



## HYDROMETRIC NETWORK MANAGEMENT USING REMOTE WATER LEVEL MONITORING

### ENVIRONMENTAL DATA LOGGERS CAPTURE DATA FOR EPA COMPLIANCE



CAS DataLoggers provided the remote water level monitoring solution to a Pacific Northwest county's municipal water authority to capture data from storage reservoirs, surface, and groundwater sources. The project required installation of a new [telemetry](#) data acquisition system to handle routine data collection for improved data quality, regulatory compliance, and daily information on water resource operations. Originally, technicians were looking at another data logger manufacturer, but learned that their main products had no remote monitoring capability, so they contacted CAS DataLoggers for a time-saving solution.

### INSTALLATION

The county installed a [DataTaker DT90L](#) Telemetry data logger at each site under monitoring. These loggers are ideal for general water and river level monitoring, pump status monitoring, boreholes with multiple piezometer tubes, weather stations and tipping bucket rain gauges. This setup consists of several sites across the county, each with a DT90 performing periodic data collection. The DT90 is factory-configured using data acquisition cards for different combinations of up to 8 analog inputs together with 3 digital inputs, allowing them to connect with water level sensors and rain gauges in this application. For example, the DT90 can record 4-20mA, digital status/frequency/count, thermistors, and 0-2.5V signals.



Equipped with a 4G GSM Modem, the DT90 is a rugged telemetry data logger specifically designed for installation and use under outdoor conditions where instrumentation is under continuous environmental abuse. The DT90 is perfect for installation where bollards, manholes or meter box covers are used for enclosures. Its lithium battery pack and 16 MB (500,000 data points) storage enable extended logging and readings are taken with 16-bit accuracy.

The DT90L's sealed connectors allowed technicians to install them without needing to open the box. Each data logger is housed in a rugged aluminum enclosure rated at IP67 with its input port connectors and caps secured. This ensures maximum protection against hostile environmental hazards such as water, dirt, dust, and moisture.

## USAGE

Utilizing GSM, the [dataTaker environmental data loggers](#) automatically deliver their data directly to the utility manager's desktop every Monday morning with scheduled daily capture and alarm features, reducing the frequency and costs of site visits. Additionally, these weekly transfers of validated data are used for both operational management and as part of water resource investigations. In accordance with EPA environmental compliance, this meets minimum flow requirements so there is enough water in the rivers for fish and other wildlife, and enough water downstream for other users.



DataTaker provides a convenient Windows-based software package for use with the DT90L and configuration and deployment is simple and intuitive. [dataTaker Live](#) is a versatile cloud service that makes collecting, monitoring, analyzing, sharing, and storing information easy. The software allows users to configure the loggers, configure sampling rates & alarms, and graph data for all channels.



## BENEFITS

The Pacific Northwest county realized many benefits after installing the DT90L remote water level monitoring system:

- Continual monitoring and alarming for multiple sites including rivers, boreholes, and groundwater sources
- Weekly reporting and automated alarming of all level and flow data sent directly to desktop
- Real-time data improves asset management for water resource operations
- Compliance with regulatory monitoring requirements

CAS Dataloggers and [dataTaker](#) have delivered solutions that are proven to be robust and low-cost data logging and telemetry solution for the county's environmental application. Easy to use, the DT90 data loggers have the remote monitoring capability that the lead competitor doesn't, saving the county substantial amounts of time and travel.

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For more information on [dataTaker environmental data loggers](#), or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or [www.DataLoggerInc.com](http://www.DataLoggerInc.com).