



January 2021  
FLSA: NON-EXEMPT

## WASTEWATER TREATMENT PLANT OPERATOR I/II

### DEFINITION

Under direct and general supervision, performs a variety of operations, control, and maintenance functions in support of the District's wastewater treatment plant, including micro-filter and reverse osmosis systems; regulates influent and effluent flows within the system; demonstrates a full understanding of all applicable policies and work methods associated with assigned duties; assists with basic laboratory testing and sample collection; performs related work as required.

### SUPERVISION RECEIVED AND EXERCISED

Receives direct or general supervision from the Wastewater Treatment Plant Senior Operations staff. May exercise technical and functional supervision over assigned staff.

### CLASS CHARACTERISTICS

Wastewater Treatment Plant Operator I: This is the entry-level class within the Wastewater Treatment Plant Operator series. Initially under close supervision, incumbents with basic experience learn District systems, operations, practices, and procedures. As experience is gained, assignments become more varied and are performed with greater independence. Assignments may vary with the skill and training of the incumbent. Incumbents may advance to the higher level after gaining the knowledge, skills, experience, and certifications, which meet the qualifications of the higher-level class and after demonstrating the ability to perform the work of the higher-level class.

Wastewater Treatment Plant Operator II: This is the full journey-level class within the Wastewater Treatment Plant Operator series. Under general supervision, incumbents operate and maintain wastewater treatment equipment and appurtenances according to District practices and procedures, as well as State and Federal regulations. Employees within this class are distinguished from the Wastewater Treatment Plant Operator I by the performance of the full range of duties. Employees at this level 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.

## **EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only)**

*Management reserves the rights to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.*

- Monitors the operation of a variety of wastewater treatment plant pumps, motors, digesters, and other equipment; read gauges, dials and other instruments that record plant operations including SCADA, micro-filtration, and reverse osmosis.
- Ensures compliance with environmental and public health standards, including monitoring and making adjustments as needed to optimize efficiency, making chemical dosage changes, changing pumping rates, and monitoring all equipment daily.
- Reviews and analyzes automated information and control system data and revises equipment settings as appropriate; notifies supervisor of unusual situations and makes inspections or corrects system problems as necessary.
- Interprets and may perform laboratory and process tests to optimize plant performance, checks the results, and makes appropriate changes.
- Operates and assists in preventive maintenance on a variety of treatment plant equipment, such as electric motors, engines, gas and electric powered pumps, air compressors, emergency systems, power generation systems, chillers, pressure and flow regulators, analyzers, filters, chemical feed systems, digesters, bar screens, and blowers.
- Operates valves, pumps and automated controls to regulate the flow of wastewater through plants.
- Lubricates pumps, motors, chains, conveyors and other machinery and equipment.
- Uses a variety of hand and power tools and testing equipment.
- Perform a variety of general and grounds maintenance in and around plant facilities.
- Maintains accurate records, including calculating the daily use of energy and chemicals, gauge and meter readings, and completing required monthly reports.
- Provides training to lower-level and new staff as required.
- May perform confined space entry and rescue operations.
- Builds and maintains positive working relationships with co-workers, other District employees, and the public.
- Performs other duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles, practices, equipment, material, and tools used in the operation, cleaning and preventive maintenance of wastewater treatment and disposal facilities and equipment.
- The operation and preventive maintenance of piping systems, including pipes, valves, and related appurtenances.
- Basic laboratory operations, and standard chemical and physical tests of wastewater, sludge, and related materials.
- SCADA operating systems and other computer applications related to the work.
- Practices, materials, and techniques used in general and grounds maintenance activities.
- The operation and minor maintenance of a variety of hand and power tools, vehicles, and power equipment.

- Basic mechanical, electrical, and hydraulic principles.
- Applicable Federal and State laws; District, Department, and Division regulations, codes, policies, and procedures.
- Modern office practices, methods, and computer equipment, and computer applications related to work.
- Record keeping principles and procedures.
- Basic shop arithmetic.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for effectively representing the District in contacts with governmental agencies, community groups, and various business, professional, educational, regulatory, and legislative organizations.
- Techniques for providing a high level of customer service to public and District staff, in person and over the telephone.

**Ability to:**

- Operate, maintain and repair a variety of wastewater treatment and disposal facilities and equipment.
- Read and interpret gauges and other recording devices reflecting wastewater treatment plant operations and make operating adjustments based upon recorded data.
- Recognize and correct or report unusual, inefficient or dangerous operating conditions.
- Conduct standard chemical and physical tests of water, wastewater, sludge, and related materials.
- Use and maintain the tools and equipment of the work skillfully, and safely.
- Handle hazardous chemicals in a safe manner.
- Maintain both manual and automated logs, records, reports, and charts.
- Follow department policies and procedures related to assigned duties.
- Work overtime, weekends, holidays, and shift work as assigned.
- Understand and follow oral and written instructions.
- Organize, maintain, and update office database and records systems.
- Maintain clear and accurate records.
- Make basic arithmetic computations.
- Provide training for less experienced staff.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical deadlines.
- Maintain attention to detail and accuracy.
- Identify and take appropriate action when operating problems occur.
- Communicate effectively in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- Establish and maintain effective working relationships with those contacted in the course of the work.
- Perform work in confined spaces, following required confined space entry procedures.

## **EDUCATION AND EXPERIENCE:**

*Any combination of training and experience which would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:*

Wastewater Treatment Plant Operator I and II: Equivalent to the completion of High School Diploma or General Equivalency Diploma.

Wastewater Treatment Plant Operator I: One (1) year of wastewater treatment plant operations and maintenance experience is desirable.

Wastewater Treatment Plant Operator II: Two (2) years of wastewater treatment plant operations and maintenance experience.

## **Required Qualifications:**

Wastewater Treatment Plant Operator I and II:

- Possession of a Class C driver's license required by the State of California, Department of Motor Vehicles, to perform the duties of the position. Continued maintenance of said driver's license in compliance with established District vehicle operation standards, and the ability to be insured for the operation of a vehicle/District vehicle in accordance with the terms and conditions of the District's insurance program are conditions of continuing employment. The California Sanitation Risk Management Authority (CSRMA) driving standards.
- 40-hour HAZWOPER certificate within one (1) year of employment.

Wastewater Treatment Plant Operator I:

- Possession of, or ability to obtain within 24 months of date of hire, a Grade I Wastewater Treatment Plant Operator Certificate issued by the State of California.

Wastewater Treatment Plant Operator II:

- Possession of, or ability to obtain within 24 months of date of hire, a Grade II Wastewater Treatment Plant Operator Certificate issued by the State of California.

## **Additional Requirements:**

**Ability to be on standby for after hour emergency call outs and acknowledge the notification within 15 minutes when on standby duty. If an emergency requires the employee to return to work, they must do so within 1 hour of responding to the notification.**

Employee must pass a respiratory fit test within 2 months of employment and adhere to District respiratory policy which specifies facial hair restrictions.

All Carmel Area Wastewater District employees are, by State and Federal law, **Disaster Service Workers**. The roles and responsibilities for Disaster Service Workers are authorized by the California Emergency Services Act and are defined in the California Labor Code. In the event of a declaration of emergency, any employee of the District may be assigned to perform activities which promote the protection of public health and safety or the preservation of lives and property.

Such assignments may require service at locations, times, and under conditions that are significantly different than the normal work assignments and may continue into the recovery phase of the emergency.

If a "Local Emergency" is declared during the employee's shift, employees will be expected to remain at work to respond to the emergency needs of the community. If a "Local Emergency" is declared outside of the employee's shift, employees must make every effort to contact their direct supervisor or department head to obtain reporting instructions as Disaster Service Workers.

### **PHYSICAL DEMANDS**

*The physical demands and work environment described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions:*

#### **Standing:**

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Surfaces: Office – carpet, tile; field/plant – concrete, asphalt, dirt, gravel, mud, metal grating, grass, sloped and uneven terrain
- Description: Performs while performing a variety of skilled work in the maintenance and repair of sewer lines, manholes, related facilities and equipment including: deragging, packing and sealing pumps, inspecting sewer lines, performing repairs, operating a variety of equipment including instruments, testing and monitoring confined spaces, digging, installing pipes, operating a variety of equipment including vibrators, jackhammers, tampers, monitoring and controlling the operation of water reclamation and treatment systems including chemical feeding equipment, utilizing the SCADA system, filtration equipment, regulating water flow, repairing leaks in pipelines, pumps, tanks, performing preventative maintenance on pumps, motors and other equipment, installing water meters, working in confined space entries, and a variety of related tasks.

#### **Walking:**

- Average Frequency: Greater than 9 times per day
- Average Duration: Long (2 to 8 hours)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Long (2 to 8 hours)
- Surfaces: Office – carpet, tile; field/plant – concrete, asphalt, dirt, gravel, mud, metal grating, grass, sloped and uneven terrain
- Description: Performs while walking within the plant, to and from field sites, relocating tools, supplies, equipment, inspecting and monitoring equipment, operating vibrators, utilizing a wheelbarrow, dollies and a variety of related activities.

**Sitting:**

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Long (2 to 8 hours)
- Surfaces: Cushioned vehicle seat, office chair
- Description: Performs while working at a desk station, during trainings, operating equipment including a forklift, golf cart, tractor, backhoe, pickup truck, hydrocleaning/vacuum truck.

**Kneeling/Crouching/Squatting:**

- Average Frequency: 1 to 3 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Surfaces: Office – carpet, tile; field/plant – concrete, asphalt, dirt, gravel, mud, metal grating, sloped and uneven terrain
- Description: Performs while digging, inspecting, or accessing equipment, retrieving or setting items on and off lower shelves or ground level, accessing leaks, equipment inspections, repairing equipment in conjunction with utilizing a variety of tools.

**Crawling:**

- Average Frequency: 1 to 3 times per month
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per year
- Maximum Duration: Short (Less than 1 hour)
- Surfaces: Office – carpet, tile; field/plant – concrete, asphalt, dirt, gravel, mud, metal grating, sloped and uneven terrain
- Description: Performs while accessing restricted areas including plumbing/pipes, inspecting equipment, performing carpentry tasks, accessing mechanical equipment or during plumbing tasks.

**Laying on Back/Stomach:**

- Average Frequency: 1 to 3 times per year
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: 4 to 8 times per year
- Maximum Duration: Short (Less than 1 hour)
- Surfaces: Office – carpet, tile; field/plant – concrete, asphalt, dirt, gravel, mud, metal grating, sloped and uneven terrain
- Description: Performs while inspecting and repairing equipment including plumbing and mechanical.

## **Climbing/Balancing:**

- Average Frequency: Greater than 9 times per day Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Surfaces: Ladder or stair steps, vehicle floorboards
- Description: Performs while ascending or descending extension ladders up to 40 feet, stepladders 10 to 12 feet, stair steps at plant buildings, accessing vehicle cab 1 to 3 steps.

## **Reaching:**

### *Above Shoulder Level:*

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while repairing and servicing equipment including plumbing in conjunction with utilizing a variety of hand or power tools, replacing lamps or lights, retrieving equipment over railing, painting in conjunction with utilizing rollers or brushes, polishing, carpentry work including assembling cabinets, counters, sanding, repairing piping. Unilateral or bilateral upper extremities from a less than full-to-full extensions at each occurrence.

### *Between Waist and Shoulder Level:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Medium (1 to 2 hours)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while operating a variety of equipment including forklift, truck, golf cart, tractor, backhoe, man lift in conjunction with maneuvering levers and a steering wheel, retrieving and relocating tools, supplies, equipment, inspecting, troubleshooting and repairing equipment, utilizing a variety of basic or power tools including a shovel, pick, digging bar, sledgehammer, grinders, chop saw, presses, skill saw, operating a jackhammer, maintaining plumbing, painting in conjunction with utilizing brushes or rollers, performing custodial tasks including sweeping, vacuuming, utilizing a squeegee, shampooer, extractor to clean floors, performing a variety of carpentry work including remodeling and assembling of cabinets, counters, drawers, renovating, relocating, altering workstations, sanding, texturing and repairing walls, repairing and installing building hardware including door handles, repairing plumbing systems, during traffic setup. Unilateral or bilateral upper extremities from a less than full-to-full extensions on each occurrence.

### *Below Waist Level:*

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while repairing and servicing equipment, retrieving or setting items on and off lower shelves or the ground, painting in conjunction with utilizing rollers or brushes, landscaping including utilizing basic hand tools to repair irrigation systems, custodial tasks

including polishing furniture, utilizing a squeegee to clean windows, cleaning toilets, urinals, wiping walls, retrieving trash or debris, lubricating equipment, installing water meters, performing a variety of carpentry work including remodeling and assembling cabinets, counters, drawers, sanding, texturing and repairing walls, installing building hardware, marking utilities. Unilateral or bilateral upper extremities from a less than full-to-full extensions on each occurrence.

### **Pushing/Pulling:**

- Average Frequency: 1 to 3 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while utilizing a shovel, utilizing a hook to remove or replace manhole lids, meter covers, operating a vibrator, jackhammer, tamper – a combination of lifting, pushing, pulling, guiding, operating hydrocleaning vacuum truck hoses, connecting or disconnecting trailers, utilizing a pipe wrench, roto hammer, chop saw, skill saw, sawzall, drill, a variety of wrenches, operating a pallet jack to move equipment or chemicals, relocating a wheelbarrow in conjunction with lifting, operating a skill saw, a chainsaw to cut or remove roots, utilizing a valve key to open or close/exercise valves, utilizing a 20' scraper to remove grease from manhole interiors, utilizing a dolly.

### **Twisting/Rotating:**

#### *Waist:*

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Medium (1 to 2 hours)
- Description: Performs while accessing parts, utilizing equipment while hydrocleaning, opening or closing valves, utilizing a shovel to relocate dirt, driving. The motion is center to the right back to center or center to the left back to center less than 20-degrees per occurrence.

#### *Neck:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while aiding visually, operating equipment including a forklift, truck, golf cart, tractors, backhoes, man lifts, servicing and repairing and maintaining a variety of equipment including plumbing, electrical, while painting, heating and ventilation, custodial tasks, performing carpentry duties, during normal body mechanics. The motion is from center to right back to center or center to left back to center up to 45-degrees.

#### *Wrists:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)



- Description: Performs while utilizing a variety of tools including drills, pliers, ratchets, screwdrivers, saws, digging tools, valve keys, manipulating nuts, bolts, screws, small parts, shoveling, utilizing rollers or brushes while painting, utilizing a vacuum, sweeping, mopping, utilizing a metal hook to remove or replace a manhole lid. Unilateral or bilateral hand use.

**Bending:**

*Waist:*

- Average Frequency: 4 to 8 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while digging, inspecting, or accessing equipment, retrieving or setting items on and off lower shelves or ground level, accessing leaks, equipment inspections, repairing equipment in conjunction with utilizing a variety of tools, utilizing tools to finish concrete, performing various repairs, operating a variety of equipment including hydrocleaning, video equipment, digging, installing pipes, operating a variety of equipment including vibrators, jackhammers, tampers, repairing leaks in pipelines, performing preventative maintenance on pumps, motors and other equipment including water meters, working in confined space entries. The motion is in a forward direction between 5 and 65-degrees.

*Head/Neck:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while performing a variety of skilled work in the maintenance and repair of sewer lines, manholes, related facilities and equipment including, packing and sealing pumps, inspecting sewer collection lines, performing repairs, operating a variety of equipment including hydrocleaning, video equipment, testing and monitoring manholes, digging, installing pipes, operating a variety of equipment including vibrators, jackhammers, tampers, performing traffic control tasks including flagging vehicles, monitoring and controlling the operation of water reclamation and treatment systems including chemical feeding equipment, utilizing the SCADA system, filtration equipment, regulating water flow, repairing leaks in pipelines, pumps, tanks, reservoirs, performing preventative maintenance on pumps, motors and other equipment, installing water meters, working in confined space entries, and a variety of related tasks, utilizing a variety of hand or power tools, inspecting equipment, during normal body mechanics.

### *Wrists:*

- Average Frequency: Greater than 9 times per day
- Average Duration: Short (Less than 1 hour)
- Maximum Frequency: Greater than 9 times per day
- Maximum Duration: Short (Less than 1 hour)
- Description: Performs while utilizing a variety of tools including drills, wire cutters, wire strippers, tape measures, sockets, socket adapters, ratchets, tape measures, wrenches, screwdrivers, hammers, Allen wrenches, shovel, pick, digging bar, manipulating bolts, nuts, small parts, screws, operating a jackhammer, operating equipment including maneuvering a steering wheel and levers, sweeping, mopping, vacuuming, utilizing rollers or brushes while painting, utilizing carpentry tools, utilizing a metal hook to remove or replace a manhole lid, during normal body mechanics. Unilateral or bilateral hand use.

### **Lifting/Carrying:**

#### *0 to 10 lbs.:*

- Objects: Smaller power tools (drills, grinders, air tools, grease gun, skill saw, etc.); hand tools (wrenches, screwdrivers, pliers, hammers, ratchets, strippers/cutters, etc.); small tool bag, socket set, fasteners; couplings, short sections of metal/pipe or wood; miscellaneous parts, wiring, levels, tape measures, small fire extinguisher, electrical cords, diagnostic equipment, aerosol cans, rollers, brushes, one-gallon containers, two safety cones, step-stool/ladder, broom, squeegee/mop, shovel, binders, manuals, writing utensils, telephone handset, chair
- Average Frequency: Ongoing - tasks performed throughout shift
- Average Duration: Seconds to less than 15 minutes at a time
- Maximum Frequency: Ongoing - tasks performed throughout shift
- Maximum Duration: Seconds to less than 15 minutes at a time
- Height: Ground to shoulder or above
- Distance: Average - less than 100 feet including ascending/descending stairs
- Maximum - 1,000 feet
- Description: Using hand or power tools as needed, performs a variety of lifts and carries to complete the following: carpentry, electrical, plumbing, painting, landscaping, cleaning, assembling/disassembling, diagnosing, repairing, bolting, screwing, cleaning, sweeping, stocking, storing, office duties, paperwork/manuals, writing.

#### *11 to 25 lbs.:*

- Objects: Larger hand tools (large sledgehammer, large wrenches), medium power tools (pneumatic nail gun, reciprocating saws, hammer-drill, core drill), medium tool bag, bucket of tools, 3-gallon containers, up to five safety cones, medium fire extinguisher, 6' ladder, pneumatic pipe plug, shovel with dirt, picking/digging tools, sections of metal/pipe or wood, boxes of tools/parts; valves, 100' of ¾" hose, 20' of 2" suction hose, 13-gallon trash can, partial box of paper/files
- Average Frequency: Routine- 1 per hour
- Average Duration: Seconds to less than 15 minutes at a time
- Maximum Frequency: 8 times per hour
- Maximum Duration: Seconds to less than 15 minutes at a time
- Distance: Less than 100 feet, including ascending/descending stairs
- Height: Ground to shoulder or above

- Description: Using hand or power tools as needed, performs a variety of moderate duty lifts/carries to complete the following: carpentry, electrical, plumbing, painting, landscaping, assembling/disassembling, diagnosing/repairing, bolting, screwing, cleaning, stocking, storing, valve removal/replacement, battery removal/replacement; small grate and lid removal/replacement; digging and filling. Retrieval, set-up, breakdown and replacement of equipment for projects.

*26 to 50 lbs.:*

- Objects: Large tool bag/kit, metal chain, small electric motors, 12' ladder, 20' extension ladder, jack hammer, concrete and metal debris, flanges, couplers, sections of metal/pipe or plastic/wood, smaller valves, small impellers, band saw, flange, pipe vice, oil bucket, blower, shaft, threader, traffic signage, wheelbarrow, 5-gallon container/bucket, empty pallet, case of paper or full box of files, 30-gallon garbage can, 50' of 1" hose, 10' of 6" suction hose, valve box lid, car battery
- Average Frequency: 4 times per day
- Average Duration: Seconds to less than 10 minutes at a time
- Maximum Frequency: 4 times per hour
- Maximum Duration: Up to 15 minutes at a time
- Distance: Less than 50 feet, including ascending/descending stairs
- Height: Ground to shoulder
- Description: Using hand or power tools as needed, performs a variety of medium duty lifts/carries to complete the following: carpentry, electrical, plumbing, painting, landscaping, assembling/disassembling, bolting, stocking, storing, valve removal/replacement, battery removal/replacement; grate and lid removal/replacement; digging and filling. Retrieval, set-up, breakdown and replacement of equipment for projects. Confined space winch. Jackhammer use includes pushing, pulling, partial lifting, lifting, and guiding.

*51 to 60 lbs.:*

- Objects: 28' extension ladder, 10' step ladder, confined space winch, wheelbarrow, medium electric motor, medium VFD unit, steel flanges, steel elbows/necks/spools, couplers, longer sections of metal/pipe or wood, 100' of 1" hose, truck battery, 30' of 2" hose, 15' of 6" hose, 4' x 4' aluminum vault lid, sandbag, small steel stormwater grating
- Average Frequency: 4 times per month
- Average Duration: Seconds at a time
- Maximum Frequency: 4 times per day
- Maximum Duration: Less than 1 minute at a time
- Height: Ground to waist
- Description: As needed for activities including repair and construction projects; retrieval, set-up, breakdown and replacement of project equipment; confined space entry set-up/breakdown including davit arms, accessing vaults, collections infrastructure repair, flood preparations.

61 to 120 lbs. (two-person lifts):

- Objects: 32' extension ladder, AA frame ladder, forklift propane cylinder [63 pounds shoulder height], 2' submersible pump, portable railing anchor plate, trash pumps, vault lid, electric motors, VFDs, confined space base tripod, bollards, jumping jack, steel manhole covers, steel piping, 15' or more of large suction hose, generator, 8" x 20' suction pipe, large steel stormwater grating, various steel valves, flanges, elbows up to 150 lbs.
- Average Frequency: As assigned - 1 to 4 times per month
- Average Duration: Seconds at a time
- Maximum Frequency: As assigned - 4 times per day
- Maximum Duration: Seconds at a time
- Distance: Less than 25 feet
- Height: Ground to waist
- Description: As needed for projects and activities including repair, replacement or construction projects; confined space entry set-up/breakdown, accessing vaults, collections infrastructure repair. Lifting straps are to be used if safety will be increased.

120+ lbs. Not a job requirement, any lifts above this threshold will be accomplished via lifting equipment.

### **Dragging/Pulling:**

76 to 100 lbs. (single-person pulls):

- Objects: Floor jack, manhole covers, 100' of charged 1" water line, charged suction lines, metal grating, aluminum pipe, heavy duty electrical wire, long sections of plastic or wood, collections equipment jetting lines, collections camera tether/cable
- Average Frequency: 4 times per month
- Average Duration: Seconds to less than 10 minutes at a time
- Maximum Frequency: Four times per day
- Maximum Duration: 5 minutes
- Distance: Less than 5 feet to 100' feet for collections lines
- Height: Ground level or partial lift of one end from ground
- Description: A combination of pulling and/or partial lifting as needed to move heavy objects including using a floor jack, removing, and replacing a manhole lid with a metal hook, dragging hose, dragging lengths of pipe, wood or metal, dragging metal grating, and operating a pallet jack to move equipment or chemicals,. Lifting straps are to be used if safety will be increased.

### **Grasping:**

Simple:

- Average Frequency: Ongoing - tasks performed throughout shift
- Average Duration: Seconds to less than 15 minutes at a time
- Maximum Frequency: Ongoing - tasks performed throughout shift
- Maximum Duration: Seconds to less than 15 minutes at a time

- Description: Performs while operating a variety of equipment (forklifts, truck, golf cart, tractor, backhoe, etc.); operating small power tools; using small hand tools; retrieving and relocating miscellaneous tools, parts; utilizing a telephone handset, handling paperwork; utilizing caulking and grease guns; spraying aerosol cans; painting with rollers or brushes, mopping, sweeping, vacuuming, landscaping; scraping, utilizing a squeegee; any grasping necessary to complete required lifts/carries. Unilateral and bilateral hand use.

*Power:*

- Average Frequency: Routine- 1 per hour
- Average Duration: Seconds to less than 15 minutes at a time
- Maximum Frequency: 8 times per hour
- Maximum Duration: Seconds to less than 15 minutes at a time
- Description: Performs while utilizing a shovel, digging bar or pick while digging; operating a jackhammer in conjunction with pushing, pulling, partial lifting and guiding; utilizing wrenches to remove or secure and torque bolts; using pry bars, wrenches, levers; tie down and securing equipment; utilizing wide variety of power tools grinders, electric chop saw, presses, drills, chainsaw, installing cabinetry including repairing walls. Any grasping necessary to complete required lifts/carries. Unilateral and bilateral hand use.

**Fine Manipulation:**

- Average Frequency: 4 times per day
- Average Duration: Seconds to less than 5 minutes at a time
- Maximum Frequency: 2 to 3 hours
- Maximum Duration: Seconds to less than 10 minutes at a time
- Description: Performs while using of small hand tools (screwdrivers, small sockets, Allen wrenches, etc.), placing bolts, nuts, screws, nails, small parts; joining small components; using electrical testing equipment; making equipment adjustments, using machine-user interfaces, utilizing a writing utensil, using computer keyboards/tablets and mouse, touchpad or touch screens; using telephone. Unilateral or bilateral hand use.

**Machine/Tools:**

*The machines and tools listed here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions:*

- Drills
- Pneumatic nail gun
- Pliers
- Tape measures
- Sockets
- Socket adapters
- Ratchets
- Wrenches
- Screwdrivers
- Reciprocating saws
- Hammers
- Diagnostic tools
- Allen wrenches
- Digging bar
- Pick
- Writing utensil
- Telephone handset
- Sledgehammer
- Grinders
- Air tools
- Grease gun
- Skill saw
- Levels
- Square
- Wire strippers
- Spray can
- Roto hammer
- Jackhammer
- Pipe wrenches
- Presses
- Chop saw
- Computer keyboard, mouse, monitor
- Band saw
- Cut off saw
- Forklift
- 28-ton truck
- Golf cart
- Tractor
- Backhoe
- Aerial lift
- Dollies
- 4-wheeled cart
- Wrenches
- Motors
- Ladders
- Valves
- Generators
- Electric snakes
- Rollers
- Blowers
- Vacuum
- Broom
- Mop
- Squeegee
- Paint brush

## Weights and Measures:

The items listed here to be weighed or measured are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions:

### Items Weighed:

- 4" C-900 pipe fitting – 6 lbs.
- 6" C-900 pipe fitting – 12 lbs.
- Gas Can (2 gallon) – 13 lbs.
- Suction hose (2" x 20' Green PVC) – 16 lbs.
- 6" x 4" I-beam – 20 lbs.
- Flow thru plug 6-8" – 20 lbs.
- 8" C-900 – 23 lbs.
- Pneumatic plug 10-18" – 25 lbs.
- Pipe (4" x 20' SDR 35) – 27 lbs.
- 3/8" chain – 28 lbs.
- Valve box lid (B12) – 28 lbs.
- Shoring (2' x 24-36" cylinder) – 30 lbs.
- Discharge hose (2" x 50' blue PVC) – 30 lbs.
- Cut off saw (hot saw) – 32 lbs.
- Jack hammer (30 pound) – 33 lbs.
- Gas can (5 gallon) – 33 lbs.
- Firehose (2.5" x 50') – 34 lbs.
- Confined space blower – 35 lbs.
- Electric motor (1 HP) – 35 lbs.
- Ventilation Blower (12V) – 36 lbs.
- Confined space winch – 41 lbs.
- Storm drain inlet (2x2) – 42 lbs.
- 20' extension ladder – 42 lbs.
- Concrete/Asphalt debris – 50 lbs.
- 6' plug hand crank – 50 lbs.
- Standard wheelbarrow (full) – 50 lbs.
- Metering vault lid (open) – 52 lbs.
- 28' extension ladder – 57 lbs.
- Traffic valve box (G5) – 58 lbs.
- Sandbags – 60 lbs.
- Pipe (4"x6' mission clay) – 60 lbs.
- Perma-Patch sack (60 pound) – 60 lbs.
- Concrete sack (60 pound) – 60 lbs.
- 2" Submersible sump pump – 60 lbs.
- Pipe (6"x20' SDR 35) – 61 lbs.
- Bumper crane assembly – 62 lbs.
- Lumber boards (2"x12"x16') – 64 lbs.
- Jack Hammer (60 pound) – 65 lbs.
- 2x4 grate – 71 lbs.
- Jet hose (pulling) – 71 lbs.
- Bollards (remove and replace) – 72 lbs.
- 32' extension ladder – 72 lbs.
- 4" plug valve – 75 lbs.
- 24" Manhole lid (open/lift) – 75 lbs.
- Concrete Sack (90 pound) – 90 lbs.
- Plywood (4'x8'x 1 1/8") – 94 lbs.
- Confined space base (tripod) – 95 lbs.
- Valve box (B12) – 96 lbs.
- Jack hammer (90 pound) – 97 lbs.
- Move furniture – 100 lbs.
- 2" Trash Pump (187 GPM) – 104 lbs.
- Pipe (8"x20' SDR 35) – 110 lbs.
- 4" gate valve – 114 lbs.
- 6" gate valve – 194 lbs.
- Manhole lid (36" diameter) – 229 lbs.
- 55-gallon drums- 458 lbs.

## **PERSONAL PROTECTIVE EQUIPMENT**

Depending on the hazard, the employee is required to wear head, hearing, eye, foot, face, respiratory, body harness, and/or hand protection.

## **ENVIRONMENTAL ELEMENTS**

- Employee is frequently exposed to outside weather conditions
- Employee is occasionally exposed to high, precarious places
- Employee is exposed to confined spaces; fumes or airborne particles; toxic or caustic chemicals
- Employee is exposed to unpleasant smells and odors
- Employee is exposed to moderate cold, moderate heat
- Employee is exposed to risk of electrical shock or mechanical hazards
- Employees in this classification may perform duties that involve a potential risk of exposure to blood-borne pathogens
- The noise level in the work environment is usually loud
- Employee, as needed, works indoors, office setting, climate controlled

**NOTICE:** The examples of functions, responsibilities, work environment, physical demands etc. listed in this Job Analysis are representative only, and not exhaustive of the tasks that an employee may be required to perform.