



COMPETENCY STANDARDS GUIDE BOOK

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How To: SFPUC Competency Standards Guide Book

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Competency Standards Guide Book for WWE
San Francisco Public Utilities Commission



1. Background Information

1.1 Drivers for the Competency Standards

Several principle factors drove the SFPUC to develop a competency standard program. Examples include:

- The risk of regulatory violations if employee performance is inadequate and quality standards are not met.
- The demographics of the SFPUC employees are such that over 40% of current staff are eligible for retirement in the next few years. A significant number of pending retirees carry the most valuable institutional knowledge; the time is now to capture their knowledge and document it as part of the competency standards program.
- Ever-increasing budget limitations require high efficiency among employees; consistency of performance across crews and shifts and among members of different work groups supports improved efficiency.

1.2 Definition of Competency Standards

The initial phase of the SFPUC competency standard program is a qualification system where certification of a minimum level of competency is required prior to qualifying to perform specific duties. The competency standards do not duplicate the process to attain other state or local certifications, but instead delineate the skills beyond those generic certifications that are specific to the SFPUC's functions. This competency standard program is a compilation of the minimum knowledge, skills and abilities (KSAs) that an individual must demonstrate in order to successfully perform in their role.

Ultimately, competency standards will be developed across multiple tiers of the SFPUC as illustrated in Figure 1. Core competencies at Level 1 are common to all positions within the organization and include such characteristics as respect and teamwork. Level 2 competencies recognize common KSAs for all staff within a specific enterprise or bureau. For example, competency in customer service would apply to the Bureau of Business Services. KSAs for each classification series are the next tier of specificity at level 3 and recognize that a combination of technical and interpersonal competencies are required for each employee of the SFPUC. Technical skills for managers within the Bureau of Business Services may include budget administration, while interpersonal skills for those employees might include conflict management. Such KSAs are not unique to this particular bureau and may pertain to managers in other bureaus and enterprises. Occupation-specific competencies at Level 4 identify the KSAs for all staff within a specific job classification, such as Stationary Engineers. An example of a competency for these staff may include the ability to complete a written work order. Level 5 competency standards are position-specific and pertain to KSAs required for an employee to perform a specific task without direct supervision. In the case of a stationary engineer at the SFPUC's Southeast Treatment Plant, a pertinent competency may be knowledge and understanding of the effluent quality requirements as specified in the NPDES permit for the facility. As staff advance from entry level through management they are expected to demonstrate competencies in different areas, showing progressively more experience in leadership and supervisory skills as they move from technical to management positions. It is important

to note that as staff progress from strictly technical roles to leadership and managerial roles, they are expected to retain basic knowledge of the technical aspects of the work. Their managerial skills are in addition to those technical skills and not a substitution for them. In this manner, for example, a senior stationary engineer at a treatment plant would be capable of not only managing a team of apprentices and journeymen, but could also step in and perform a specific function should the journeyman not be present when a technical issue arose that requires immediate attention.

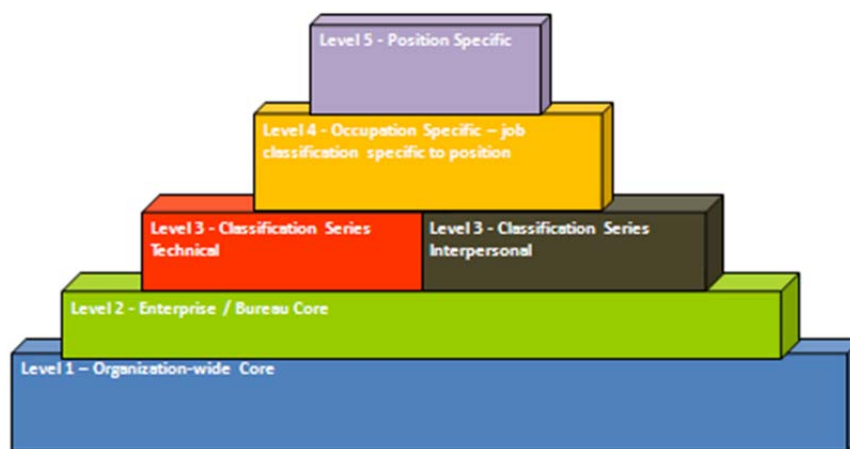


Figure 1: SFPUC Competency Model

2. The Process: Competency Standard Development

2.1 Steps for Development

Start with Levels 4 and 5 in Figure 1; at this level the employees engaged in developing the competencies are typically division managers or treatment plant superintendents. Development of the competencies for Levels 1 through 3 will follow and tend to fall out as common, fundamental features among the higher level competencies. A focus on Levels 4 and 5 allows the timely capture of information about KSAs from subject matter experts, many of whom are nearing retirement. Complete Levels 4 and 5, as outlined below. In the process, track common, overarching characteristics and values noted by staff and capture them in levels 1, 2 and 3. Present Levels 1 through 3 to senior management for review and comment. Ask about what other competencies are important for the organization that are not yet listed and add them to compile the final, accepted competencies.

Level 4 Competency Model: The Level 4 competency model is a set of KSAs for each job classification. The series of steps followed to populate Level 4 competencies is summarized as follows:

1. **Interview:** Conduct one-on-one interviews with subject matter experts for each job classification. The purpose of the interviews is to identify the KSAs required for successful performance of that classification.
2. **Job Shadow:** Job shadowing follows the interviews to validate the information gathered in the interviews and fill any gaps identified.
3. **Survey:** Develop a survey based on information gathered in the interviews and job shadowing activities. The surveys allow data collection from a wider group of staff in that job classification.
4. **Validate Data:** Validate the competency model for that job classification using survey data collected.

Level 5 Competency Model: The competency model for Level 5, the position-specific competencies, builds upon the competencies of the entire classification of employees developed for Level 4. Level 5 is specific to a particular position in the organization and links to a job model for each role. Each competency model should also link to appropriate Standard Operating Procedures (SOPs) for each function addressed in the model to assure consistency in setting the criteria for performance. The Level 5 competency model is captured via a collection of written, field (if applicable) and oral assessments that determine an employee's ability to perform a specific function without direct supervision. The steps to develop these competencies include the following:

1. **Function selection** - Select a function by risk prioritization and identify a lead for the competency standard development.
2. **Knowledge gap analysis** - Review available documentation and industry best practices regarding the function and identify knowledge gaps.
3. **Knowledge capture and standard setting** - Fill in the knowledge gaps and confirm the preferred standard of performance:
 - a. Confer with the supervisor of the group to obtain the names of the subject matter experts (SMEs) for the position. For positions at a treatment plant, the appropriate supervisor is typically the plant superintendent.
 - b. Conduct a kick off meeting with 2 to 4 SME's for the function. Explain the objectives and next steps for development of the competency standard.
 - c. Advise the SME's of their role in the hands-on development of the competency standard. Arrange for their time to assist with the program.
 - d. Meet with the selected SMEs one-on-one to review existing documentation and industry best practice and to collect key points
4. **Assessment development** - Prepare questions and standard answers for the written, field (if applicable) and oral assessments that comprise the competency standard.

5. **Competency Standards vetting** - Vet the draft competency standard (questions and answers) with division management. In the case of a position at a treatment plant, the appropriate reviewer is often the plant superintendent. Revise the draft document as appropriate.
6. **Beta testing of Competency Standards** - Conduct a trial run of the competency standard with a qualified employee or set of employees selected by the division leaders. Revise competency standard as appropriate.
7. **Management review and approval** - Submit the revised competency standard to division management for approval.

2.2 Knowledge Gap Analysis

The initial steps in the process of developing Level 4 and Level 5 competency standards encompass a review of existing documentation. Job descriptions for each classification should be reviewed in preparation for Level 4 interviews. Standard operating procedures (SOPs), O&M manuals, policies and procedures, and other documentation that addresses performance requirements should be reviewed in development of the Level 5 effort. Knowledge gaps may be revealed between written documentation and information gathered from staff. Such gaps should be noted and, if the benefits outweigh the costs to fill them, it is recommended the documentation be appropriately updated.

2.3 Knowledge Capture - Tapping Subject Matter Experts

Key SMEs should be tapped to develop the Level 4 and Level 5 competencies. A number of steps can be taken to capture the input of these SMEs, including one-on-one interviews and documentation of their input while shadowing them from the start to the end of the process. Using this approach yields information rich with detail as the SMEs are allowed to simply share their knowledge of the process while in their routine environment. The various idiosyncrasies of a process that emerge during job shadowing will trigger contextual knowledge based on decades of experience. Equally rich, robust knowledge is almost impossible to capture by handing someone a blank piece of paper and asking them to write down what they know. A 2-hour initial interview followed by a 4 to 8 hour job shadowing typically allows capture of the most significant aspects of a process. However, this knowledge capture phase working with the SMEs could take several days or weeks depending on the complexity of the task and the SME's availability over time. Development of a questionnaire for use by those completing the interviews and job shadows is a good means of collecting consistent information. The questionnaire developed for the collection of information from SFPUC stationary engineers is provided in the Appendix.

2.4 Level 5 Assessment Development - Standard Questions/Answers

The Level 5 competencies are captured in the form of standard questions and answers about a specific task for which the employee is responsible. Minimum levels of competency are defined as those that

allow the employee to perform a function without direct supervision. These questions may be based on four categories:

- Fundamental knowledge of the function
- Sub-processes that comprise the function
- Tasks to perform on a routine basis
- Abnormal situations

Ensure draft documents are reviewed by a seasoned staff member, with modifications made to incorporate review comments. Appropriate senior managers involved in the process need only review final drafts.

Competency standards for field operations staff should address such activities as process start up and shut down under a range of conditions such as dry weather, wet weather, and power failure. The field assessment forms the backbone of the certification process, verifying that operators are able to satisfactorily perform a number of mandatory tasks and work through troubleshooting exercises.

Written assessments should be designed as a scenario to evaluate the written skills required by the employee in his/her normal duties. For example, a question may require a treatment plant operator to evaluate a situation in which a piece of equipment is not working correctly and prepare an appropriate work order for repairs.

The last step in the Level 5 assessment is for the employee to appear in front of an oral board to confirm that he/she clearly understands their role and is truly competent under routine and emergency situations. The oral board members present an emergency or other non-routine scenario to the employee and ask them to describe the appropriate action to take. Follow up questions can be posed by the members of the oral board to ensure the employee's knowledge is sufficiently comprehensive for his/her position. Formal guidelines by which the oral board works should be developed and agreed upon before these oral interviews take place.

The employee must earn a prescribed score on each assessment (field, written, and oral) to gain certification to perform a specific function. Ensure training is provided to equip staff to know proper procedures. Failure to pass an assessment is an indication that additional training is required for that employee. Certification of each function is valid for three years.

2.5 Level 5 Core Team – Roles and Responsibilities for Development

A core team of staff within each division should be dedicated to development of the Level 5 competency standards.

3. Level 5 Employee Certification

Following development of the competency standards for a specific function, the employee certification process can begin. It is recommended the certification process begin with entry-level staff.

3.1 Roles and Responsibilities for the Certification Process

Assign specific roles for various staff responsible for implementation of the certification process. The various roles to consider include the following:

- Senior Sponsor for the program. This may be the division manager or the manager of the enterprise.
- Oversight of program implementation. It is recommended this role be filled at a treatment plant by the plant superintendent.
- Supervisors – those who informally evaluate staff skills and recommend staff for formal assessment. These individuals are the direct supervisors of the staff to be assessed.
- Trainers – those individuals identified by the division manager as having the competencies to successfully perform the functions and who also have the talent to train others.
- Qualifiers – those who develop and administer the formal competency standards qualification process. Qualifiers should be identified by the division manager as individuals who have demonstrated a thorough understanding of the functions that are the subject of the written, field and oral assessments. Qualifiers should be vetted by the same process as those they will qualify. Where more than one person is tapped as a Qualifier for a specific competency, it is recommended those individuals work together initially to ensure they are consistent in the application of the written, field and oral assessments.

3.2 Assessment Process for Field Staff

The following process can be applied to certify staff in field positions:

1. Training
2. Selection of staff for assessment
3. Written and field assessments
4. Oral board
5. Re-certification every 3 years

4. Competency Standard Implementation

Implementing a new process is a change management effort and should follow a thoughtful process to engage staff to maximize the probability of success with the change. This is presented as an example.

1. Roll out to division supervisory staff
2. Roll out to staff
3. Conduct Assessments starting with mid-level staff
4. Review and revise Competency Standards
5. Update documentation such as manuals, SOPs and training materials

Tracking the work in a Learning Management System or spreadsheet is important in implementing the competency standard process. This is especially valuable if staff is expected to gain certification of their competency across multiple functions.

Finally, consistent with the best change management practices, reinforcement and reward for change is important. A “leader board” or other public acknowledgement of those employees who demonstrate their ability to pass the written, field and oral assessments is recommended as one way to recognize the accomplishment.

5. Appendix

Sample Questionnaire for Collection of Information from SFPUC Stationary Engineers

One-on-One Interview Questions SFPUC Competency Model Development Occupation Specific Competencies – Level 4

Full Name: _____	Start Date at SFPUC: _____
Position Title: _____	Phone/Email: _____
Functional Job Title: _____	Supervisor's Name: _____
Interviewer's Name: _____	Division: _____
_____	Date of Interview: _____

What are all the tasks you perform as part of your position? *(Note to Interviewer: After listing the tasks, ask the interviewee all the task-specific questions shown on the last page and fill out one sheet for each task.)*

Now, prioritize your tasks in order of importance. *(Note to Interviewer: Rank the tasks in the list above after completing the task-specific sheets with the interviewee.)*

What are the primary challenges your position faces?

- How do you go about dealing with this challenge?

- What do you do if you have not been able to resolve this challenge?

- How do you communicate these challenges to others?

- How do you document the challenges you encounter and the steps you take to make adjustments?

- What are the skills, knowledge, and characteristics that need to be developed to meet that challenge?

What makes someone in your position more or less successful at doing their job well? Focus your answer on how an individual's behavior or response to challenges impacts their success on the job.

- What does your supervisor expect from you?

- How would you know if you did something incorrectly in your job?

What are your responsibilities with regard to workplace and safety requirements?

- In what manner are you involved with the workplace and safety requirement responsibilities of others?

How do you feel the completion of your specific job impacts the larger goals and responsibilities of SFPUC?

How do you currently receive communication about SFPUC changes, events, management, etc.?

- How would you most like to receive communication about SFPUC?

Additional Notes and Comments:

TASK-SPECIFIC QUESTIONS

One-on-One Interview Questions
SFPUC Competency Model Development

Full Name: _____

Position Title: _____

Name a task that you perform as part of your position.

Describe this task – what do you do?

How long does it take to perform and/or complete this task?

How often do you have to perform this task (hourly, daily, weekly, etc.)?

What skills, abilities, and/or knowledge are required to complete this task?

Describe each of these skills and/or knowledge areas.

Who do you work with and/or supervise to complete this task?

When would you say you completed this task successfully?

Is this task captured in a SOP or other documentation? If so, where is this documentation located and accessed?
