

## **HYDRO ENGINEER II**

### Definition:

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

### Distinguishing Characteristics:

This is a single position class in the Power Systems Division of the Agency. It is distinguished from the Hydro Engineer I in that it requires a greater degree of independence of action and, therefore, a greater consequence of error. Both positions require an engineering degree. 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.

### 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;
- 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.

## **HYDRO ENGINEER II**

### Qualifications:

#### Knowledge of:

- engineering principals 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;
- material 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 four years of experience in hydroelectric generation and/or water collection facilities or a closely related field. Registration as a Professional Engineer is preferred, but not required.

#### License/Certificates:

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