

WATER CONVEYANCE TECHNICIAN

SUMMARY/PURPOSE

Ensure the dependability and functionality of water/wastewater/storm water pumping stations and perform flow monitoring and sampling operations of wastewater and storm water.

DISTINGUISHING FEATURES OF THE CLASS

Employees in this classification will perform semi-skilled work and be trained to perform skilled work in the functional areas listed below.

ESSENTIAL DUTIES AND RESPONSIBILITIES

1. Assist with work in the operation and maintenance of water/wastewater/storm water pump stations.
2. Perform proper safety methods when entering manholes, vaults, reservoirs, wet wells, confined workspaces, working with electricity, using hand and power tools, operating heavy equipment, or driving a motor vehicle.
3. Monitor the daily operation of pumping stations, booster stations, and drinking water storage tanks, with the Supervisory Control & Data Acquisition (SCADA) system to ensure the proper operation of all equipment at each station so the normal flow is not interrupted.
4. Ensure proper operation and maintenance of City-owned water and low pressure sewer systems to include but not limited to, grinder stations, booster stations, pumps, structures, controls, or air release valves.
5. Implement emergency procedures on each pump station in the event of the malfunction of either primary pumping equipment or any auxiliary equipment.
6. Troubleshoot for the cause of any malfunction affecting pumps or any related equipment of each pump station.
7. Maintain and repair all types of water and wastewater pumps.
8. Maintain and repair industrial type electric motors.
9. Monitor, perform, and record required predictive maintenance program tasks.
10. Maintain and operate large standby generators for emergency backup or a planned power service shutdown.
11. Maintain and repair various wet well and reservoir level sensing systems.
12. Maintain and repair valves, couplings, and drive-shafts.
13. Maintain wet wells, reservoirs, storage basins, bar screens, tipping trough systems, and grinder pump stations.
14. Monitor and maintain inventory of parts for proper pump station system operation.
15. Maintain and operate large auxiliary pumps for emergency backup or bypass pumping.
16. Assist in the maintenance and repair of water distribution system regulators, reliefs, pressure reducers, and pressure transmitters
17. Install various types of flow meters; bubbler, area velocity, ultrasonic and submerged probe.
18. Install, maintain, and collect data from various types of water/wastewater samplers and rain gauges.
19. Monitor and maintain sampling/flow monitor inventory; loggers, batteries, battery chargers, spring rings, flow metering inserts, rapid transfer devices.
20. Monitor and maintain magnetic flow meters to include transmitters.
21. Perform work to download, upload, and review data between computer and field installed data collecting devices.
22. Perform related duties as required.

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 & Experience Requirements
 - A. Possession of a State of Minnesota Maintenance Electrician's License and one (1) year of verifiable experience working with programmable controllers (MicroLogic); or
 - B. Completion of a City of Duluth Water & Gas Maintenance training program, Utility Operator apprenticeship program, or Lift Station Operator apprenticeship program; or
 - C. Four (4) years of verifiable experience in wastewater collection systems or water distribution systems.

2. License Requirements
 - A. Possess and maintain a valid Minnesota Driver's License or privilege.
 - B. Ability to obtain and maintain a valid Minnesota Pollution Control Agency Wastewater Operators Class S-D Certificate within 18 months of hire date.

3. Knowledge Requirements
 - A. Knowledge of electricity and electronics.
 - B. Basic knowledge of personal computers and related data processing equipment.
 - C. Knowledge of telemetry/SCADA software and hardware.
 - D. Knowledge of the National Electrical Code in relation to pump station functions.
 - E. Knowledge of plumbing and building codes in relation to pump stations.
 - F. Knowledge of Minnesota Pollution Control Agency regulations pertaining to wastewater discharge.
 - G. Knowledge of Minnesota Department of Health regulations pertaining to water distribution systems.
 - H. Knowledge of confined space entry procedures.
 - I. Knowledge of lock-out tag-out procedures.

4. Skill Requirements
 - A. Skill in the repair of heavy duty pumps and electric motors.
 - B. Skill in the operation/maintenance of sampling/flow meter installation and data collection.
 - C. Skill in the operation and use of a variety of maintenance and testing tools and equipment – flow meters, poly-phase meter, volt-ohm meter, gear pullers, conduit benders, tap and die sets, atmospheric-testing meters, portable generators, and electric hoists.
 - D. Skill in setting up appropriate traffic controls.

5. Ability Requirements
 - A. 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.
 - B. Ability to communicate effectively in both written and oral form.
 - C. Ability to calculate water and wastewater volumes.
 - D. Ability to read and interpret schematic drawings.
 - E. Ability to identify good flow monitoring sites.
 - F. Ability to successfully complete a "Competent Person" training program.

6. Physical Ability Requirements
 - A. Ability to transport oneself to, from, and around sites of projects, tests, and other assignments.
 - B. Ability to attend work on a regular basis.
 - C. Ability to frequently lift and carry equipment and materials weighing up to 50 pounds.
 - D. Ability to occasionally lift and carry, with assistance, equipment and materials weighing up to 100 pounds, such as generators and pumps.
 - E. Ability to frequently push, pull, stoop, kneel, crouch, and reach to perform maintenance on pumps.

- F. Ability to occasionally climb and balance while working on tanks and basins at heights up to 30 feet.
- G. Ability to work in confined spaces.
- H. Ability to work outside in inclement weather.

HR: MC	Union: Basic	EEOC: Skilled Craft Workers	CSB:	Class No: 4211
WC: 7520	Pay: 29	EEOF: Sanitation/Sewage	CC:	Resolution: