

Utilities Career Advancement Gets a Boost Staffing to Meet Today's Challenges... The Orange County Experience

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For the past three decades, Orange County has experienced continued and rapid growth, combined with increased complexity and sophistication of its water and wastewater infrastructure. Along with the growth and infrastructure changes, operations, maintenance, and management of the facilities have also presented challenges for utility staff. This scenario is characteristic of many utilities in Florida.

Spurred by the passage of the Clean Water Act and associated federal funding programs of 1972, many utilities constructed wastewater and water treatment facilities. Employees were hired and quickly trained to operate, maintain, and manage the facilities. Many of these early employees grew with the utility and advanced through the ranks to supervisory and management positions.

In the years that followed, the facilities expanded, along with the level of expertise required of staff to provide these services. When in the 1990s public utilities faced the threat of privatization, they responded with strategies to optimize operations and improve efficiency. These strategies included significant downsizing of staff, primarily attained through attrition; however, hiring of new employees was severely curtailed.

Orange County Utilities (OCU), having successfully survived both the hiring boom of the 1970s and the downsizing of the 1990s, is today looking toward a decade in which a large percentage of its key staff members will be retiring from the workforce. Through the efficiency initiatives of the 1990s came a need to retool and cross train the workforce with the goal of developing job descriptions that encompass a multitude of skills—a contrast to the era when jobs were highly specialized.

With these broader job descriptions came the challenge of identifying where the key institutional knowledge and skills reside, and then capturing this information to develop training and competency measurement mechanisms for the future. The result is broader educational and skill requirements for the utility's operation and maintenance staff—a new staffing blueprint.

The goals of the staffing blueprint called for a structured advancement program that defined basic skills and qualifications, as well as areas of specialized competency, which

provided value to OCU's organization and advancement opportunities for its employees. The program needed to assess the skills of current staff and provide a training program to enable self-paced advancement opportunities.

A consultant was retained to review the framework of the program developed by OCU, assist in the development of tests, facilitate deployment of the program, and promote acceptance by building full staff understanding of the program goals.

The Changing Utility

During the early 1980s, OCU began to regionalize water and wastewater treatment, formed a water reuse program, and expanded collections and distribution systems. The technologies employed throughout these systems became more sophisticated while customer demands upon them grew.

Since the 1980s, OCU has consolidated the number of wastewater treatment plants from more than 40 to four. The number of water treatment plants has been reduced from 25 to 14.

At the same time, the number of wastewater customers has increased from fewer than 50,000 in 1990 to over 118,000 today. The number of water customers increased from 46,000 to 116,000 during the same time period. While the capacities of the systems and numbers of customers have increased, the workforce has decreased.

The Changing Workforce

Changes in the infrastructure necessitated the need for change in the workforce. During the 1990s, there was increasing pressure across the country for utilities to do more with less. It was during this time that OCU began to look at organizational and workforce issues, realizing that many utilities were being forced to work with smaller, more versatile staffs; however, the challenge of developing versatility was exacerbated by the retirement of many long-term, senior employees who possessed most of the institutional knowledge and technical skills.

In an innovative move to bring new employees into the system and begin developing diverse skills within the workforce, OCU developed job descriptions for operations specialists—the beginning of its broad-

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ening of job descriptions. Later, specialist job descriptions were created for field personnel as well. These job descriptions allowed individuals with additional skills to advance and receive higher pay—a “quasi” skill-based compensation system.

Until recently these jobs had served to lessen the impact on the utility when more senior, highly skilled employees retired, but this solution was temporary. OCU realized that additional work had to be done.

A New Staffing Blueprint

No Pain – No Gain

Following deployment of the operations specialist job descriptions for plant and field staffs, OCU began the planning process for the future. Realizing the gains that were needed in the organization as senior employees would retire or move to other positions, OCU planners made the decision to expand the “specialist” career path model. To do this, however, would require a great deal of organizational change—a new staffing blueprint.

Plant and field specialist job descriptions were developed for trainee, level 1, level 2, and level 3. These job descriptions all apply to plant operators and field personnel in water treatment, wastewater treatment, water distribution, reclaimed water distribution, and wastewater collections. Having four levels created opportunities for bringing trainees into the jobs while continuing to provide challenging jobs for the more experienced employees.

One of the most effective aspects of the “specialist” model is that it is skill based. Employees in these job classifications may advance in their positions by accumulating proficiency in specific skills or specialty areas.

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Table 1
Specialist Level Certification Prerequisites

Level ⁽¹⁾	Prerequisite Certifications
Specialist	None
Specialist Level 1	“C” license issued by the state of Florida or the FWPCOA voluntary Field Technician Program. Proficiency in one specialty area.
Specialist Level 2	“B” license issued by the state of Florida or the FWPCOA voluntary Field Technician Program. Proficiency in two specialty area.
Specialist Level 3	“A” license issued by the state of Florida or the FWPCOA voluntary Field Technician Program. Proficiency in three specialty areas.

(1) OCU requires that all employees meet minimum qualifications for these positions. A list of these minimum qualifications can be obtained through the Human Resources Department.

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By gaining proficiency in specialty areas, in addition to obtaining higher-level licenses through the FDEP Operator Certification Program or the FWPCOA voluntary Field Technician Program in the state of Florida, employees can qualify for promotions.

A Certification Model

As this career path model developed, it became necessary to identify the specialty areas and establish the requirements for advancing from one level to the next. It was determined that there was a high degree of commonality between the skills of specialists in the water plants and the water reclamation plants, and between the wastewater collection and water distribution staffs. Conversely, there was a great deal of difference in the skills required between the field staff and plant staff. Using this premise, two distinct career tracks were identified and designated as Plant Specialists and Field Specialists.

Since there were to be two categories of specialist positions, Plant Specialist and Field Specialist, it was necessary to engage senior staff to help define these requirements. As subject matter experts, OCU’s senior staff members possess the institutional knowledge of the system and an understanding of the specific job duties that must be performed by the operations staff in order for the systems to provide excellent customer service, achieve regulatory compliance, and maximize the life cycle of the utility’s assets.

Using four levels as the basis for the certification structure, advancement through the levels is based on specific metrics. These metrics include passing certifications examinations offered by the state of Florida’s Operator Certification Program or the FWPCOA voluntary Field Technician Program, and demonstrating proficiency in

specialty areas. Table 1 summarizes the certification requirements for advancement.

Once the certification model was developed, the senior staff began the process of developing criteria to measure proficiency in some of the specialty areas. By virtue of their knowledge and experience in these areas, they are the best source of information about the specific requirements of these jobs.

OCU’s human resources specialist interviewed senior staff in water, wastewater, reclaimed water, distribution, and collections to collect specific information on job duties and knowledge, skills, and abilities. This information was used to help develop tests.

At this point OCU brought in CDM for its expertise and to help expedite the process of developing tests for the specialty areas. Part of the task at hand was to verify that the tests contained an appropriate mix of general knowledge of the fundamentals and working knowledge of each specialty area. Tests also had to be developed for the general body of knowledge. Ultimately, the areas of specialty will result in a more technically proficient staff.

Table 2 lists the specialty areas for the Field Specialist and Plant Specialist positions.

Managing the Change

Change is one of the biggest challenges faced in this process. The implementation of a skill-based model for advancement affects utility staff at all levels and multiple business units. From human resources, to the water division, to the water reclamation division, the paradigm for how employees are evaluated and promoted changed.

As with most major changes, planning and facilitation are key elements in the overall success. Never does a change happen successfully without these elements.

This change did not come without considerable effort to engage the employees who are affected most by the program. A series of meetings was held with supervisors and representatives of the plant and field specialists. During these meetings, the employees were engaged to identify and address critical success factors. They contributed and are credited to a large degree with the success of this effort to date.

Among the items identified by the employees were:

- ◆ Fair and equitable treatment of all OCU plant and field specialists with regard to training and advancement opportunities.
- ◆ Availability of training resources to support this multi-skilled approach.
- ◆ Expanding opportunities for career advancement.
- ◆ Recognizing employees who take the initiative to increase their capabilities.
- ◆ Creating opportunities for employees to learn new skills and take on new challenges and responsibilities.
- ◆ Providing opportunities for employees to contribute to the overall success of the organization and add to their personal job satisfaction.
- ◆ Developing skills that make the employee more valuable, employable and mobile.

Rollout Results

The testing program was initially rolled out in March of 2004. Tests were offered quarterly in April, July, and November. OCU

Table 2
Specialty Areas for Plant and Field Specialists

Field Specialist	Plant Specialist
Equipment Operation	Treatment Process Control
Computer Skills	Computer Skills
Piping Construction	SCADA/DCS Controls
Video/Sealing of Collection System	Mechanical Maintenance
Pump Station O&M	Biosolids Processing and Management
Service Install/Meter Maintenance	
Piping O&M	

employees have continued opportunities to take these tests. Orange County's human resources department provides ongoing dates for employees to take or re-take tests. The tests are intended to measure general knowledge in each of the areas (as listed in Table 2) for plant and field specialists.

To date, approximately 70 percent* of those taking the general knowledge tests have scored passing marks, making them eligible to test their proficiency in one or more of the skill areas. The skill tests have proven more challenging with about a 30 percent* passing rate.

Next Steps

Implementation continues. OCU's senior plant and field staff play a key role in the further development of the program. Their expertise and familiarity with Orange County's plants and conveyance systems, as well as internal procedures, will be integrated into this program for the benefit of current and future employees.

The program components currently under development include:

- ◆ Updating of policies and procedures associated with training and development.
- ◆ A program handbook to help guide program users through use and administration of the program.
- ◆ A list of available in-house and external resources to assist employees in skills and proficiency development training.
- ◆ Standard operating procedures (SOP) for the specialty area tasks.
- ◆ Hands-on proficiency test requirements and tests.

Standard operating procedures, general knowledge and specialty tests, training, and hands-on skills tests are subjected to continuous review and improvement as part of this program for plant and field specialists.

Migrating from an informal to a formal structured environment for training and measurement of skills and proficiency is challenging. Although OCU may provide some training necessary for specialty areas and specific job assignments, employees must also study on their own to sharpen their general knowledge and job skills. A more effective program will emerge through these combined efforts.

As the program matures, OCU employees will have the opportunity to progress through three levels, ultimately to level 3. Future training and measurement of competence is planned for employees who wish to advance into supervisory positions. OCU is striving to provide excellent career opportunities for motivated individuals.

* Provided by Tom Klus, Orange County Human Resources 