

HYDRO ENGINEER I

Definition:

Under the direction of the Power Systems manager, provides field and office engineering work to all activities of the division and performs related work as assigned.

Distinguishing Characteristics:

This is a single position, alternately staffed class in the Power Systems division of the Agency. This position requires that incumbents be able to traverse steep, irregular terrain; crawl through generators and water passage ways; and work safely in close proximity to electrical equipment, rotating equipment, high pressure piping and in high noise level areas and in dams and waterways and work under varying and sometimes adverse weather conditions.

Examples of Duties:

- plan, design, specify construction, reconstruction and improvement projects for hydrogeneration and water collection facilities, prepare detail drawings and cost estimates and write installation instructions;
- provide technical assistance to crews performing the work;
- conduct studies and investigations;
- prepare and administer contracts;
- assist in preparation and administration of the annual budget;
- prepare startup procedures, direct or participate in tests, and evaluate results for acceptance;
- research and evaluate new and replacement equipment;
- analyze the cause of malfunctions in operating equipment and excessive equipment maintenance requirements;
- prepare reports and correspondence;
- follow-up on drawing corrections or as-builts as required;
- gather and exchange information tactfully and effectively with suppliers, consultants, regulatory agencies, and other entities;
- provide technical services to the operation and maintenance staff;
- prepare studies and reports for regulatory agencies;
- prepare RFPs, bid documents and specifications for services and equipment;
- coordinate the development of safety and emergency plans and procedures;
- assist in preparing training programs;
- may be assigned, in emergencies, work necessary for project facility operation and well being.

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Qualifications:

Knowledge of:

- engineering principles and applications related to hydrogeneration and water collection projects and facilities;
- principles of project management;
- safety issues and requirements in construction, electrical generation, dam and water collection facilities;
- engineering and construction estimating practices policies and procedures;
- public entity budgeting;
- maintenance procedures and practices;
- electrical equipment operations;
- water system operation and hydrology;
- scheduling and coordination of materials, workforce and other resources.

Ability to:

- conduct engineering investigations;
- prepare detailed engineering drawings on a variety of construction, reconstruction and improvement projects for hydrogeneration and water collection facilities;
- communicate effectively both orally and in writing;
- establish and maintain effective working relationships with others;
- gather and analyze engineering data and develop effective, efficient solutions;
- materials procurement practices.

Education/Experience:

Sufficient education, training and experience to demonstrate the knowledge, skills and abilities listed above. These would normally be acquired by completion of a Bachelor's degree in civil, mechanical or electrical engineering, and two years of experience in hydroelectric generation and/or water collection facilities or a closely related field.

License/Certificates:

Must possess and maintain a valid California driver's license with an acceptable driving record.