EL DORADO IRRIGATION DISTRICT
Class Specification

CLASS TITLE: Hydrologist

DEFINITION

Under direction, performs highly professional level administrative and analytical work in support of strategies to manage operations of District facilities. Performs analysis of hydrological data, and modeling of hydrologic resources, including rainfall, snowpack, temperature, water quality, and/or demand data to maximize the efficiency of District water resources management activities. Manages special projects and or studies that cross departmental lines in support of long-term planning efforts in order to maximize the District's water rights portfolio while protecting against potential for drought, regulatory mandates, and/or other factors that may limit supply availability. Supports reservoir management efforts to maximize drinking water supplies, hydroelectric generation revenues, and water transfer opportunities.

DISTINGUISHING CHARACTERISTICS

This is a single journey level class focused on hydrological analysis and strategic planning of District facility operations. The Hydrologist is distinguished from the Hydrographer series in that the latter is focused on field data gathering. Incumbents in this class serve as subject matter experts on District-wide water resources planning and management and must perform the full range of duties as assigned including fulfillment of State and Federal consultation and reporting requirements as necessary. Incumbents in this class receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from assigned Director, may exercise technical and functional supervision over assigned technical and administrative support personnel.

EXAMPLES OF ESSENTIAL DUTIES: the duties specified below are representative of the range of duties assigned to this class and are not intended to be an inclusive list.

Develops and operates hydrology and demand projection models and related planning tools utilizing historical operations and hydrologic and meteorological data, participates in the monitoring and collection of data in coordination with District personnel to support water management planning efforts.

Coordinates directly with department managers and supervisors, as well as personnel from Office of General Counsel and Engineering Department and other departments as appropriate, in fulfilling the District's water management.

Reviews and interprets weather forecasts to determine operational effects and recommend diversion and storage facility operations to Operations Department managers and supervisors to maximize efficiency of operations in response to anticipated effects.

Studies, develops, maintains, and regularly disseminates information on critical and or other events to forecast or provide probabilities under specific assumptions, covering a range of meteorological events, and various interventions to improved integration with field operations.

Develop, and update, as appropriate in response to changing conditions, annual facility operations plans in close coordination with department managers and supervisors.

Coordinates and corresponds with appropriate external personnel, including from the California Department of Water Resources, United States Geological Survey, and other local, State and Federal agencies regarding data collaboration.

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Coordinates and works with various District personnel in conducting changes in operational facility configuration, streamflow measurements, snow surveys, water quality analyses, monitoring equipment data downloads, local, state and federal database queries, and other data gathering and analyses efforts to support water management efforts.

Develop and apply shifts to gaging stations rating tables as appropriate in response to changing site conditions.

Oversees District-wide snow course, streamflow measurements and gaging, meteorological, and related data gathering efforts; compiles and analyzes data to support operational recommendations for department managers and supervisors.

Develops hydrological and hydraulic studies, reports and schedules for reservoir releases to maximize drought management planning, hydroelectric generation, and water transfer opportunities while fully exercising the District's water rights portfolio.

Prepares technical reports as directed utilizing analyzed data and submits reports to internal and external stakeholders, including state and federal agencies as directed.

Represents the District before groups or individuals for the purpose of explaining and interpreting technical information.

Prepares and makes presentations to District personnel, the District Board of Directors, the public, and other interested parties as requested by supervisor.

Builds and maintains positive working relationships with co-workers, other District employees and the public using principles of good customer service.

Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

Principles, practices and applications of hydrology, water supply, water demands, weather patterns, meteorological influences, and other related aspects of hydrology. Principles, methods and procedures related to the operation of hydrologic equipment used in measuring rainfall, temperature, water level, stream flow velocity, snow pack volume and density, and other related data. Software, including models, databases, and graphics packages used in the course of water resource planning and management.

Methods and techniques involved in gathering and analyzing data related to water supply availability and utilization, including the use, installation, and maintenance of instruments to gather such information. Meteorological, historical, forecast, and climate data used to interpret and predictive hydrologic response patterns. Computer modeling and simulation as it pertains to practical hydrology. Statistical analysis of hydrologic data. Methods of advanced journey level technical report preparation and presentation. Applicable codes, regulations, and standards related to water resources.

Terminology, methods, practices and techniques used in hydrology studies. Principles and practices of project scheduling and management, including work plans and budgets, District storage and diversion facilities operations, and water rights.

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Skill/ Ability to:

Perform highly advanced professional level hydrologic studies and analyses, including collection and analysis of hydrologic data. Operate and maintain hydrologic, temperature, and meteorological database to support analysis of weather impacts to District operations and facilities; graph and chart data and regularly disseminate such information District-wide to maximize efficiency of District operations.

Develop, implement and manage short-range and long-range hydrology forecasts using a variety of internal and external data sources. Apply hydrologic, water quality, and demand principles and techniques to evaluate and solve difficult water resources challenges. Develop and maintain models and similar planning tools using hydrologic and meteorological data. Operate, maintain, and repair instruments and equipment associated with snow surveys, streamflow measurements, and related data-gathering efforts and assist staff with collection of such data.

Establish and shift stage-discharge curves for streamflow gaging sites. Maintain accurate data and records. Relate hydrology information in a meaningful manner to internal and external stakeholders as appropriate. Read, analyze, and interpret State and Federal laws and regulations, scientific and technical literature, maps, reports and related documents regarding hydrology and associated topics. Prepare clear and concise technical reports for dissemination to internal and/or external stakeholders as appropriate.

Ability to maintain regular and predictable attendance is a condition of employment, subject to applicable medical and disability leave laws. 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 a keyboard to communicate through written means; and lift or carry weight of 20 pounds or less.

Experience and/or Education:

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

Four years of recent experience in hydrology, geology, hydrogeology, engineering, or a closely related field. Public water utility experience is highly desired.

AND

Education:

Bachelor degree from an accredited college or university in hydrology, geology, hydrogeology, engineering, environmental sciences, or a closely related field.

SPECIAL QUALIFICATIONS

License and Certificate:

Possession of, or ability to obtain, a valid California driver's license at the time of appointment. Individuals who do not meet this requirement due to physical disability will be reviewed on a case-by-case basis.

Successful completion of Cal Poly San Luis Obispo Irrigation Training & Research Center Flow Measurements & Canal Operation Course, or similar course, from a recognized training or higher learning institution required within one year of appointment.

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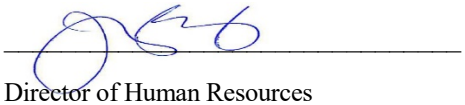
Professional Hydrologist Certification with the American Institute of Hydrologists or similar professional membership desired at time of appointment; certification must be maintained throughout employment. Registration as a geologist in the State of California is desirable.



Director of Human Resources

05/26/2022

Date

Established: 05/26/2022
Revised:
FLSA: Exempt
Unit: Non-Safety