

City of San José
CLASS SPECIFICATION

Title: Wastewater Facility Principal Engineer (3838)

DEPARTMENT	ACCOUNTABLE TO	FLSA STATUS
Environmental Services Dept	Deputy Director	Exempt

CLASS SUMMARY

Plans, organizes, coordinates and directs the activities for the implementation of multiple large-scale engineering, architectural, construction, or other related technical projects or programs, or acts as a high level technical advisor, specific to wastewater treatment. Supervises professional and sub-professional engineering staff. Performs related work as required.

DISTINGUISHING CHARACTERISTICS

This is the second-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 Deputy Director and acts as a high level technical advisor on large-scale projects or programs, or directing the activities for the implementation of such projects and programs, and are generally assigned to positions as portfolio managers. This class is distinguished from the lower-level Wastewater Facility Senior Engineer, which typically functions as a manager of a section of a division as project managers rather than the manager of multiple large-scale projects or programs and does not act as a high level technical advisor or director on major projects and programs. The Wastewater Facility Principal Engineer represents the Department in implementation of major wastewater treatment projects or programs and has responsibility for final review of projects within their oversight. The Wastewater Facility Principal Engineer class is distinguished from the Principal Engineer/Architect class in that the Wastewater Facility Principal 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 classification of Division Manager, in that the latter classification has full management responsibility for a Division, and is not assigned as a project or program manager with technical expertise in one given field.

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 eight (8) years of progressively responsible professional engineering experience in the wastewater treatment industry, including at least three (3) years of experience at a level equivalent to Wastewater Facility Senior Engineer.

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.)

- Possession of a Certificate of Registration in the required discipline.
- Possession of a valid State of California's driver 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.)

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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 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;
 - 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 and displays openness to other people's ideas and thoughts.
- Computer Skills - Experienced with common business computer applications including but not limited to: MS Outlook, MS Word, MS PowerPoint, MS Access, and MS Excel.
- 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.
- Decision Making – Identifies and understands issues, problems, and opportunities; uses effective approaches for choosing a course of action or developing appropriate solutions.
- 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.
- 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.
- Political Skill – In taking action, demonstrates an understanding and consideration of how it will impact stakeholders and affected areas in the organization.
- 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.

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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.)

A master's degree is highly desirable.

An emphasis in Environmental or Hydraulic Engineering is highly desirable.

Knowledge of:

- Design and construction document development.

Ability to:

- Plan, assign and direct the preparation of complex plans, reports and recommendations.
- Prepare concise cost-estimates and monitor budgets.
- Review and evaluate submitted plans and designs.

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.	Oversees engineering technical research; directs the collection of field data; reviews, analyzes, and prepares recommendations to Senior and Executive staff regarding project and/or program scope or objectives. 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
2.	Consults with Senior and Executive staff, contractors, other departments, and consultants to plan, design and construct major engineering technical projects. Acts as the City's expert in a particular discipline (i.e. Structural, Electrical, Mechanical, etc.) as required.	Daily/Several Times
3.	Supervises engineering and other professional and subprofessional project staff engaged in large-scale technical, engineering, or construction projects and/or programs. Supervisory duties 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. May also coordinate and supervise the work of project teams comprised of individuals in a variety of organizations or agencies in order to achieve desired results.	Daily/Several Times

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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*
4.	Makes detailed analyses of proposed projects for the economic benefit and the practical engineering issues. 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
5.	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
6.	Negotiates and administers contracts and agreements with consultants, vendors, agencies and contractors. 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.	Weekly
7.	Directs and coordinates the preparation of cost estimates and project and/or program budgets; monitors budget and controls expenditures for projects during the development, design, and construction phases.	Weekly
8.	Represents the Department on boards and commissions, outside agencies, professional and business groups.	Intermittent
9.	Confers with elected and appointed officials, resident groups and the general public to explain engineering or technical projects and/or programs.	Intermittent
10.	Understands, promotes and supports the City Service Area's Business Plans and the core services of the Department.	Intermittent
11.	Prepares technical reports and correspondence as required.	As Required
12.	Acts in the absence of Deputy Director, as required.	Intermittent
13.	Performs other related work as required.	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.

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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 02/23, Revised 08/24*