Job Description

Control System Engineer

**Division/Department:** Operations/Instrumentation Control Electrical Engineering (ICEE)

**Reports To:** ICEE Department Manager

**Type of Position:** Full-time

**Status:** Exempt

**General Statement**

This position is responsible for maintaining and upgrading existing control systems and designing new control systems.

**Essential Duties and Responsibilities**

- Configures operator interface graphics using GE iFIX.
- Configures Historian achievers using GE Historian.
- Creates Piping and Instrumentation Diagrams (P&ID) using AutoCAD Electrical.
- Designs and implements control systems using AB, Modbus, Ethernet TCP/IP and other protocols.
- Designs and implements a control system using AB PLC and GE iFIX hardware and software.
- Programs AB PLCs and GE iFIX HMI.
- Designs and commissions new control systems using PLC & HMI.
- Produces instrumentation specifications.
- Produces wiring schematic for instrumentation.
- Designs, implements and commissions an industrial control networks utilizing fiber optics and radios.
- Creates project documentation such as SOP and operator training materials.
- Applies engineering principles and logical problem-solving techniques for projects.
- Identifies new automation and process improvement opportunities.
- Maintains 100 percent uptime for entire control system.
- Assists with budgeting process.
- Other duties as assigned related to maintaining, designing and commissioning Northern Water and Municipal Subdistrict’s control systems.
**Education, Experience and Training Requirements**

*Education*
- Bachelor’s degree in mechanical or electrical engineering. Or, related degree and relevant experience.

*Experience*
- Ten years’ experience in maintaining, upgrading, designing and implementing SCADA, PLC, HMI and ICS. Experience in process control involving pump plants, hydro-generations, pipeline and open canal flows is highly desirable.

**License, Certificate, and Credential Requirements**

*License*
- Colorado Professional Engineer license or ability to obtain within one year.
- Valid driver’s license.

**Knowledge, Skills, and Abilities**

*Knowledge*
- Thorough understanding of control system design and implementation.
- Thorough understanding of ISA standards and practices.
- Good understanding of electrical fundamentals.

*Skills*
- Microsoft Office Suite
- Microsoft Visio or Smartdraw
- AutoCAD Electrical
- GE iFix and VBA

*Abilities*
- Work well with electronic technicians.
- Communicate technical details clearly to other trades.

**Work Environment**

*Physical Activities*
- Work both in an office setting and in the field.
- Work in and around construction site settings.
- Balance, using legs to stabilize self on uneven surfaces, ditch sides, concrete abutments, etc.
- Sustained operation of keyboard devices.
- Prolonged sitting, standing, and walking in performance of daily duties.
- Lift, drag, or push boxes of paper and documents weighing up to 50 pounds.

Reasonable accommodations will be made to enable qualified individuals with disabilities to perform the essential functions.

**Other Requirements**
- Maintains a personal appearance appropriate for job position and image of Northern Water.

This job description in no way states or implies that these are the only duties to be performed by this employee.

Northern Water is an equal employment opportunity employer.