

Utility Operator

SUMMARY/PURPOSE

To perform skilled and semi-skilled work to install, maintain, and repair water and gas distribution systems (including transmission mains up to 900 PSI), as well as sanitary and stormwater collection systems. This role combines instruction, manual labor, and operation of power equipment to complete utility projects.

DISTINGUISHING FEATURES OF THE CLASS

Employees at this level have completed the Joint Apprenticeship Training Program and demonstrate proficiency in the full range of duties. They require minimal supervision, handling most tasks independently, and are fully familiar with the operating procedures and policies. Utility Operator positions are filled after successful completion of the Apprentice Training Program.

SUPERVISION RECEIVED

The supervisor makes assignments by defining objectives, priorities, and deadlines and assists incumbents with unusual situations which do not have clear precedents. Incumbents plan and carry out the successive steps and handle problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices in the occupation.

SUPERVISION GIVEN

Does not have direct supervisory responsibility but does have significant oversight of employees and input regarding performance on a regular basis.

ESSENTIAL DUTIES AND RESPONSIBILITIES

1. Oversee installation, repair, modification, and maintenance of the City's water, natural gas, sewer, and stormwater systems, including mains, services, and infrastructure.
2. Operate and maintain equipment for system maintenance, including trenchers, backhoes, jet rodders, rod truck, excavators, easement machine, crane truck, dump truck, skidsteer, dozer and CCTV units.
3. Respond to emergency situations as incident commander, assess damage and urgency, direct personnel and resources, and document actions in compliance with Minnesota Office of Pipeline Safety (MNOPS) and Pipeline and Hazardous Materials Safety Administration (PHMSA).
4. Use the Enterprise Asset Management (EAM) system to track utility projects, including work performed, progress, and materials.
5. Ensure worksite safety and compliance with procedures, inspecting equipment, barricades, and tools, and conducting necessary maintenance.
6. Read maps (e.g., ArcGIS) to locate and repair utility systems.
7. Restore work sites by refilling trenches, mixing and pouring concrete, and repairing road surfaces.
8. Be proficient with basic computer functions, cloud-based applications, and data collection and analysis applications.
9. Set up and maintain traffic control plans, training personnel in their proper installation.
10. Direct crews to address health/safety violations and ensure compliance.
11. Provide on-the-job training and mentorship to Utility Operator Apprentices and Utility Maintenance Workers, including Federal Motor Carriers Safety Administration (FMCSA) Entry Level Driver Training (ELDT) standards.
12. Assist with hiring, onboarding, and staff development.
13. Use appropriate safety equipment in hazardous conditions, such as exposure to asbestos, confined spaces, and sewage.
14. Assist in the maintenance of motors, pumps, and other equipment, and report defects or failures.
15. Support wastewater and stormwater monitoring and sampling.
16. Perform winter maintenance, including snow removal, ice removal, and steaming at pump stations, hydrants, and valve boxes.

17. Install and maintain water and gas mains, meters, valves, and regulator stations, as well as sewer and stormwater infrastructure.
18. Prepare worksites, including setting up traffic control, digging, and shoring.
19. Repair road surfaces by refilling trenches, and applying asphalt, gravel, or concrete.
20. Perform pipe installation, including cutting, threading, tapping, sealing joints, and installing valves and stops.
21. Inspect, operate, and repair hydrants, valves, mains, and services, including replacing connections and stop boxes.
22. Respond to and control water, gas, and sewage leaks safely to minimize environmental impact.
23. Maintain wash rack and garage areas, ensuring cleanliness and safe conditions.
24. Ensure access to vehicles, equipment, and work sites by performing snow removal.
25. Dispose of demolition debris properly, including concrete, asphalt, and pipe materials.
26. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
27. Coordinate with various City departments, other government agencies, and community groups to develop methods of sharing resources, minimizing duplication, and simplifying procedures.
28. Provide training on new or modified procedures and policies to all affected parties.
29. Establish and maintain positive working relationship with the supervisor and employees by maintaining two-way communication, producing consistent results, advocating for the team when appropriate, and offering expertise to improve processes, systems, and the organization.
30. Other duties may be assigned.

JOB REQUIREMENTS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skills, and abilities required.

1. Education & Experience Requirements
 - A. Completion of the Utility Operator Apprenticeship.
 - B. Completion of Wastewater Collection Systems Volume I & II and Water Distribution System Operation and Maintenance courses.
2. License Requirements
 - A. Possession and maintenance of a valid Minnesota Class "A" Commercial Driver's License including Tanker and Combination Vehicle Endorsement or equivalent.
 - B. Possession of a valid Minnesota class "D" Water Operators license and/or a valid Minnesota Wastewater Facility Operator Class SD Certificate by the date of appointment and thereafter.
 - C. Acquire and maintain OQ (Operator Qualification) certification as required by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) within one (1) year of hire.
3. Knowledge Requirements
 - A. Knowledge of gas- and diesel-powered equipment used in the repair, installation, and maintenance of a utility operations system.
 - B. Knowledge of the materials, equipment, procedures, and practices used in a utility operations system.
 - C. Knowledge of policies and procedures used in the construction, repair, and maintenance of the utility operations system.
 - D. Knowledge of Occupational Safety and Health Administration (OSHA), Commercial Driver's License (CDL), Department of Transportation (DOT), Environmental Protection Agency

(EPA), Minnesota Pollution Control Agency (MPCA), Minnesota Department of Health (MDH) and Minnesota Office of Pipeline Safety (MNOPS) regulations.

- E. Knowledge of flow monitoring and sampling of water, wastewater, and storm water.
 - F. Knowledge of Confined Space entry procedures.
 - G. Knowledge of sanitary sewer force main operation and maintenance.
 - H. Knowledge of problem-solving and conflict-resolution techniques.
 - I. Knowledge of applicable safety requirements.
 - J. Knowledge of, or the ability to learn, City policies and procedures.
 - K. Knowledge of federal, state, and local laws, statutes, regulations, codes, and standards related to the area of responsibility.
 - L. Knowledge of effective leadership and personnel practices.
 - M. Knowledge of safe, proper trenching, shoring procedures to include trench box operation.
 - N. Knowledge of location and topography of the City of Duluth.
 - O. Knowledge of WIN-911 and Supervisory Control and Data Acquisition (SCADA) system operation.
 - P. Knowledge of business and management principles involved in strategic planning, resource allocation, human resource practices, leadership technique and coordination of people and resources.
4. Skill Requirements
- A. Skill in inspecting, diagnosing, and repairing the distribution and collections systems.
 - B. Skill in setting up appropriate traffic controls.
 - C. Skill in using and operating utility equipment used in the construction, repair, installation, and maintenance of the utility operations system.
 - D. Skill in using hand and power tools used in utility operations.
 - E. Skill in pinpointing natural gas leaks using CGI, four-gas meter or other tools.
 - F. Skill in pinpointing water main breaks using tools such as correlator or ground microphone.
 - G. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, and modern office equipment.
 - H. Skill in managing one's own time and the time of others.
 - I. Skill in completing assignments accurately and with attention to detail.
 - J. Skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
5. Ability Requirements
- A. Ability to read and implement maps, specifications, and construction plans used in utility construction work.
 - B. Ability to establish and maintain effective working relationships with supervisors, other employees, and the public.
 - C. Ability to prepare clear, concise reports.
 - D. Ability to identify excess clear water flows in the sanitary collection system.
 - E. Ability to be scheduled for standby duty.
 - F. Ability to set expectations and provide training in safe and proper work methods, development and coaching for employees in conjunction with the supervisor.
 - G. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
 - H. Ability to communicate and interact effectively with members of the public.
 - I. Ability to communicate effectively both orally and in writing.
 - J. Ability to recognize, analyze, and solve a variety of problems.
 - K. Ability to organize and prioritize work while meeting multiple deadlines.
 - L. Ability to handle difficult and stressful situations with professional composure.

- M. Ability to work successfully as a member of a team and independently with minimal supervision.
- N. Ability to train and lead others.
- O. Ability to interpret and apply laws, contracts, regulations, policies, and procedures.
- P. Ability to enforce safety rules and regulations.
- Q. Ability to maintain confidential information.
- R. Ability to demonstrate dependability, responsibility, and consistency in job performance.
- S. Ability to attend work as scheduled and/or required.

Physical Demands

The work requires considerable and strenuous physical exertion such as frequent climbing of tall ladders, lifting heavy objects over 50 pounds, crouching or crawling in restricted areas. Requirements also include entry into confined spaces and lifting heavy objects at unusual angles.

Work Environment

The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress requiring a range of safety and other precautions (e.g., working at great heights under extreme outdoor weather conditions, or in similar situations in which conditions cannot be controlled).

HR: HD	Union: Basic	EEOC: Skilled Craft Workers	CSB: 03/04/2025	Class No: 4140
WC: 6319	Pay: 30	EEOF: Utilities/Transportation	CC:	Resolution:

Utility Operator

SUMMARY/PURPOSE

To perform skilled and ~~semiskilled~~semi-skilled work ~~in order~~ to install, maintain, and repair ~~the~~ water and gas distribution systems, ~~and (including transmission mains up to 900 PSI), as well as~~ sanitary and ~~storm water~~stormwater collection systems. This role combines instruction, manual labor, and operation of power equipment to complete utility projects.

DISTINGUISHING FEATURES OF THE CLASS

Employees at this level ~~are distinguished from the Utility Operator Apprentice level by completion of~~ have completed the Joint Apprenticeship Training Program; ~~and by the proficient knowledge, skills, and abilities; and by performance of~~ demonstrate proficiency in the full range of duties ~~as assigned. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise. They require minimal supervision, handling most tasks independently, and are fully aware of~~ familiar with the operating procedures and policies ~~of the work unit. Positions at the~~ Utility Operator level ~~positions~~ are filled ~~by employees upon their after~~ successful completion of the ~~Utility Operator Apprentice~~ Joint Apprenticeship Training Program.

SUPERVISION RECEIVED

The supervisor makes assignments by defining objectives, priorities, and deadlines and assists incumbents with unusual situations which do not have clear precedents. Incumbents plan and carry out the successive steps and handle problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices in the occupation.

SUPERVISION GIVEN

Does not have direct supervisory responsibility but does have significant oversight of employees and input regarding performance on a regular basis.

ESSENTIAL FUNCTIONS/DUTIES AND RESPONSIBILITIES (other duties may be assigned)

1. ~~Operate and maintain equipment in order to repair, clean, install, and maintain water and gas distribution systems and sanitary and storm water collection systems.~~
 - A. ~~Perform routine~~ Oversee installation, repair, modification, and maintenance checks on ~~vehicles~~ of the City's water, natural gas, sewer, and equipment.
 - B. ~~Operate and maintain equipment used in sewer line and distribution line maintenance and repair~~ stormwater systems, including high pressure jet rodder, mechanical rodder, cleaning bucket machine, trenchers, mobile steamer, backhoe, loader, excavators, and hydro-excavator, cable crane, and closed-circuit television equipment.
 - C. ~~Assist in the preparation of work sites to include the erection of appropriate barricades, warning devices, equipment, and shoring equipment.~~
 - D. ~~Operate and maintain equipment used in ditch, open channel, and shoreline maintenance and repair, including excavators and backhoes.~~
2. ~~Perform routine service work in order to maintain water, sanitary and storm water pumping stations, and regulator stations.~~
 - A. ~~Analyze and record hour meter data at pump stations.~~
 - B. ~~Record and report defects or failures in collection, filtration, and conveyance of wastewater, gas, water, and storm water.~~
 - C. ~~Assist in the maintenance and repair of motors and pumps and report equipment defects or failures.~~
 - D. ~~Assist in cleaning wet wells and bar screens in sanitary pump stations.~~

- ~~E. Assist in the removal of filter media at the City of Duluth Water Treatment Plant.~~
- ~~F. Assist in snow removal at pump stations.~~
- ~~G. Assist in wastewater and storm water flow monitoring and sampling.~~
- 1. ~~Assist in the installation and maintenance of water and gas service mains, water and gas services, large meters, and regulator stations and infrastructure.~~
- 2. ~~Perform skilled Operate and semiskilled work in order to install, maintain, and repair the water equipment for system maintenance, including trenchers, backhoes, jet rodders, rod truck, excavators, easement machine, crane truck, dump truck, skidsteer, dozer and CCTV units.~~
- 2.3. ~~Respond to emergency situations as incident commander, assess damage and gas distribution urgency, direct personnel and sanitary resources, and storm sewer collection systems document actions in compliance with Minnesota Office of Pipeline Safety (MNOPS) and assist in the training of apprentices. Pipeline and Hazardous Materials Safety Administration (PHMSA).~~
- ~~A. Install and maintain water mains, valves, hydrants, gas mains, and sanitary and storm sewer mains, services, manholes, catch basins and leads.~~
- ~~B. Prepare work site by setting up traffic control, breaking street surfaces, digging, and shoring.~~
- 4. ~~Make repairs to Use the Enterprise Asset Management (EAM) system to track utility projects, including work performed, progress, and materials.~~
- 5. ~~Ensure worksite safety and compliance with procedures, inspecting equipment, barricades, and tools, and conducting necessary maintenance.~~
- 6. ~~Read maps (e.g., ArcGIS) to locate and repair utility systems.~~
- 3.7. ~~Restore work sites by refilling trenches, mixing, and pouring concrete, and smoothing asphalt, gravel and other materials to replace street repairing road surfaces, including landscaping.~~
- ~~C. Perform work to cut, thread and tap pipes.~~
- 8. ~~Be proficient with basic computer functions, cloud-based applications, and data collection and analysis applications.~~
- 9. ~~Set up and maintain traffic control plans, training personnel in their proper installation.~~
- 10. ~~Direct crews to address health/safety violations and ensure compliance.~~
- 11. ~~Provide on-the-job training and mentorship to Utility Operator Apprentices and Utility Maintenance Workers, including Federal Motor Carriers Safety Administration (FMCSA) Entry Level Driver Training (ELDT) standards.~~
- 12. ~~Assist with hiring, onboarding, and staff development.~~
- 13. ~~Use appropriate safety equipment in hazardous conditions, such as exposure to asbestos, confined spaces, and sewage.~~
- 14. ~~Assist in the maintenance of motors, pumps, and other equipment, and report defects or failures.~~
- 15. ~~Support wastewater and stormwater monitoring and sampling.~~
- 16. ~~Perform winter maintenance, including snow removal, ice removal, and steaming at pump stations, hydrants, and valve boxes.~~
- 17. ~~Install and maintain water and gas mains, meters, valves, and regulator stations, as well as sewer and stormwater infrastructure.~~
- 18. ~~Prepare worksites, including setting up traffic control, digging, and shoring.~~
- 19. ~~Repair road surfaces by refilling trenches, and applying asphalt, gravel, or concrete.~~
 - ~~D. Perform pipe sections by positioning, joining, aligning, calking, and installation, including cutting, threading, tapping, sealing joints.~~
- 4.20. ~~Install, and installing valves and stops.~~
 - ~~E. Operate, inspect, inspect, operate, and repair, and test hydrants, valves, mains, and services, and mains.~~
 - ~~F. Operate and maintain tools and equipment such as compressors, pneumatic hammers, tapping machines, and hand tools in a safe and efficient manner.~~
- 5.21. ~~Operate water and gas valves including replacing connections and stop boxes.~~

- ~~G. Install and replace water and gas services and sewer wye connections.~~
- ~~H. Instruct apprentices in all areas of the Utility Operator apprenticeship program, as assigned.~~
- ~~6-22. Respond to emergencies and act to control water, gas, and sewage leaks in a manner that is safe for self and public and safely to minimize environmental impact.~~
- ~~I. Provide information to customers related to utility operations in a professional manner.~~
- ~~3. Perform maintenance duties within and around Utility Operations facilities including work sites.~~
- ~~7-23. Perform routine cleaning and maintenance of vehicle. Maintain wash rack and garage areas, including sweeping, hosing floors, washing walls, and cleaning wash rack pits ensuring cleanliness and safe conditions.~~
 - ~~A. Maintain stock piles of materials such as gravel, blacktop, and sand, and operate a gravel pit burner to keep materials from freezing.~~
- ~~8-24. Maintain accessibility. Ensure access to vehicles, equipment, materials, pump stations, and work sites by plowing, shoveling, and removing performing snow removal.~~
- ~~25. Organize disposal. Dispose of demolition debris such as broken properly, including concrete, blacktop asphalt, and pipe materials and deliver to.~~
- 26. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
- 27. Coordinate with various City departments, other government agencies, and community groups to develop methods of sharing resources, minimizing duplication, and simplifying procedures.
- 28. Provide training on new or modified procedures and policies to all affected parties.
- 9-29. Establish and maintain positive working relationship with the supervisor and employees by maintaining two-way communication, producing consistent results, advocating for the team when appropriate, dump sites, and offering expertise to improve processes, systems, and the organization.
- 10-30. Perform related Other duties and assignments as directed may be assigned.

JOB REQUIREMENTS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skills, and abilities required.

1. Education and Experience Requirements
 - A. Completion of the Utility Operator Apprenticeship.
 - ~~B. Completion of Wastewater Collection Systems Volume I & II and Water Distribution System Operation and Maintenance courses.~~
2. License Requirements
 - A. Possession and maintenance of a valid Minnesota Class "A" Commercial Driver's License including Tanker and Combination Vehicle Endorsement or equivalent.
 - B. Possession of a valid Minnesota class "D" Water Operators license and/or a valid Minnesota Wastewater Facility Operator Class SD Certificate by the date of appointment and thereafter.
 - ~~C. Acquire and maintain OQ (Operator Qualification) certification as required by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) within one (1) year of hire.~~
3. Knowledge Requirements
 - A. Knowledge of gas- and diesel-powered equipment used in the repair, installation, and maintenance of a utility operations system.

- ~~A. Knowledge of all safety rules and regulations related to a utility operations system.~~
- B. Knowledge of the materials, equipment, procedures, and practices used in a utility operations system.
- C. Knowledge of policies and procedures used in the construction, repair, and maintenance of the utility operations system.
- ~~B. Knowledge of OSHA, CDL, and MNOPS regulations.~~
- ~~D. Knowledge of Occupational Safety and Health Administration (OSHA), Commercial Driver's License (CDL), Department of Transportation (DOT), Environmental Protection Agency (EPA), Minnesota Pollution Control Agency (MPCA), Minnesota Department of Health (MDH) and Minnesota Office of Pipeline Safety (MNOPS) regulations.~~
- ~~D.E.~~ Knowledge of flow monitoring and sampling of water, wastewater, and storm water.
- ~~F. Knowledge of Confined Space entry procedures.~~
- ~~G. Knowledge of sanitary sewer force main operation and maintenance.~~
- H. Knowledge of problem-solving and conflict-resolution techniques.
- I. Knowledge of applicable safety requirements.
- J. Knowledge of, or the ability to learn, City policies and procedures.
- K. Knowledge of federal, state, and local laws, statutes, regulations, codes, and standards related to the area of responsibility.
- L. Knowledge of effective leadership and personnel practices.
- ~~M. Knowledge of safe, proper trenching, shoring procedures to include trench box operation.~~
- ~~N. Knowledge of location and topography of the City of Duluth.~~
- ~~O. Knowledge of WIN-911 and Supervisory Control and Data Acquisition (SCADA) system operation.~~
- ~~P. Knowledge of business and management principles involved in strategic planning, resource allocation, human resource practices, leadership technique and coordination of people and resources.~~

4. Skill Requirements

- ~~A. Skill in inspecting, diagnosing, and repairing the distribution and~~
- A. ~~Collection~~collections systems.
- B. Skill in setting up appropriate traffic controls.
- C. Skill in using ~~hand and power tools~~operating utility equipment used in the construction, repair, installation, and maintenance of the utility operations system.
- D. Skill in ~~operating using hand~~ and ~~maintaining vehicles and equipment~~power tools used in utility operations.
- ~~E. Skill in pinpointing natural gas leaks using CGI, four-gas meter or other tools.~~
- ~~F. Skill in pinpointing water main breaks using tools such as correlator or ground microphone.~~
- G. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, and modern office equipment.
- H. Skill in managing one's own time and the time of others.
- I. Skill in completing assignments accurately and with attention to detail.
- J. Skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

5. Ability Requirements

- A. Ability to read and implement maps, specifications, and construction plans used in utility construction work.
- ~~A. Ability to use good judgment and work independently under limited supervision.~~
- ~~B. Ability to communicate and to follow written and oral directions.~~
- B. Ability to establish and maintain effective working relationships with supervisors, other employees, and the public.
- C. Ability to prepare clear, concise reports.
- D. Ability to identify excess clear water flows in the sanitary collection system.

1. Physical Ability Requirements

- ~~E.~~ Ability to work outside in inclement weather be scheduled for standby duty.
- ~~A.~~ Ability to enter manholes, catch basins, and to work in confined spaces.
- ~~B.~~ Ability to remove and replace manhole and catch basin covers.
- ~~F.~~ Ability to set expectations and provide training in safe and proper work methods, development and coaching for employees in conjunction with the supervisor.
- ~~G.~~ Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
- ~~H.~~ Ability to communicate and interact effectively with members of the public.
- ~~I.~~ Ability to lift and carry supplies and equipment up communicate effectively both orally and in writing.
- ~~J.~~ Ability to 50 pounds, and occasionally carry up recognize, analyze, and solve a variety of problems.
- ~~F.K.~~ Ability to 90 pounds organize and prioritize work while meeting multiple deadlines.
- ~~G.L.~~ Ability to take samples of city water, wastewater, and storm water handle difficult and stressful situations with professional composure.
- ~~G.~~ Ability to work expanded shifts and/or be called in for emergency work with little or no advance notice.
- ~~H.M.~~ Ability to successfully complete a "Competent Person" training program as a member of a team and independently with minimal supervision.
- ~~N.~~ Ability to successfully complete a Gas Operator Qualifications program train and lead others.
- ~~H.O.~~ Ability to interpret and apply laws, contracts, regulations, policies, and procedures.
- ~~J.P.~~ Ability to stand, kneel, stoop, and crouch for extended periods enforce safety rules and regulations.
- ~~Q.~~ Ability to maintain confidential information.
- ~~R.~~ Ability to demonstrate dependability, responsibility, and consistency in job performance.
- ~~K.S.~~ Ability to attend work on a regular basis as scheduled and/or required.

Physical Demands

The work requires considerable and strenuous physical exertion such as frequent climbing of tall ladders, lifting heavy objects over 50 pounds, crouching or crawling in restricted areas. Requirements also include entry into confined spaces and lifting heavy objects at unusual angles.

Work Environment

The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress requiring a range of safety and other precautions (e.g., working at great heights under extreme outdoor weather conditions, or in similar situations in which conditions cannot be controlled).

HR: S	7	Union: Basic	EEOC: Skilled Craft Workers	CSB: 08/07/2012	Class No: 4140
WC: 49	63	Pay: 28	EEOF: Utilities/Transportation	CC: 08/13/2012	Resolution: 42-0411R