

City of San José
CLASS SPECIFICATION
WASTEWATER FACILITY SENIOR ENGINEER (3839)

DEPARTMENT	ACCOUNTABLE TO	FLSA STATUS
Environmental Services Dept	Varies	Exempt

CLASS SUMMARY

Under general direction, performs a variety of professional and supervisory assignments by planning, directing and participating in the work of engineering and/or technical personnel reviewing complex professional plans and calculations to ensure compliance with uniform codes, engineering principles, Federal, State and local ordinances and regulations. Leads, participates in, and delivers infrastructure and engineering projects mostly related to wastewater treatment facilities. Performs related work as required.

DISTINGUISHING CHARACTERISTICS

This is the first-level professional classification in a two-class series with an emphasis on wastewater process and treatment expertise. An incumbent in this class reports to a Wastewater Facility Principal Engineer, Division Manager, or Deputy Director and may supervise the work of lower level professional and sub-professional engineering classes. The incumbent in this class may function as a manager of a section of a division and assumes broad responsibility in the fields of planning, implementing and monitoring programs and projects related to wastewater facilities. The Wastewater Facility Senior Engineer class is distinguished from the Senior Engineer class in that the Wastewater Facility Senior Engineer is responsible for management of specialized engineering functions related to wastewater process and treatment, hydraulics, and various mechanical equipment in the wastewater treatment process. This classification is also distinguished from the Wastewater Facility Principal Engineer in that the latter classification represents the Department in implementation of major wastewater treatment projects or programs and has responsibility for final review of projects within their oversight.

QUALIFICATIONS

Minimum Qualifications

Education and Experience

A bachelor's degree from an accredited college or university in Civil, Mechanical, Chemical, or related engineering discipline AND five (5) years of progressively responsible professional engineering experience in the wastewater treatment industry.

Acceptable Substitution

A Master's Degree in Environmental Engineering or other related disciplines can be substituted for one year of professional engineering experience.

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

- Certificate of Registration from State of California in a Civil/Mechanical/Chemical professional engineering discipline.
- Possession of a valid State of California's driver's license.

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 Competencies

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

- Job Expertise - Demonstrates knowledge of and experience with applicable professional/technical

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principles and practices, Citywide and departmental procedures/policies and federal and state rules and regulations. Demonstrates knowledge of and experience with:

- Applicable professional/technical principles as related to wastewater process and treatment practices, open/closed channel hydraulics, hydraulic modeling, pump design, wastewater collection design and design of various wastewater treatment unit process;
 - State and federal regulations for wastewater treatment, biosolids, nutrient removal and recycle water;
 - Fundamentals of engineering research and accepted research procedures; Knowledge of engineering mathematics and hydraulic principles;
 - Ability to apply engineering principles to the solution of sanitary engineering problems and to perform engineering studies and make evaluations.
 - Knowledge of emerging new technologies in wastewater treatment
 - Knowledge of wastewater treatment process modeling
 - Knowledge of various standard laboratory test methods for wastewater treatment process
- **Communication Skills** - Effectively conveys information and expresses thoughts and facts clearly, orally and in writing; demonstrates effective use of listening skills; displays openness to other people's ideas and thoughts, prepare technical reports and council memorandums.
 - **Computer Skills** - Experienced with common business computer applications including but not limited to: MS Outlook, MS Word, MS PowerPoint, MS Access, and MS Excel.
 - **Initiative** – Exhibits resourceful behaviors toward meeting job objectives; anticipates problems, is proactive, and avoids difficulties by planning ahead; displays willingness to assume extra responsibility and challenges; pursues continuing education opportunities that promotes job performance.
 - **Leadership** –Leads by example; demonstrates high ethical standards; remains visible and approachable and interacts with others on a regular basis; promotes a cooperative work environment, allowing others to learn from mistakes; provides motivational supports and direction.
 - **Problem Solving** – Approaches a situation or problem by defining the problem or issue; determines the significance of problem; collects information; uses logic and intuition to arrive at decisions or solutions to problems that achieve the desired outcome.
 - **Planning** - Acts to align own unit's goals with the strategic direction of the organization; Defines tasks and milestones to achieve objectives, while ensuring the optimal use of resources to meet those objectives.
 - **Project Management** - Ensures support for projects and implements agency goals and strategic objectives.
 - **Supervision** - Sets effective long and short-term goals based on a good understanding of management practices; establishes realistic priorities within available resources; provides motivational support; empowers others; assigns decision-making and work functions to others in an appropriate manner to maximize organizational and individual effectiveness.

Additional Competencies and/or Desirable Qualifications

(Competencies, knowledge, skills and abilities that are more position specific and/or likely to contribute to more successful job performance)

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- A master's degree is highly desirable.
- An emphasis in Environmental or Hydraulic Engineering is highly desirable.

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:	FREQUENCY*
1.	Plans, prioritizes, assigns, supervises and evaluates the work of professional, technical, and other engineering and non-engineering staff involved in the performance of field and office engineering functions.	Daily/Several Times
2.	Designs and prepares, and/or supervises the preparation of, and/or reviews and approves plans, specifications, calculations and estimates for building wastewater facility structures and related infrastructure; researches project design specification requirements and project delivery methods; interprets engineering drawings for various wastewater treatment plant unit processes, piping and instrumentation (P&ID) diagrams, and charts.	Daily/Several Times
3.	Coordinates project design and development with outside consultants; prepares requests for proposals for services; establishes conditions of contract approval; assists in the selection of consultants; coordinates and evaluates consultants' work; reviews and recommends acceptance of invoices and processes progress payments; prepares periodic reports.	Daily/Several Times
4.	Understands, promotes and supports the City Service Area's Business Plans and the core services of the Department.	Daily/Several Times
5.	Acts as design and development team leader for wastewater process/treatment projects within assignment; plans, administers, schedules, and oversees design and construction projects or maintenance rehabilitation projects; prepares estimates of time and material costs; coordinates and monitors project progress to ensure timely progress of all phases of the project; provides technical direction, inspection and final acceptance for new construction and maintenance; prepares technical reports and correspondence.	Daily/Several Times
6.	Serves as a technical resource in assigned engineering area; participates in the development of standard engineering specifications, criteria and policy and procedure statements on engineering matters; provides technical advice to field operations, other City departments, and the general public in the interpretation of City ordinances, policies, regulations, and procedures as required.	Daily
7.	Prepares feasibility reports and directs studies and research for new or modified wastewater engineering programs and/or projects; directs efforts to solve wastewater engineering problems.	Daily
8.	Participates in budget preparation and administration; prepares cost estimates for budget recommendations; monitors budget and controls expenditures for projects during the development, design and construction phases.	Weekly
9.	Participates in the selection of staff; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline procedures.	Weekly

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10.	Coordinates wastewater process and treatment capital improvement or maintenance projects with other City departments, engineers, consultants and maintenance personnel; assists other City departments in preparing capital projects; coordinates with other public agencies and utility companies for orderly planning, scheduling, and construction; meets with professional and business groups; confers with elected and appointed officials, citizen groups and the general public.	Weekly
	Develops, prepares, and utilizes a variety of computer programs for the analysis and solution of plant operations problems.	Intermittent
11.	Revises operations and maintenance manuals as required.	Intermittent
12.	Acts in the absence of the Division Manager or Principal Engineer.	Intermittent
13.	Performs other related duties as assigned.	As Required

*Frequency defined as Daily/Several Times, Daily, Weekly, Intermittent, or As Required

PHYSICAL/ENVIRONMENTAL ELEMENTS

The following is a general statement for the classification. Individual positions may have additional or different physical/environmental elements.

Possess ability to:

- Move between/within work areas, including but not limited to sitting, walking, and standing on various surfaces, turning, bending, grasping, and making repetitive hand movements;
- Maintain professional demeanor during interactions with staff, customers, and the public.

When assigned to an office environment, possess ability to:

- Operate, access, enter, and retrieve data using standard office equipment, including but not limited to a computer or tablet;
- Read printed materials and a computer screen;
- Communicate in person and over the telephone;
- Be exposed to moderate noise levels and controlled temperature conditions.

When assigned to field inspection, possess ability to:

- Work in and inspect changing site conditions and work in progress;
- Perform light to medium physical work, including climbing/descending ladders and stairs;
- Operate a motor vehicle and visit various City sites;
- Be exposed to unpredictable working conditions including but not limited to loud noise levels, inclement weather conditions, road hazards, vibration, confined workspaces, toxic or caustic chemicals, hazardous physical substances, fumes, odors, gases, dust, and air contaminants;
- Lift, carry, push, and pull materials and objects averaging a weight of 40 pounds, or heavier weights, in all cases with the use of proper equipment.

CLASSIFICATION HISTORY *Created 02/2023; s000*