

City of San José
CLASS SPECIFICATION

TITLE: SANITARY ENGINEER (5232)
SANITARY ENGINEER (P/T) (5231)

| DEPARTMENT | ACCOUNTABLE TO | FLSA STATUS |
|--|-----------------------|--------------------|
| Environmental Services Dept. Department of Transportation | Varies | Exempt |

CLASS SUMMARY

Performs a variety of professional sanitary engineering assignments of moderate difficulty at the Environmental Services Water Pollution Control Plant and/or performs assignments related to other sanitary engineering programs. Performs related work as required.

DISTINGUISHING CHARACTERISTICS

This is a single level classification that is the first level in environmental engineering. Other levels in environmental engineering classifications are included in the generic Engineering series (i.e., Associate Engineer, Sr. Engineer). This class differs from the next higher class of Associate Engineer in that incumbents in the latter class are responsible for complete engineering projects and perform work of considerable difficulty under direction in addition to managing subordinate staff.

QUALIFICATIONS

(These qualifications are typically required. An equivalent combination of education, experience, knowledge, skills, and abilities sufficient to satisfactorily perform the duties of the job may be substituted.)

Minimum Qualifications

Education and Experience

Completion of a Bachelor's degree from an accredited college or university in an engineering science or environmental engineering, and one (1) year of professional sanitary or closely related engineering experience.

Possession of a valid Engineer-in-Training Certificate or a valid Professional Engineer Certificate issued by the State of California, or Master's reciprocal states, may be substituted for the required education. A degree with specialty in sanitary or environmental engineering may be substituted for the required experience.

Required Licensing (such as driver's license, certifications, etc.)

None

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Other Qualifications

(Incumbents may be required to have different combinations of the listed qualifications, or more specific job-related qualifications depending on the position.)

Basic Knowledge, Skills and Abilities

(Needed at entry into the job in order to perform the essential duties.)

- Knowledge of sanitary engineering principles and practices.
- Knowledge of bacteriological, chemical, biological, and physical tests applied to wastewater.
- Knowledge of wastewater treatment methods and equipment, engineering mathematics and hydraulic principles.
- Knowledge of State and local rules and standards governing the operation of a wastewater treatment plant.
- Knowledge of the applications of computer technology.
- Knowledge of the fundamentals of engineering research and accepted research procedures.
- Ability to apply engineering principles to the solution of sanitary engineering problems and to perform engineering studies and make evaluations.
- Ability to perform a variety of routine tests on wastewater and to interpret test data.
- Ability to deal effectively with the public and with other employees.
- Ability to analyze data, prepare and interpret maps, diagrams, charts and drawings, and write reports.

Desirable Qualifications

(Knowledge, skills and abilities; licenses, certificates, education, experience that is more position specific and/or likely to contribute to more successful job performance.)

- Knowledge of the practices, policies and procedures of wastewater treatment plants and their emergency procedures.
- Knowledge of changing regulations, standards, and techniques in the field of wastewater engineering and of new technology, methods, and equipment.
- Ability to direct the work of others.
- Ability to develop, prepare, and utilize a variety of computer programs for the analysis and solution of plant operations problems.
- Ability to write clear and concise technical reports.

| DUTY NO. | <u>TYPICAL CLASS ESSENTIAL DUTIES:</u> (These duties and estimated frequency are a representative sample; position assignments may vary depending on the business needs of the department.) Duties may include, but are not limited to, the following: | *FRE-QUENCY |
|-----------------|---|--------------------|
| 1. | Evaluates unit operations and processes for wastewater treatment efficiency, evaluates and recommends innovative process modifications. | Continuous |
| 2. | Performs design of treatment facilities including feasibility studies, construction plans and specifications, and cost estimates. | Continuous |

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| DUTY NO. | TYPICAL CLASS ESSENTIAL DUTIES: (These duties and estimated frequency are a representative sample; position assignments may vary depending on the business needs of the department.) Duties may include, but are not limited to, the following: | *FREQUENCY |
|-----------------|--|-------------------|
| 3. | Provides technical assistance to Plant Operations on biosolids management. | Continuous |
| 4. | Provides engineering and technical assistance in the development and delivery of a variety of programs. | Frequent |
| 5. | Performs a variety of sanitary engineering computations and analyses for wastewater treatment and its characteristics; prepares related reports. | Frequent |
| 6. | Performs research projects dealing with all aspects related to a large wastewater treatment plant. | Occasional |
| 7. | Manages consultant contracts for technical support of Plant operations. | Occasional |
| 8. | Remains apprised of new wastewater treatment methods and equipment and evaluates their potential application to plant operations. | As Required |
| 9. | Keeps abreast of changing regulations, standards, and techniques. | As Required |
| 10. | Reviews, prepares, or directs the preparation of records of treatment plant operations. | As Required |
| 11. | Compiles data and reports of section operations (such as monthly and annual reports). | As Required |
| 12. | Conducts tour groups through the wastewater treatment plant and explains operations, and processes control related subjects. | As Required |
| 13. | Participates in the development and preparation of training material for Plant operating personnel and conducts training as needed. | As Required |
| 14. | May direct or supervise technical support and other lower level employees to include: prioritizing and assigning work; conducting performance evaluations; ensuring staff are trained; and, making hiring, termination, and disciplinary recommendations and any other recommendations related to the change in status of employees. | As Required |
| 15. | Performs other duties of a similar nature or level. | As Required |

*Frequency defined as %, (totaling 100%) *or* “Continuous” (daily or approximately 20%+), “Frequent”(weekly or approximately 15%+), “Occasional”(monthly or approximately 10%+), “As Required”(Intermittent or 5% or less)

CLASSIFICATION HISTORY: Established 7/80, revised 8/82, 7/84, 10/88. Revised 2005, 5232s001. Updated format and deleted 5235 Sanitary Engineer Unregistered (formerly non-exempt) due to consolidation with Sanitary Engineer (5232), exempt.