The general level of employee performance represents money to the water-utility industry, as it does to every other business. Each year the costs of operating a water utility, large or small, increase—because of both the higher costs of materials and the increased costs of salaries and wages. Since most water utilities use competitive bidding as a method of purchasing materials or contracted services, the costs of these items are generally subject to better control. However, competitive bids cannot be taken to purchase the services of employees, so generally a large proportion of the budget dollar is spent for wages and salaries. Therefore, more attention should be directed to securing a higher level of employee performance to derive better returns for the money spent.

This article will comment on some of the things being done at the San Antonio City Water Board to improve employee performance. This organization is municipally owned and employs approximately 640 people serving 150,000 customers in the metropolitan San Antonio area. It operates separately from the city government, with an appointed board of trustees to provide overall guidance in a policy capacity.

The board sets an excellent example for the entire organization by requiring a high level of operating efficiency and approving the establishment of policies that encourage a high level of employee performance. It approves an annual budget that provides the funds to implement these policies.

Within the organization below the policy level, the responsibility for employee performance is shared by the management staff, the personnel function, operating supervision, and the individual employee. Each of these has an important part in achieving the overall objective of efficiency through high-level performance standards.

The management staff at the City Water Board is composed of the general manager to whom five branch managers report. The branch managers are individually responsible for their areas of operation in conformance with established policies. These areas include customer service, comptroller, distribution, operations, and personnel. This group provides the leadership and in the broadest sense the environment that encourages employees to do their best. The managers recognize and support the board policies and the personnel programs that have been established with their agreement.

The City Water Board’s personnel function provides service to the entire organization. This service includes the basic programs that are normally found in most personnel activities: employment, job analysis, salary administration, training, safety, employee benefits, counseling, and records. The emphasis is on developing and maintaining programs that meet the needs of the
Employee performance is of key significance in the efficient operation and management of water-utility facilities. There are many paths open to management for improving this performance in ways that will be greatly beneficial to both employees and the operation as a whole. The following two articles describe suggested programs that have attained successful results in this area of concern.

The first article points out a shifting emphasis in the work attitude and particular needs of the work force. It is necessary for management to recognize these changes if it is to upgrade the performance of the entire staff.

The second article discusses the need for planning and implementation of training programs in the water-utility field. Recent improvements in both equipment and techniques demand a higher level of proficiency from employees.

Employee Performance

operating activities and on providing methods to hire, train, and retain a well-qualified work force.

The immediate operating supervisor is most important in establishing the performance level of employees. He represents the City Water Board to the individual employees working in his area of responsibility, and his responsibility is to encourage a good performance by utilizing the programs provided and individualizing them to the particular group's needs. The supervisor is the key to upgrading employee performance on an individual basis.

The employee also has a responsibility for the level of performance. The older employees set an example for the newer employees; their individual attitudes toward the organization and the supervisors have an important bearing on the overall efficiency level. And all employees have a responsibility to the organization that employs them, since they are being provided the opportunity to earn a living, and, in the water business, to the community being served.

Two generally accepted formal programs for upgrading employee performance are training and performance rating; however, these programs are directed to the needs of the individual employee. Some of the ways in which the City Water Board is trying to improve or upgrade employee performance of the work force as a unit shall be described here.

The general attitude of the work force has changed, and will continue to change, due to increased emphasis on equal employment, individual employee rights, and unions or other forms of organized employee groups. It is necessary that the management staff, the personnel department staff, and the individual supervisors recognize these changes as having an important bearing on the way in which they perform their responsibilities.

Hiring

One of the best ways to improve performance is to hire high-quality workers. Each year members of the work force retire, resign, or are fired. These vacancies, as well as an increase in the size of the force, provide an opportunity to upgrade performance by employing the best-qualified applicants available for these positions. The City Water Board conducts background investigations of prior employment, police and retail records, and other sources to secure as much information as possible about the work records of the individuals. Once screened, the applicants are referred to the individual supervisor so that he may select the person he feels is best suited to the job in question.

Once employed, emphasis is placed on the orientation of the employee to the responsibilities of being a member of a municipal service organization. During a monthly meeting of new employees, the general functions of the City Water Board are explained in addition to the employee-benefits programs, the safety and training programs, and other items of a general nature. Currently this new-employee orientation is being recorded on video tape so that it can be shown on a television screen. In this way the board covers many of its day-to-day operations.
Communication must be a two-way affair between management...

operations and introduces its management staff. This has been a most effective method of acquainting the new employee with the entire organization.

Additionally, at certain employment levels, particularly supervisory positions or those requiring considerable internal contacts, the board establishes specialized orientations lasting up to 30 days. These orientations are planned on an individual basis to provide an opportunity for a new employee to move from department to department so that he can meet directors and supervisory personnel, who explain their responsibilities and their working relationship with the department or division where he will work.

This period of orientation is the best time to emphasize the importance of performance to new employees. It is important that they be properly trained to the responsibilities of their position and of being a member of a water utility.

The immediate supervisor should establish good communications and have a definite on-the-job training plan. Too frequently, on-the-job training, whether for the new employee or for the employee who has been promoted to new responsibilities, is not adequately planned and organized. It is important that all of the responsibilities be listed or itemized and some form of measurement used to ensure that the instruction is understood and the employee is learning what is necessary to do the job properly.

All new employees are hired on a 6-month probationary period. The performance-review program requires the supervisor to evaluate the new employee at the end of the first 3 months and again prior to the completion of the 6-month period. The form used requests answers to questions concerning the individual's willingness to learn, to work, and to accept suggestions, rules, and training, and his ability to work with others. The questions appraise the employee's ability to learn and to communicate, his attitude toward public relations, attention to his work area, personal appearance, dependability, and overall rate of progress. Space is provided to describe the training procedures used and to define areas where the employee needs additional training and development. The supervisor further answers specific questions as to whether the employee is properly placed, what his strongest assets and his weakest points are, and any additional comments.

Preparation of the form is meaningless, however, unless the supervisor's opinions are communicated to the employee. He is asked to review his observations in detail, beyond his written comments, and to encourage the employee to discuss the work situation freely.

This type of performance review encourages the supervisor to think in an organized manner concerning the employee's adaptability to the position and to reach a decision prior to the completion of 6 months as to whether he or she should become a permanent employee.
Training is important to sound, effective promotion from within.

Promotions

Although the hiring of well-qualified individuals is important to improved performance, it is secondary to a good promotion-from-within program that utilizes the experience of employees already on the payroll. Prior to hiring anyone from outside the organization, employees are provided the opportunity of applying for vacant positions, of which a weekly listing appears on all bulletin boards. As a result, most of the positions are filled by employees, with hiring from the outside done primarily at the entry or lower levels. For example, during the first 4 months of 1972, 64 per cent of the positions were filled by existing employees. A sound and effective promotion-from-within program thus encourages employees to improve their performance and their qualifications.

Specialized Education Programs

It is essential that training and education programs be made available to employees who wish to secure the necessary schooling or job experience to qualify for higher-level positions. One of the more successful programs the board has implemented in this area has been an adult basic-education program. The population in San Antonio is approximately 50 per cent Mexican-American, a large portion of whom have not had a high school education and, thus, are generally employed at the basic laborer level. Approximately 200 of the board’s work force are in this category. Without an opportunity to increase their formal education, they are not promotable to more responsible positions. In recognition of this fact, the board initiated an adult basic-education program in 1969 to provide interested employees with sufficient formal school training to enable them to take the general educational development test and attain high-school-equivalency certification.

Participation in the program was strictly voluntary and classes were held during off-duty hours in a training room adjacent to the location where most of these individuals worked. Through the San Antonio Independent School Dist. Adult Basic Education Program the board was able to secure the finances to defray the cost of a qualified teacher and many of the materials and books required. Since initiating this class in Feb. 1969, a total of six classes have been conducted and 49 employees have graduated and been awarded their high school equivalency. Although this program was aimed primarily at the minority individual, many of the older employees already holding jobs such as foreman took advantage of the opportunity to earn high school diplomas and thus the chance for promotion to more responsible positions.

The results of this program have been well worth the time and monies involved. A large number of employees have been promoted to greater responsibility and many minority representatives who could not progress have now substantially increased their earning abilities. The result is a useful service not only to the organization but
to the community as a whole. The program received the complete support of the board and its management staff. For example, as each group completed its training the board sponsored a graduation dinner for the employees and their wives. The members of the board and management staff attended and the certificates were presented with appropriate ceremony.

Education beyond high school is also important, and a college-tuition-refund program recognizes this need. This program encourages employees to secure personal and professional development to increase understanding of current jobs and prepare for more responsible positions. The program is open to all permanent full-time employees, with the provision that tuition costs will not be refunded until an employee has completed at least 1 yr of employment. The board refunds tuition for degree programs and specialized courses when the courses or programs are related to the employee's position and will enhance his value through increased confidence and competence. The tuition is reimbursed upon completion of the approved courses, with full reimbursement for grades of B or higher and one half reimbursement for grades of C. Tuition is not reimbursed for grades of D or below.

This program is beneficial and a wide range of employees are participating. Some are working on bachelor's or master's degrees in fields related to their present positions; others are taking specialized courses in such fields as computers and secretarial sciences, or are studying more generalized subjects.

Once the education and training programs are available, their value and the improved performance that can result are predicated upon the supervisors' cooperation in encouraging the employees to participate. The costs of these two education programs are relatively small compared with the increased knowledge that leads to improved performance.

**On-the-Job Training**

Although specialized education programs are important, on-the-job training is even more significant. The board's training administrator is available to assist supervisors in the establishment of specific training programs to indoctrinate new employees or improve the knowledge and performance of all employees. Two examples of this type of training program are those for foreman trainees and meter readers.

Within the Distribution Branch are approximately 40 to 50 foreman positions at different responsibility and salary-grade levels. With a group this size it is important to have trained replacements available as vacancies occur. There are two trainee foreman positions in the budget, and these are used as training positions for individuals who demonstrate potential for this type of work.

The training program is 6 months long, with designated periods in the administrative area, supply and services, field meters, maintenance, and service and main construction. Within each area a plan has been developed that outlines in detail the work procedures individuals should know in order to perform the responsibilities of that area. Provisions are made for evaluating the knowledge of the employee at designated periods of the training.

Through this program trained personnel are available, which assures continuation of the performance level of the crews involved. Generally, an employee is assigned to the lowest-level foreman position and progresses to the higher levels based on his performance.

In the Meter Reading Div. there are 28 meter readers. New meter readers are trained under the direction of a lead meter reader with a program planned for the community as a whole. The program received the complete support of the board and its management staff. For example, as each group completed its training the board sponsored a graduation dinner for the employees and their wives. The members of the board and management staff attended and the certificates were presented with appropriate ceremony.

**Bruce E. Regadanz**

A paper presented at the Annual Conference on Jun. 6, 1972, by Bruce E. Regadanz (Active Member, AWWA), water production supt., Santa Clara County Flood Control and Water Dist. (Technical Service Member, AWWA), San Jose, Calif.

Since the day the first water was delivered through a hollowed-out log into a trough in the center of town, the water-supply industry has been on the move, improving services, facilities, and water quality. In the past few years there have been great strides forward in water-supply technology. Unfortunately, in many cases the training of operators who staff modern and sophisticated water-supply facilities has lagged far behind the advances made in both equipment and technique. This problem has forced the water-supply industry to embark on extensive programs to upgrade its employees' proficiency.

**Training**

The only way to achieve the levels of performance required today is through training; and the first and foremost problem in this case is motivation. The employees should be convinced that they want to be trained. This involves a selling job on the part of managers. Typically when thinking of improving performance, they think first of compensation, fringe benefits, and promotional opportunities. They too often neglect the importance of training and management's role in such a program. Training is often thought of as work for the front office, but even in a small organization, where some personnel responsibilities are centralized, there is little time allowed for even a part-time training coordinator; and in large agencies, with a full-time training coordinator or staff, job-skil training is negligible or nonexistent. Therefore, a great deal of the training responsibility falls on the water-system manager.

In terms of upgrading employee performance, one must assume that the operators under discussion have been trained in the basics of water-supply operation, and to varying degrees are journeymen-level operators. Management's concern is to train these people to accept and make use of the more sophisticated equipment, chemicals, and techniques available today. This can often be a problem as most people tend to resist change to some degree. As an example of this, a plant was visited just a few months ago that used a conventional alum, lime,
a 30-day period. The general introduction includes the overall responsibilities of the job, the importance of public relations, reading accuracy, and similar detail. Training in the various types of meters used throughout the system, the mechanics of the meters, and the types of registers is included. In addition, the trainees accompany qualified readers on their routes in order to become familiar with the locations of meters in various areas of the city. In San Antonio all of the meters are located in the ground, either in alleys or on easements adjacent to the streets. Therefore, one of the more difficult problems faced by new meter readers is to find the meters, which are frequently hidden by shrubbery, lawns, or other obstacles. In the older areas of the city, they may be almost anywhere. The lead meter reader evaluates the progress of the new meter reader and can repeat portions of the training as required. Once the training period is complete, the new meter reader is well equipped to read meter routes without assistance.

The board's meter-reading activity has also established excellent standards against which to measure the performance level of all of the meter readers. This evaluation is based on the number of errors in the readings each month. The supervisor maintains detailed cumulative records of the number of errors and reviews this information monthly with all the employees.

This type of performance standard is a valid method of measuring the progress of the new readers. The established standard is seven allowable errors per month for a completely trained reader. However, the experienced meter readers average far fewer errors. During all of 1971 the top thirteen meter readers averaged 2.3 errors per month, with the lowest averaging 0.3 of 1 error per month up to a high of 5.8 errors per month. More than 1.8 million meters were read last year with less than 3,000 reading errors.

With this sound standard to measure performance and chlorine process to treat a very stable lake water with little turbidity. The quantity of alum being used was sufficient to make one inquire as to whether or not the use of poly electrolytes had been explored. The operator said the plant had run tests with several and found one or two that did a very good job at considerably less expense. When asked why the plant hadn't switched, the operator reported that his boss said that since the plant had been doing all right on alum for a good many years, he could see no reason to change. It is this attitude, sometimes faced with a seemingly insurmountable problem, that must change if management is to keep up with the times.

Effective Program

To be effective, a training program must be geared to fulfill the needs of the utility involved. Sending operators to other facilities to observe is a good idea and is usually beneficial, but one must be sure that there is a specific connection to training needs. The training must be done for a specific plant and for the benefit of the personnel. Individual utility circumstances will dictate the type of training programs that are required. For instance, the utility that is building its first water-treatment plant is sometimes faced with a seemingly insurmountable problem of recruiting qualified operating and maintenance personnel. Therefore, due to economic considerations, operators with a performance level less than desirable might be recruited and then trained on the job. The utility that is expanding or upgrading an existing plant can also have a serious problem depending on the age of the original plant and the degree of sophistication designed into the addition.

Training Goals

One approach to setting up a training program as a means of improving performance is an examination of expected gains. Some goals are

1. Reduction in the time required for full journeyman-level performance by new employees, plus the ability to adapt quickly to changing equipment and processes by long-term employees.
2. Reduction of accidents, errors, equipment, and process malfunctions.
3. An increase in productivity through improving the employees' ability to do their own job and the ability to perform jobs of others as needs arise.
4. Improved motivation, because a fully-qualified employee is more content on the job—the result being less absenteeism, lower turnover, and so forth.

Conclusion

The high level of employee performance at the City Water Board is attributable to many things. To maintain or to improve the level of performance on a continual basis requires the active support of management and the daily interest of the supervisors and the employees. No one specific program or group of programs will provide miraculous results overnight. Progress is generally slow, but the values received are worth concerted effort.

It is important to each employee that management establish an environment that is conducive to a high level of performance. The individual employee needs to be supported in his daily work activities by the proper tools, equipment, vehicles, and facilities. An employee who can take pride in his surroundings and equipment is more apt to take pride in the level of work he accomplishes. The board's management has provided such an environment. Additionally, it has consistently supported a salary-administration program that permits appropriate recognition of an employee's excellence of performance. Recognition of good performance and long service is encouraged through salary increases and service-awards programs. When an individual employee improves his qualifications, he has the opportunity to progress to greater responsibility. Employees who are supported by management and their supervisors will, in turn, support the organization by a high level of performance.