

## **ENGINEERING INSPECTOR I/II**

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

### **DEFINITION**

Under supervision, perform a variety of quality control, compliance, and safety inspection duties for inspections of water, sewer, and recycled water systems to ensure compliance to District's Construction Standards; inspections of industrial users to ensure compliance with the District's Pretreatment/Source Control Program; and inspection to ensure compliance to the District's Cross-Connection Control Program in accordance with Title 17 and 22 of the California Code of Regulations.

### **DISTINGUISHING CHARACTERISTICS**

*This series class specification defines and describes the nature and levels of work performed in the Engineering Inspector job series.*

Engineering Inspector I is the entry level in the Engineering Inspector series. At this level, incumbents learn and perform a limited range of the less complex or specialized work tasks, under closer supervision, with less latitude for independent action. At this level, incumbents shall have general knowledge and proficiency in one or more inspection disciplines (Construction, Industrial Waste, Recycled Water, or Cross-Connection)

Engineering Inspector II is the experienced, journey-level in the Engineering Inspector series. Under general supervision, incumbents perform the full range of assigned duties, while exercising discretion and independent judgment within established guidelines. At this level, incumbents shall be knowledgeable and proficient in two or more of the inspection disciplines (Construction, Industrial Waste, Recycled Water, or Cross-Connection).

### **SUPERVISION RECEIVED AND EXERCISED**

Direct supervision is received from an Associate Engineer or Environmental Services Supervisor: may also receive direction from the Engineering Managers.

Technical and/or functional work direction may be provided from the Lead Engineering Inspector.

### **ESSENTIAL AND MARGINAL FUNCTION STATEMENTS**

*Essential and other important responsibilities and duties may include, but are not limited to, the following. Incumbents at any level in the job series perform the same or similar tasks.*

#### **Essential Functions:**

##### **General**

1. Be familiar with District, local and national codes, standards, ordinances, and regulations.
2. Reads, reviews, analyzes, and evaluates plans and specifications.

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### ***Essential Functions - General (Continued)***

3. Communicates and coordinates construction activities with all project stakeholders including the contractors, developers, city inspectors, utility agencies, and affected property owners throughout the inspection process.
4. Regular attendance at the work site.

### ***Construction Discipline***

1. Perform constructability review by comparing construction documents, standards and site conditions prior to the start of construction.
2. Inspects work quality and materials used at a variety of construction sites within the District service area; verifies contractors are properly licensed and ensures compliance with applicable plans, codes, standards, ordinances, and regulations.
3. Communicates and coordinates construction activities with all project stakeholders including the contractors, developers, city inspectors, utility agencies, and affected property owners throughout the construction process; observes and coordinates with all stakeholders to ensure that safety procedures are followed and proper materials are used throughout the construction process.
4. Conducts pre-construction meetings with developers and contractors.
5. Reports possible safety violations including traffic control, trench shoring, Cal/OSHA and other safety regulations at job sites.
6. Prepares inspector's daily report and periodic progress reports on construction projects and installation work.
7. Maintain accurate and up-to-date as-built drawings to depict current status of projects; records drawings, hydrostatic test data sheets, concrete cylinder test data sheets and various miscellaneous reports as needed.
8. Assists in locating water, sewer and recycled water lines; informs Dig Alert and other entities of facility locations during construction phase.
9. Schedules and coordinates shutdowns of water systems for construction and emergencies.
10. Assist contractors in obtaining District supplied materials through coordination with District warehouse.
11. Supervises and observes hydrostatic pressure testing of newly installed water mains and air testing of newly installed sewer systems to verify proper installation in accordance with approved engineering specifications.
12. Observe disinfection of newly constructed pipeline and obtains water samples at construction sites and tests for chlorine content to ensure work is in accordance with approved engineering specifications.

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### ***Industrial Waste Discipline***

1. Conduct site inspections of sewer user industrial processes including, but not limited to, metal finishing, electrostatic painting, and pharmaceutical manufacturing; collects wastewater discharge samples and sends to laboratory for testing.
2. Identifies and categorizes sewer dischargers by manufacturing process or materials used for applicable federal regulations; evaluates potential to harm a downstream wastewater treatment plant or discharge of pollutants into local rivers.
3. Analyzes laboratory test results, issues notices of violations, and conducts other enforcement activities related to real or potential threats to a sewage treatment plant or water quality.
4. Issues and renews industrial sewer use permits; conducts enforcement actions related to technical or reporting violations of District ordinance or permit requirements; maintains master database records of inspection and permitting activities.
5. Conducts research and compiles analytical data; writes technical compliance reports and provides copies to the Inland Empire Utility Agency as it relates to operation of their wastewater treatment plant; provides information for inclusion in reports to State and Federal monitoring agencies.
6. Conducts plan check reviews to ensure proper design and installation of required pre-treatment equipment by industrial dischargers; makes field inspections of plumbing system upgrades.
7. Conducts a variety of special investigations of sewer odors and illegal discharges; issues citations to industries found to be violating applicable standards.
8. Stays abreast of new trends and innovations in the field of industrial waste and changes to Federal regulations; conducts Internet research and reviews printed literature describing details of industrial manufacturing processes.
9. Prepares a variety of written correspondence to industrial users, which may include policy informational letters, written warnings, notices of violations and other administrative or technical directives.

### ***Cross-Connection / Recycled Water Discipline***

1. Inspects and tests new backflow prevention assemblies installed by contractors or others for compliance with Title 17 and District standards and requirements.
2. Tests and maintains all backflow prevention assemblies belonging to the District or the City of Rancho Cucamonga.
3. Conducts site surveys and/or inspections of customer properties to determine need for backflow prevention; maintains surveillance of District to ensure against unauthorized connections.
4. Performs detailed building and facilities plan checks for compliance with District cross connection program requirements.

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### ***Cross-Connection /Recycled Water Discipline (continued)***

5. Inputs testing and inspection results into computerized data base; generates customer notifications from data base regarding testing and installation of cross connection devices; assists in scheduling of testing as necessary.
6. Maintains detailed records and statistics of work activities; compiles information into reports as necessary.
7. Responds to public inquiries in a courteous manner; provides information within area of assignments; resolves complaints in an efficient and timely manner.
8. Knowledgeable of California State Title 22 regulations in order to implement and enforce compliance.
9. Performs shut down testing of all recycled water facilities in conjunction with the San Bernardino Department of Health to ensure that there no cross connections between the potable domestic system and the recycled water system.
10. Conduct annual site inspections of all recycled water facilities to ensure all sites in the District stay in compliance with the California State Title 22 regulations.
11. Assists in preparation of engineering reports to Division of Drinking Water regarding new recycled water services or conversions from potable water to recycled water.

### **Marginal Functions:**

1. Attends and participates in professional group meetings.
2. Obtains records and information from contractors and developers for use by District auditors upon request.
3. Performs related duties and responsibilities as assigned.

### **KNOWLEDGE, SKILLS AND ABILITIES**

#### **Knowledge of:**

Principles, methods, materials, equipment, and safety hazards of construction projects including water, sewer and recycling.

Principles and practices of construction inspection.

Regulations applicable to confined space entry.

#### ***Knowledge of (continued):***

Basic mathematics including algebra, and geometry.

Principles and methods of business correspondence, report writing, recordkeeping and filing.

English usage, spelling, grammar and punctuation.

Modern office procedures, methods and computer equipment and software.

Electronic data input.

Pertinent Federal, State, and local laws, codes and regulations governing the construction of assigned projects.

Appropriate safety precautions, procedures, practices and regulations.

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### **Knowledge, skills and abilities (continued)**

#### **Ability to:**

- Properly inspect various construction projects and ensure compliance with plans, specifications, codes and regulations.
- Detect and locate faulty materials. Workmanship in construction and determine the stage of construction during which defects can be effectively and efficiently remedied.
- Oversee multiple tasks and assignments in an efficient manner.
- Operate a two-way radio, computer, camera, video equipment, various hand tools and other assigned equipment as required.
- Wear protective apparel, including eye protection, face protection, hearing protection, safety shoes and respirator protection.
- Work in inclement weather and overtime as needed.
- Operate a vehicle observing legal and defensive driving practices.
- Read and interpret engineering and construction drawings.
- Work independently in the absence of direct supervision.
- Maintain accurate records and prepare inspection reports.
- Respond effectively to requests and inquiries from the general public.
- Understand and carry out oral and written instructions.
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Use tact, discretion, and diplomacy in dealing with others including contractors, and property owners.
- Maintain physical condition appropriate to the performance of assigned duties and responsibilities.
- Maintain mental capacity which allows the capability of making sound decisions and demonstrating intellectual capabilities.
- Maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading, writing and operating assigned equipment.
- Hear and respond to traffic and warning noises while on the job site.
- Perform work in accordance with safety regulations, District and Department guidelines.

### **REQUIRED QUALIFICATIONS**

#### **Experience and Training Guidelines**

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

#### **Engineering Inspector I**

##### **Experience:**

One (1) year of engineering inspector experience; or three (3) years of experience in the installation, repair and/or maintenance of pipeline facilities and appurtenances; or three (3) years of field services experience in a water utility; or one (1) year of construction related experience in water/wastewater engineering.

##### **Training/Education:**

Equivalent to the completion of the twelfth grade supplemented by college or vocational/technical training in construction management, water utility construction inspection, or a related field; or supplemented by college level coursework in chemistry, biology, environmental science, or water/wastewater technology; or supplemented by courses dealing in backflow device tester or cross connection control or plumber.

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### Required Qualifications (continued)

#### Certificate:

Possession of all required certifications for one or more of the following discipline is required:

<i>Construction Discipline</i>	Possession of a valid: <ul style="list-style-type: none"><li>- DI Distribution System Operator Certificate issued by the State Water Resources Control Board (SWRCB)</li><li>- Grade I Collection System Maintenance Certificate issued by the California Water Environmental Association (CWEA).</li></ul>
<i>Industrial Waste Discipline</i>	Possession of a valid: <ul style="list-style-type: none"><li>- Grade I Environmental Compliance Inspector Certificate issued by the California Water Environment Association (CWEA).</li></ul>
<i>Cross-Connection/ Recycled Water Discipline</i>	Possession of a valid: <ul style="list-style-type: none"><li>- San Bernardino County Department of Public Health Certified Backflow Prevention Device Tester,</li><li>- DI Distribution System Operator Certificate issued by the State Water Resources Control Board (SWRCB).</li></ul> Possession of, or ability to obtain within one (1) year of appointment: <ul style="list-style-type: none"><li>- valid AWWA Cross-Connection Control Specialist Certificate</li><li>- valid Grade I Collection System Maintenance Certificate issued by the California Water Environmental Association (CWEA).</li></ul>

#### License:

Possession of a valid Class C California driver's license and a satisfactory driving record.

### Engineering Inspector II

#### Experience:

Three (3) years of engineering inspector experience; or five (5) years of experience in the installation, repair and/or maintenance of pipeline facilities and appurtenances; or three (3) years of construction related experience in water/wastewater engineering.

#### Training/Education:

Equivalent to the completion of the twelfth grade supplemented by college or vocational/technical training in construction management, water utility construction inspection, or a related field; or supplemented by college level coursework in chemistry, biology, environmental science, or water/wastewater technology; or supplemented by courses dealing in backflow device tester or cross connection control or plumber.

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### Required Qualifications (continued)

**Certificate:**

Possession of all required certifications for two or more of the following disciplines; OR all required certifications for one of the following disciplines and at least two certifications from the other required certificates category: is required:

<p><i>Construction Discipline</i></p>	<p>Possession of a valid:</p> <ul style="list-style-type: none"> <li>- D2 Distribution System Operator Certificate issued by the State Water Resources Control Board (SWRCB), and</li> <li>- Grade I Collection System Maintenance Certificate issued by the California Water Environmental Association (CWEA).</li> </ul>
<p><i>Industrial Waste Discipline</i></p>	<p>Possession of a valid:</p> <ul style="list-style-type: none"> <li>- Grade 2 Environmental Compliance Inspector Certificate issued by the California Water Environment Association (CWEA).</li> <li>- D1 Distribution System Operator Certificate issued by the State Water Resources Control Board (SWRCB).</li> </ul>
<p><i>Cross-Connection Recycled-Water Discipline</i></p>	<p>Possession of a valid:</p> <ul style="list-style-type: none"> <li>- San Bernardino County Department of Public Health Certified Backflow Prevention Device Tester,</li> <li>- D2 Distribution System Operator Certificate issued by the State Water Resources Control Board (SWRCB).</li> <li>- AWWA - Cross-Connection Control Specialist Certificate</li> <li>- Grade 2, Collection System Maintenance Certificate issued by the California Water Environmental Association (CWEA).</li> </ul>
<p><i>Other required certificates</i></p>	<p><u>Required possession of a valid:</u></p> <ul style="list-style-type: none"> <li>D3 Distribution System Operator Certificate issued by the State Water Resources Control Board (SWRCB)</li> <li>T2 Water Treatment Operator Certificate issued by the State Water Resources Control Board (SWRCB)</li> <li>Concrete Field Testing Technician, Grade I Certification issued by the American Concrete Institute</li> <li>Certified Welding Inspector Certification issued by the American Welding Society</li> <li>Certified Public Infrastructure Inspector (CPII) issued by American Public Works Association</li> </ul>

**License:**

Possession of a valid Class C California driver's license, together with a satisfactory driving record.

# Engineering Inspector I/II

## **PHYSICAL DEMANDS AND WORKING ENVIRONMENT**

*The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

### **Environment**

Outdoor field and construction site environment; travel from site to site; exposure to wet conditions, fumes, airborne particles, all types of weather and temperature conditions, heavy vibration and loud or prolonged noise levels. Incumbent regularly work and/or walk near moving equipment and heavy traffic, in confined spaces such as trenches, pipelines, and vaults, and on uneven or slippery surfaces and rough terrain, routinely climb ladders and stairs.

### **Physical**

While performing the duties of this job, the incumbent is regularly required to use hands to finger, handle, feel or operate objects, tools or controls; perform repetitive movements with hands, and reach with hands and arms. Incumbent frequently is required to walk and stand, talk or hear; sit, climb or balance, stoop, kneel, crouch or crawl. The incumbent must frequently lift and/or move up to twenty-five (25) pounds and occasionally up to fifty (50) pounds without assistance.

### **Mental**

While performing the duties of this class, incumbents are regularly required to use written and oral communication skills; read and interpret data, information and documents; analyze and solve problems; use math and mathematical reasoning; observe and interpret situations; learn and apply new information or new skills; perform highly detailed work; work under deadlines with constant interruptions; perform multiple, concurrent tasks; interact with District staff and other organizations; and interact with dissatisfied or quarrelsome individuals.

### **Vision**

See in the normal visual range with or without correction; vision sufficient to read printed documents and to operate assigned equipment. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

### **Hearing**

Hear in the normal audio range with our without correction.

**JOB STATUS:** Non-Exempt  
**DATE ADOPTED:** January 2015  
**DATE MODIFIED:** November 2021

Safety Sensitive Position