

PROCESS ENGINEER

DEFINITION

To plan, organize, direct and coordinate the water and wastewater process engineering activities in the planning, use, design and associated construction management of City treatment plant facilities and related equipment, electrical systems, and infrastructure; to ensure the maintenance, operation and improvements to the City's treatment plants and collection and distribution systems are in compliance with Federal and State requirements; and to provide highly technical process engineering support to higher level management as assigned.

DISTINGUISHING CHARACTERISTICS

The Process Engineer is a specialized management job classification that recognizes positions providing highly specialized and responsible function related to the City's treatment plants. Positions do not require direct supervision of others; however, have greater administrative responsibility and technical expertise in the area of long and short range planning of the City's water and waste water facilities and over general collection and distribution systems. Incumbents serve as the project manager and/or professional engineering lead over specified projects.

The Process Engineer is distinguished from the Principal Engineer in that it requires specialized technical expertise in treatment plants which spans across multiple sections whereas the Principal Engineer acts as a full first-line supervisor planning, organizing and directing professional engineering staff activities of an assigned section.

SUPERVISION RECEIVED AND EXERCISED

Receives administrative direction from higher level management staff.

May exercise direct supervision and/or technical and functional supervision over assigned professional, technical and maintenance personnel.

EXAMPLES OF ESSENTIAL DUTIES: Duties may include, but are not limited to the following:

Evaluate operations and activities of treatment plants, collection and distribution systems and related equipment and infrastructure; plan, develop, and implement various process engineering improvement goals and objectives related to water and wastewater capital improvement projects.

Establish and recommend long-range strategic plans and goals for the water and wastewater utilities, considering use forecasts, long-term consumer rate impact, environmental regulations and coordination with the South Placer Wastewater Authority and other regional partnership agencies.

Design, or oversee the design of, capital improvement projects including water and wastewater facilities and related infrastructure, serving as project manager for select projects and professional process engineering lead over additional projects; collaborate with utility operations and maintenance staff to troubleshoot and resolve complex problems; interpret process and system data to provide engineering recommendations or improvements.

Participate in budget preparation for various divisions of Environmental Utilities in forecasting needs for staffing, equipment, materials, engineering design and construction costs associated with ongoing and improved operations as well as capital improvement projects for water/wastewater facilities and related infrastructure.

Perform and prepare complex engineering studies and reports, or establish contracts for construction projects for improved facility operations; research and procure technologies to improve treatment plant, collection and distribution operations and maintenance.

Prepare and present technical and administrative reports to City Council, commissions, agencies and citizen groups or other organizations as required.

Review construction plans and technical engineering solutions prepared by private contractors related to utility projects to ensure that they are accurate, respond to operational and environmental needs and conform to standards and regulations.

Oversee assigned project contracts from inception to completion to meet needs of Environmental Utilities; review bids and active contracts, compile analytical data to ensure accuracy and track project completion; prepare, write and present project updates for City Council consideration.

Participate in the selection of staff; coordinate staff training; conduct performance evaluations; recommend discipline; implement discipline procedures as directed.

Ensure that staff safety standards are adhered to, safety training is provided and regulatory safety management requirements are achieved.

Represent Environmental Utilities to outside agencies and organizations; participate in community and professional groups and committees; provide professional and technical assistance, as necessary.

Answer questions and provide information to the public; investigate complaints and recommend corrective action as necessary to resolve complaints.

Build and maintain positive working relationships with co-workers, other City employees, external stakeholders and the public, using principles of exceptional customer service.

Perform related duties as assigned.

## MINIMUM QUALIFICATIONS

### Knowledge of:

Principles and practices of professional process engineering related to water and wastewater utility operations, including collection and distribution systems and associated infrastructure.

Methods of preparing designs, plans, specifications, cost estimates, reports and recommendations related to proposed water and wastewater projects.

Contemporary techniques in gathering, evaluating and analyzing complex water/wastewater/distribution/collection system operational performance, compliance and efficiency data for the purpose of supporting policy decision-making and preparing operational and capital improvement budgets.

Principles and practices of municipal utility strategic planning, project planning and rate-setting.

Local, State and Federal laws and regulations pertaining to the Water/Wastewater Utility industry (OSHA, EPA, Title 22, NFPA 70E, City of Roseville NPDES discharge permit) including compliance reporting, permit processing and training requirements and standards for certified Utility staff.

Principles and practices of management, supervision, training and performance evaluation.

Principles and practices of project assessment, management, planning and implementation.

Principles and practices of safety management in high risk working conditions.

City procurement policies and procedures, contract law and negotiations.

Principles and practices of administrative and financial analysis, budget forecasting and monitoring.

Computer software use including word processing, spreadsheet, data base and graphics applications.

Modern office procedures, methods and computer equipment.

Statistical methods and analysis and the use of statistics in reports.

Business correspondence and written report writing.

Policies and procedures of multiple divisions of Environmental Utilities.

### Ability to:

Organize, implement, direct and integrate process engineering activities into the current and future operations of water, wastewater, collections, distribution and recycled water systems and associated construction or process improvement projects.

Plan, prioritize, assign, manage, supervise and review the work of assigned staff, training select staff on the principles of process engineering and their impact upon engineering-dependent projects.

Evaluate operations and activities to recommend improvements and modifications, and perform complex trouble-shooting with operational, preventative maintenance and other staff and contractors to solve problems.

Research new and emerging technology in the treatment and conveyance of water and wastewater, and analyze their potential applicability to City of Roseville and regional partner operations.

Perform complex data analysis to develop process improvements using engineering principals, solutions and recommendations.

Develop and recommend policies and procedures related to assigned activities; develop and monitor associated operational budgets and recommend capital budget expenditures for Water and Wastewater treatment plants and associated infrastructure and other City Departments, as necessary.

Communicate clearly and concisely both orally and in written form, including presentations and reports to City Council and other public agencies and forums.

Independently plan, coordinate and monitor projects, interpret and explain complex rules, regulations and Environmental Utilities policies and procedures.

Establish and maintain effective working relationships with those contacted in the course of work.

On a continuous basis, sit at desk for long periods of time; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation, use telephone and write or use keyboard to communicate through written means; lift or carry weight of 10 pounds or less; visit work sites to assess physical conditions and assess compliance and adherence to work processes.

Experience and Training:

Experience:

Four or more years of increasingly responsible experience in professional civil, mechanical, environmental or chemical engineering, with a focus in process/system engineering for a Water/Wastewater Utility, including at least two years of supervisory, lead or project management responsibility.

Training:

A Bachelor's degree from an accredited college or university preferably with major course work in civil, mechanical, environmental, chemical or process engineering with an emphasis in environmental utilities or a closely related field.

License or Certificate

Possession of a California driver's license by date of appointment.

Possession of a current certificate of registration as a Professional Civil Engineer in California by date of application.

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