

Survey of Processes, Programs and Investments Required for Implementation of Effective Technical Training and Staff Development Programs

Purpose of the Survey

One of the primary challenges of the water/wastewater industry at this time is to provide the staff development and technical training programs needed by staff in order for them to perform quality work. The purpose of this survey is to document the processes that are being used by water/wastewater utilities that are doing outstanding work in this area, as well as the investments they are making in order to develop quality programs and products. These findings will be published in a BAYWORK report, and posted to the BAYWORK website, for the benefit of the water/wastewater industry.

Name:	Stuart Karasik, Ph.D.
Agency:	City of San Diego, Public Utilities Department
Position:	Training Program Manager
Email:	SKarasik@SanDiego.gov
Date:	September 5, 2012
Phone:	619-668-2093

1. Please provide the following information about your utility:

a. *Please check all functions provided by your utility.*

Water	Wastewater	Power	Stormwater/ Floodwater
X	X		

b. How many staff members are employed by your utility?

1500

- c. Please describe how different types of training/staff development are handled in your organization, in terms of roles and responsibilities (with an organization chart to help illustrate, if possible). All training and training related activities in the Public Utilities Department are managed by or processed through the Training Section. See Department Instruction 10.10 (D.I. 10.10 attached).

 - d. If your utility has access to any communication technology that would allow for remote participation by SFPUC staff in this site visit (e.g., teleconferencing, videoconferencing, webinar, or skype), please describe. Teleconferencing
2. Please describe how you prioritize the projects you work on in regards to documentation, staff development, and technical training.
- a. Who participates? Training Section Staff, Subject Matter Expert, Manager and supervisors from division or area requesting the training.

 - b. What forms, survey, analysis, workshop, documentation, etc. are used to support the prioritization process? Whatever data used to identify the need. May be one or many of the ones noted.

 - c. What criteria are used as a basis for prioritization of specific tasks or processes? (Check all that apply)

Employee Safety

Regulatory Compliance

High Volume

High Consequence of Failure

Other (please explain): Department or city need.

3. What demonstrated knowledge, skills and abilities do you look for when hiring new employees to do instructional design, development and delivery? Our field employees (Water Operations and System Operations (non-Operators), Wastewater Collection, Treatment and Disposal (non-Operators) are hired as entry level employees. KSA's are developed by the Personnel Department.
4. What organizational rewards (e.g., job advancement opportunities) if any are provided to staff who receive technical and/or staff development training? Promotional Opportunities, OCA Opportunites.
5. What type of culture change do you believe are necessary in order for training and staff development programs to support successful succession management? In your opinion, has your organization made strides toward implementing such changes, and if so, how? If your organization collects data which relates to advancement in this area, which data do you collect, and how do you measure your advancement? Inclusion of the Training Section in the development and implementation of the Department's succession plan and planning process. My Department has made significant strides in this direction.
6. Have you incorporated regulatory compliance procedures and documentation into your operating and maintenance work order system? Our Water Branch and Wastewater EMTS Divisor are ISO 14001 Certified, thus requiring significant documentation.

7. What different formats for documentation, staff development, and training materials have you considered and used in your training programs? What have you found to be some of the pros and cons of different approaches?

Material	Considered <i>(check all that apply)</i>	Used <i>(check all that apply)</i>	Pros	Cons
Written SOPs	X	X	Complete documentation	Inaccessible at time to field employees.
Video SOPs	X		Good examples	Time and cost of development above and beyond that of written.
Online training	X	X	Ease of completion, time saving for employees	Not all employees have access to pc's.
Video	X	X	Good documentation of procedures	High cost of development and maintenance
Interactive	X	X	Excellent for employee engagement	
Tutorial	X			
Avatar				
Materials to be used in a classroom setting				
PowerPoint	X	X		
Student guides	X	X		
Video	X	X		
Other (Please Explain)	X	X		

Interactive				
Simulations using computer technology	X			
Field guides	X	X		
Scenario based training	X	X	Excellent training methodology for skills based courses	
Field Demonstrations	X	X	Excellent training methodology for skills based courses	
Webinars				
Skype				
Podcasts				
Videoconferencing				
Mentoring	X	X		
Other (explain):				

8. Please provide information for any training program or product produced in each applicable category where documentation/training materials have been produced.

Material	Sample product or program Fall Classic, 2012
Written SOPs	Training curricula based on written SOP's.

Video SOPs	
Online training	
Video	
Interactive	Quiz show and other applications that encourage student/instructor interaction.
Tutorial	
Avatar	
Materials to be used in a classroom setting	
PowerPoint	All courses use PowerPoint
Student Guides	Student guides produced for each session
Video	
Other (Please Explain)	
Simulations using computer technology	
Field guides	

Scenario based training	Utilized as a part of individual courses
Field Demonstrations	Utilized as a part of individual courses
Webinars	
Skype	
Podcasts	
Videoconferencing	
Mentoring	
Other:	

Training/Staff Development Project Worksheet

Topic/purpose of training	Annual mandatory refresher training, in addition to training on specific topics requested by individual divisions, branches.
Name or Title of Training Product(s) or Programs Produced	Fall Classic, 2012
Type of Products/Programs Produced	Training Program
Date(s) Produced	Annually in the fall of each year.

For this product or set of products or programs, please describe the following (if it is feasible to provide a flowchart or time line, this would be extremely helpful).

1. The process used to create it (them): Planning, development, presentation, evaluation continuum.

2. Professional services and/or contractual costs: No outside costs incurred.

3. Estimated staff time (by job category): One trainer is responsible for the development and implantation of Fall Classic and Spring Training, in addition to other job duties.

4. What issues did you run into that affected the amount of time it took to develop the product(s) or program(s), such as lack of specific skill sets, time allowed away from job to participate, etc.? Non productive time and the wide range of students attending the training were the major issues, but these have been resolved.

5. Any equipment and supplies that were required (including hardware/software): Equipment required is dependent on the topic taught.

6. Incentives used to encourage staff to develop staff training material: Training Staff develop the materials. The SME's support the trainers with the only incentive being an invitation to the Trainer Recognition event at the end of the year.

7. Tracking system used to track costs associated with development of training tools: Training Section budget.

8. Support required for implementation of the training tool (e.g., providing equipment in the field to provide staff access to information, or change in work schedules to allow training time). No additional support required, systems in place to support this and other Training Programs.

9. What have you done to ensure that training products/programs are used? (Examples would be providing access to field staff through mobile computers, requiring supervisors to track staff use of training materials and verification of knowledge gained, tracking use through a Learning Management System, and scheduling formal training sessions using materials.) Follow up with supervisors and managers after program completion.

How do you evaluate the success of your training product(s) or program? Employee satisfaction, demonstration of Learning Outcomes, specific data related to individual programs.

10. Lessons Learned: many...