112 positions was easily accomplished. Not only had preplanning efforts virtually guaranteed meeting the first year's obligations, they also gave an additional year that was needed to consider and try alternatives. Other state departments that had not anticipated staff reductions and that filled budgeted vacancies as they developed were faced with immediate massive layoffs and employee morale problems that will take years to overcome.

A comprehensive position management program was installed shortly after reductions began. This program, though controloriented, also provided alternatives to meet program needs without adding staff to the department's payroll. The key to the entire program was a final control responsibility placed on the department's Director of Personnel Management for the approval of every vacancy requested to be filled and the increased responsibility placed on each administrator to consider all available alternatives before requesting to have a position filled.

In the position management process, action was taken to combine position duties and upgrade some positions; work was transferred from one district to another to balance workload; employees were tranferred from less critical work or work units to more critical ones; work that was often "necessary fill-in work" (such as "plans on the shelf") was put aside in favor of immediate work needs in other areas; more emphasis was placed on new systems, both manual and data processing, that could reduce present and/or future staffing requirements; work such as excess keypunching that tended to peak-and-valley was contracted out after an optimum work load-staff time base was determined and surpassed; and renewed emphasis was placed on management analysis and optimum staffing to assure that only the work that was necessary to be done was being done. It was found that employees often thoroughly enjoyed an environment where everyone was always busy beyond the point of being able to accomplish all of the work at hand.

In some programs, such as vehicle registration and driver's license examining, there were some very serious backlog problems because of staff shortages. This problem was resolved, however, by hiring non-permanent limited term employees to help catch up on the backlog. Special system studies were initiated to determine if a more efficient use of budget and staff could be realized for these programs.

Although the position-employee reduclion requirements that were mandated have been met, the position-management program is still in effect. The legislative and executive offices are raising questions as to why the highway portions of the Department of Transportation's program need the same level of staffing when the combination of decreased gasoline tax revenues, inflation, and interest payments on previous bonding is reducing the number of new projects being let to contract. This is a question that is being given serious consideration. Through the position-management program all requests to fill vacancies continue to be reviewed and only as a last resort will a position be filled.

In addition to continuing the position-management program, added emphasis has been placed on the optimum staffing program, which is geared to look at organizational components of the department as though they are first being created. The conceptual study policy is not one of "what an organizational unit is doing, " nor "what is its present staffing pattern," but it is centered around "what an organizational unit should be doing," and "what staffing pattern should it have." The optimum staffing team is composed of members of the Bureau of Audit and Management

Analysis, the Bureau of Personnel Management, the Bureau of Budget, Finance and Accounting, and a representative of the organizational unit being studied. The optimum staffing program is helping to identify both surplus and deficient staffing within the department. It is also in the process of forcing operating units to look objectively at the mission of their unit. They have found work being done, reports being published, and files being kept just because it had been done for a number of years. When unnecessary work was eliminated, it was found that the personal services budget could often be reduced.

From these three case studies it is evident that there is commonality among the departments faced with reductions in force. Basically there is a need to realize that attrition, transfer, and cross-training will not solve the problem, but a comprehensive program of preplanning combined with attrition, transfer, crosstraining and self-imposed austerity programs will lessen the impact of reductions. However, in the three cases discussed, ultimately there was not a significant layoff of employees. Therefore, a step-by-step evaluation of a program that did result in layoffs would be helpful. Hence, the case of Tennessee.

## Case Study-Tennessee: Reduction in Maintenance Manpower

Reasons for Reduction
During 1969-1970, studies were conducted in maintenance operations of the Tennessee Department of Transportation to objectively examine the maintenance program and identify potential areas for improvement. These studies eventually resulted in the implementation of a statewide maintenance management system. During the course of the initial studies and the design and implementation of the management system, it became apparent that one area in definite need of improvement was that of manpower allocation.

One aspect of the maintenance management system is performance budgeting. During the implementation of performance budgeting in the maintenance operations, annual work programs were developed and resource requirements were identified. Part of this identification process resulted in a manpower plan which specified the number of personnel authorized for each maintenance crew.

When these new manpower requirements were compared to the amount of manpower already available in the maintenance operations, it became apparent that some crews were understaffed while others were overstaffed. There was a net surplus of 485 employees in the maintenance operations. Because of this, the Department's request to the state legislature for fiscal year 1972-1973 was for 450 less maintenance employees than were on the payroll as of November 1, 1971. The dilemma was obvious: What disposition to make of the 450 surplus employees? (The other 35 had largely been taken care of through attrition during the implementation process.)

Methods for Implementing
The staffing level decision was finalized around July 1971. Under state law, the reduction had to be accomplished by July 1, 1972.

It was determined that there were four basic alternatives through which the reduction could be accomplished:

1. Non-replacement of employees who retire or resign;
2. Transfer of personnel from overstaffed crews to understaffed crews and to positions vacated by retiring or resigning employees;
3. Transfer of maintenance personnel to other functional areas of the department; and
4. The termination of surplus employces.

It was determined that the first three alternatives should be pursued as thoroughly as possible within the allotted time before initiating any layoffs.

Non-replacement of retiring and resigning personnel could not be enforced 100 percent because some of the employees who were leaving possessed special skills and expertise that were necessary to the ongoing maintenance operations. Thus, a one-man reduction in force everytime an employee retired or resigned could not be accomplished.

Transferring employees from overstaffed units to understaffed units also proved helpful, but it also had drawbacks. Since this was a statewide reduction in force involving 95 separate county crews, geographical factors worked a prohibitive hardship on potential transfers between crews. Furthermore, it was found that the overstaffed crews did not always contain employees who possossed the skills and expertise needed in the understaffed crews.

Transferring maintenance personnel to the other functional areas of the department proved less helpful than the first two. This was largely because the skills possessed by the maintenance personnel were not those required to accomplish the objectives of the other functional areas. While this problem might have been overcome by a vigorous training program, there was not sufficient time to institute such a program.

Hindsight from the Tennessee Experience

First, allow plenty of lead time. Several months are needed to plan for the reduction and to implement the plans in an orderly manner with a minimum of detrimental effect on the organization's people and program.

Second, take great care to insure the solid support of the entire management team. Be certain to keep managers and supervisors accurately and fully informed and to consult with them throughout the process.

Third, provide adequate job placement services for those employees who were being layed off.

A reduction in force can be accomplished without serious disruptions in the lives of existing personnel and their communities. To avoid disruptions, however, it may be necessary to implement extraordinary efforts such as special training programs and the provision of special services such as placement. The key is to allow plenty of lead time for planning and implementation.

PART II

## Manpower Management-A Systems Approach to Employee Reduction

The manpower management approach is an effective technique for an organization faced with the need to reduce the number of its employees. But it is not designed primarily to reduce personnel, nor is its value limited to this situation. It is designed to assist managers to select alternatives and to perform work effectively.

Three ways to reduce personnel expenditures are (a) eliminate unnecessary programs, (b) allocate employee decreases, and (c) freeze rates of pay.

Elimination of an unnecessary program is always a desirable objective. However, first to go in an economy drive are usually new programs. New and unnecessary may not be the same. Indiscriminate curtailments of new programs, an action often considered in bad times, are bound to limit the options and work-improvement opportunities available to management.

Across-the-board allocations of employee reductions, though it does not consider work loads, is often used during an austerity program. Each unit shares proportionately in the reductions. Although this action may appear fair on the surface and is easy to explain to the work force, legislators, managers, and the public, it is really a "cop-out."

Some managers are more effective than others. Across-theboard decreases penalize effective manpower managers who are already holding levels of employment to a minimum, more than it does the ineffective manager with excess personnel. The more effective manager may need to reduce or eliminate needed services while the other may continue business as usual, whether the work being done is necessary or not. One of the prime functions of manpower management programs is to identify those services that are needed more than others.

Government agencies at all levels have been engaged in a continual effort to gain competitive rates of pay. Frozen salary plans, in periods of rapid inflation, will almost guarantee that only the most dedicated and most vested employees will stay. In the end, this action is expensive. It can (a) cost the organization many of its best personnel; (b) result in employee unrest, work slowdowns, and strikes; and (c) create the need to join, once again, the catch-up game. This may not be true, however, in periods of high unemployment.

Manpower management refers to a series of logical and interrelated steps designed to provide managers with the techniques needed to evaluate alternatives, prepare work and manpower programs, select staffing alternatives, control operations, and evaluate performance.

There are six important characteristics and development steps in an effective manpower management system:

1. Work and skills analyses,
2. Performance standards development,
3. Work load identification,
4. Program development,
5. Scheduling and controlling development, and
6. Information system design.

## Work and Skills Analyses

Work analyses are undertaken to (a) identify the work being done, (b) evaluate work methods, (c) identify required quality levels, and (d) develop standardized work methods.

The first step is to identify those functions that consume large amounts of labor such as construction surveys and inspections and to concentrate on those activities within the function that consumes the greatest amounts of manpower. This is done through work sampling, analysis of accounting information, and implementation of activity-reporting systems.

Next identify step-by-step the work that must be done to complete an activity. Field observations of the best employees provide a good starting point. After the work has been completely identified, the next element is to determine if it can be completely eliminated.

Surviving activities are evaluated task by task. Unnecessary steps are deleted, equipment alternatives are evaluated, task sequences improved, standard crew sizes set, workmanship levels described, and documentation requirements established.

Improved and standardized work methods should be communicated to the work force through effective information programs and training courses.

Skills analysis is the identification of the knowledge, skills, and abilities employees will need to perform an activity or task satisfactorily. Work and skills analyses can be combined to identify training needs, improve personnel classification plans, remove artificial barriers to advancement, and develop career ladders.

## Standards

Some managers reject standards as inappropriate for transportation activities. Still, reasonable standards can be developed if the concept is changed to meet work requirements.

Three types of standards are normally used-productivity, quantity, and quality. These three together are referred to as performance standards.

The importance and use of productivity standards vary. In construction inspection they can be used as a signal that contractor production is low, meaning that inspectors have time to perform other assignments available in the same area.

Quantity standards are important in all types of transportation work. They are used in (a) estimating the amounts of manpower and other resources needed to complete projects or activities, (b) evaluating and selecting program alternatives and in setting staffing levels, and (c) controlling work operations and evaluating performance.

Quality standards are equally important. They establish documentation requirements and, as the name implies, set quality standards to ensure that work is neither overdone nor underdone.

## Work Load

The manpower management systems approach builds programs from activity standards on a single project to project and management unit summaries. It allows managers, with the help of computers, to test work-load alternatives and to measure the impacts of changes on manpower and other resource requirements. Without standards and the systems approzch, managers first must evaluate estimating methods and then differences between estimators. This process is time-consuming and intuitive rather than factual. It can easily break down in periods of rapidly changing fund availability.

## Schedules and Control

Scheduling is the most important part of control. It should be a formal written process that requires supervisors to evaluate alternatives more thoroughly. Research in one state has shown productivity gains of up to 20 percent after the implementation of a written scheduling system even though personnel were previously being "mentally" scheduled.

## Information Systems

Large volumes of information can be generated in a manpower management system, and individual activities can be tracked.

The status of all projects can be listed and so much information reported that managers are unable to understand it. The use of management by the exception principle is mandatory. Typical applications include confirming status reports to projects nearing contract letting and those off-schedule in terms of time or resource utilization.

The volumes of information developed can also be reduced by (a) requiring managers to identify the actions to be taken from the information furnished, (b) designing reports to meet the needs of each level of management and confining report distribution to those levels, (c) requiring estimates of the numbers of pages to be included in each report, (d) making trial runs of the information system before its implementation, and (e) tracking the amount of time and effort needed to provide input information and prepare the reports.

## PART III

## Emphasize the Positive in Employee Reductions

There is understandably a tendency for employees to be a little uneasy concerning the impact of the manpower reduction on their job. Assuming the existence of valid jobs before the reduction, then there is no doubt that the slack must be taken up somewhere as there are jobs that are not being performed. Management, therefore, should take the necessary steps to make something positive out of the reduction. This is an opportunity to put into practice some of the motivational concepts that have proven successful in the private sector: specifically, job enlargement and job enrichment.

Job enlargement is just as it sounds-adding to the tasks involved in a job. Job enrichment is the adding of responsibilities and authority. Often this involves giving the employees additional decision-making prerogatives over their jobs.

Neither of these techniques is suggested as a panacea, but rather they are presented as being representative of the types of process that management should commit themselves to as a part of manpower planning.

Again, timing is of the utmost importance. If a job enlargement or a job enrichment program is announced just prior to the personnel cutback, the employees could easily attach the blame to the programs and literally kill any motivational influence. This will depend, however, on the quality of the communications concerning the layoff.

Although many would recommend a longer interval of time between the reduction and the implementation of any new job enrichment programs there is something to be said for embarking on the programs with only a short waiting period. Some of the advantages would be (a) with the job enlargement program all tasks previously performed in the organization can be continued with a minimum loss of time, (b) job enlargement is an excellent method of eliminating the boredom and monotony associated with many jobs, (c) a job enrichment program will serve to stress the importance of the individual to the organization, and (d) employee morale can be maintained and even improved following the reduction by getting people actively involved in an enlargement and/or an enrichment effort. In this regard it is not inappropriate to use inputs from employees in the process of enlarging or enriching their jobs.

## Stabilization

An effective manpower planning program must always be aiming toward stabilization and the resultant efficiency. Stabilization as far as the work force itself and stabilization regarding methods of dealing with increases and decreases in the internal manpower inventory. All human beings like to live and work in an environment where there is some degree of predictability, and the establishment of a sound manpower planning program can serve this end.

Regardless of the methods used to accomplish the manpower planning process, the important thing is that it is carried out. It is not enough to wait until a reduction becomes necessary and then get involved with a "task force" approach. The crux of a successful manpower planning approach is continuity. It, of necessity, must be an ongoing process. With well-established procedures and plans some of the uncertainties and contingencies can be offset. In the final analysis all manpower planning efforts and especially those that involve reductions must be future oriented. To fail this is to fail as managers of human resources.

## Summary

It is difficult to predict inflation, recession, and energy crisis or recent changes in federal-aid programs that have occurred.

However, many manpower problems can be alleviated by implementing a manpower management planning system. Through these programs more efficient use of manpower and resources will result and directly aid other problem areas.

Timing
Employee reductions should be directly related to a particular operation that is being changed, restricted, or eliminated. Once a decision is made to cut back or eliminate a program, personnel must be fully informed as rapidly as possible in order to avoid anxiety throughout the whole organization that will result in morale and productivity problems. The employees being dismissed should be given as much advance notice as possible to enable them to seek employment elsewhere.

Methods for Implementing
All possible alternatives to dismissal should be considered first. These alternatives should include:

1. Vacancy Savings: One means of implementing the reduction is by a self-imposed austerity program and hiring freeze, thereby reducing the number of employees to be dismissed.
2. Transfer of Work Load: In situations where district or regional offices are understaffed, the work load could be equalized by transferring some of the work load to nearby locations that are overstaffed. This technique is easy to implement since work can be transferred without the red tape associated with the transfer and dismissal of civil service or union employees.
3. Transfer of Employees: In situations where work cannot be transferred between organizations to equalize the work load, employees could be transferred in lieu of dismissal. However, when civil service and union employees are involved, complex procedures must be followed to document and validate the need to transfer if employees do not volunteer, and the necessary skills must be possessed before a transfer is possible.
4. Attrition: When circumstances permit, employees engaged in certain operations no longer required, can be reduced gradually as they resign or retire. This method of direct employee reduction is one of the simplest to implement but, because of the necessity of maintaining specific skills and expertise, this may not allow a one-man reduction in force everytime an employee retires or resigns.
5. Retraining: Employees could be retrained to perform other functions in the organization where there is sufficient work to justify their use. However, there must be enough time allowed to implement training programs before a reduction becomes necessary.

If civil service or union employees must be dismissed, considerable effort must be spent on documenting and validating the need for the reductions. They must be directly related to operations by a technique that will hold up in legal proceedings. This is necessary because it is certain that a number of employees will appeal the dismissal actions taken.

In addition to validating evidence for dismissals, complex civil service and union furlough procedures must be followed. They may involve ranking employees by performance and seniority within job classifications and location.

Preplanning Considerations

1. Cost Factor: Will the savings from dismissals be greater than the loss of training investment and the associated costs of dismissals such as unemployment compensation, severance pay, and union legal action?
2. Anticipation of Possible Legal Action Due to Dismissals: If employees can individually and collectively through civil service appeals or bargaining unit action obtain a court injunction to stop dismissals, management could be forced to rehire them with back pay. Union employees might go on strike in sympathy with dismissed employees. Steps must be taken to meet these situations.
3. Employee Counseling: If the employees must be dismissed, several services should be provided to them:
a. Counseling on the availability of rotraining from within the organization or through outside sources in order to increase their chances of seeking other employment,
b. Counseling on the availability of other employment consistent with their skills, and
c. Providing lists of names and skills to other organizations in government and business who may require additional employees.
4. Sufficient Notice: Affected employees must be given sufficient notice in order to provide them with enough lead time to secure other employment and to manage their economic affairs.
5. Alleviating the Employee's Financial Anxiety: State and local agencies concerned with unemployment should be contacted and all arrangements made for unemployment compensation and for job placement.
6. Alleviating the Economic and Social Impact on the Community: When a significant number of people are unemployed, community action organizations, such as the chamber of commerce, should be contacted for assistance.
"Bumping"
When a reduction in force does occur, the method by which employees are selected for dismissal is of the utmost importance. In most organizations that employ career civil servants the process of dismissal is complicated by the "bumping" procedure.
"Bumping" is based on seniority, rating performance, classified or non-classified positions, and veterans' preference. It is this process through which an employee who has seniority, high performance rating, and veterans' preference, and who is being dismissed because of the reduction, has the right to "bump" an employee who has less seniority, lower performance rating, or no veterans' preference. This "bumping" process continues down through the ranks and is a one-way process. A person can "bump" below, but not above him.
"Bumping" itself raises a series of questions: (a) Who is able to "bump"? (b) What jobs are subject to "bumping"? (c) Is "bumping" along divisional lines or job-category lines? (d) Is "bumping" regional or local; within one department or applicable statewide? (e) Can non-union employees "bump" union employees or union, non-union? (f) Does the right of "bumping" extend to those whose job has been eliminated from the budget as opposed to those whose job still exists but with less positions?
(g) What reemployment rights do bumped employees have?

An Alternative to RIF
One alternative to reductions in employees that has been advocated by some labor unions is a reduced work week for all employees with comparable reduced pay. Rather than some being unemployed while others worked full time, a shortened work week, it is asserted, is more equitable to all employees. This could result in a savings that could be applied against cuts in programs and funding. It would allow an organization to continue at full employment, for a reduced number of days, at a reduced rate of pay.

Consideration of Benefits
An employee who is dismissed should be made aware of (a) unemployment benefits and (b) the fringe benefits such as hospitalization, disability and term life insurance that may still be available to him.

Legal Considerations
Precautions should be taken to ensure that all legal implications of a reduction have been resolved before the layoffs occur.

## Value of Manpower Management

Manpower management offers effective techniques by which managers can anticipate employee reductions and avoid large traumatic employee reductions in force. Effective manpower management can

1. Improve the way work is done and eliminate unnecessary work;
2. Project the numbers of persons needed to do the work, where they will be needed, and when;
3. Evaluate the effectiveness of their operations from the lowest to the highest levels; and
4. Substantiate the need for the actions taken.

Finally, it is a technique for use by managers, but will accomplish little in and of itself. To be effective, it must be fully endorsed and used by management.

Group I
Transportation Systems Planning and Administration

E. Wilson Campbell, Chairman<br>Acting Assistant Commissioner for Planning and Development<br>New York State Department of Transportation Albany, New York

Transportation Research Board Staff
Kenneth E. Cook and Stephen E. Blake

SECTION A - ORGANIZATION AND ADMINISTRATION

Roger R. Shipley
President, CMMS--Management and Transportation Association, Inc. Springfield, Illinois

Committee AlA02 - Manpower Management Marian T. Hankerd, Chairman

Members:

Kermit L. Bergstralh
Ira F. Doom
Grant S. Fairbanks
D. L. Howell

Douglas L. Jonas
Alan Leslie

Charles F. Miller
Neil Craig Miller
Charles T. Morison, Jr.
Wallace Thomas Schindler, Jr.
David H. Summerville
Tom B. Webb, Jr.

## Workshop Speakers

Paul E. Carey, Illinois Department of Transportation Jeff Boyd, Virginia Highway Research Council John Harhigh, Pennsylvania Department of Transportation William Irons, Business Science Corporation B. J. Jeans, Tennessee Department of Transportation Therman C. Kaldahl, North Dakota Highway Department
J. C. Kraft, Florida Department of Transportation
J. Roslak, Wisconsin Department of Transportation Jack Russell, Wyoming State Highway Department Edward Shaw, Roy Jorgensen Associates, Inc. Norman Thompson, Tampa Bay Area Rapid Transit Authority

