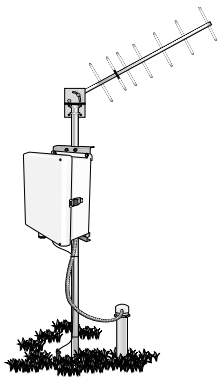


Water Quality

Benefits of Our Systems

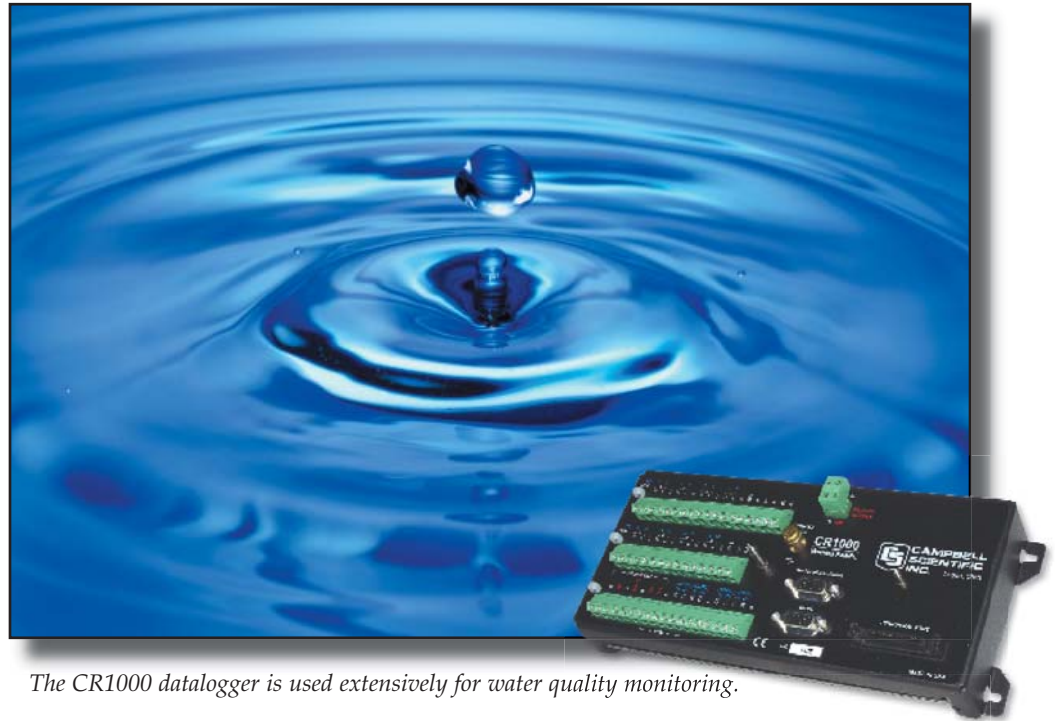
1. Systems are customized by choosing number of channels, sensors, and communications method.
2. Dataloggers can measure nearly every available sensor, including SDI-12.
3. Control of samplers, injectors, and other devices is based on time, event, or measured conditions.
4. Communications options include: radio, satellite (DCP), phone, and cell-phone.
5. Time-stamped data is recorded at programmable intervals.
6. Low current drain allows long-term operation on batteries.
7. Systems operate in harsh environments.



Contact your site(s) via satellite, radio, telephone, cellular phone, or other communications options.



CR800



The CR1000 datalogger is used extensively for water quality monitoring.

Campbell Scientific's systems for unattended, long-term monitoring of water quality provide unmatched versatility and reliability. Our systems measure water quality in many natural and industrial environments including streams, watersheds, wells, caves, water/wastewater treatment plants, aquaculture operations, landfills, and processing plants. Key components of our systems include dataloggers, sensors, and communications peripherals, which are customized for each application.

Dataloggers

Our dataloggers feature wide operating temperature ranges, low power consumption, and the ability to directly interface with a large variety of sensors. Because our dataloggers operate on batteries (with or without solar panels), they are ideal for long-term, stand-alone operation, such as at remote streams or wells. Most of our dataloggers are expandable using multiplexers and other peripherals. Data are typically displayed and stored in the desired units of measure (e.g., specific conductance as mS m^{-1} , $\mu\text{S cm}^{-1}$, Ohms).

Powerful on-board instruction sets allow unattended control decisions based on time or conditional events. For example, if measured water quality levels are outside a predetermined range, the datalogger can actuate water samplers, sound alarms, open valves, actuate injectors, and make a phone call to report conditions. The dataloggers can easily provide the necessary water sampler control to meet EPA-mandated first-flush and follow-up sample schedules. All data is time-stamped and data from event-triggered samples is marked for later analysis.

Sensors

Almost any water quality sensor, individual or multiparameter, may be used with the system, allowing the system to be customized for each application. We helped create the original SDI-12 standard, so you can be sure our systems are SDI-12 compatible. In addition, nearly all available flow, level, and meteorological sensors can be measured, generally without external signal conditioning.

Communications

The availability of multiple communications options for transmitting data also allows systems to be customized to meet exact needs. Systems can be programmed to send alarms or report site conditions by calling out to computers, phones, radios, or pagers. Real-time or historical data can be displayed or processed with Campbell Scientific software. Data can also be exported as ASCII files for further processing by spreadsheets, databases, or analysis programs.



Our dataloggers are typically interrogated via telecommunications from an office, but you can also access the data on-site.

Applications

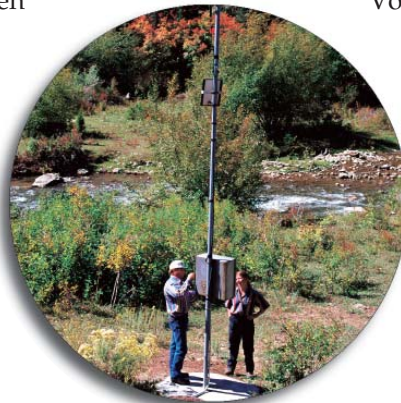
Lakes/Reservoirs
Streams/Rivers
Groundwater
Watersheds
Caves
Wells
Effluent
Landfills
Tailings ponds
Processing plants
Water/wastewater plants



Whether at an industrial setting such as a tailings pond or water treatment plant . . .

Parameters

Dissolved oxygen
Conductivity
Temperature
Chloride
Bromide
pH
ORP
Nitrate
Salinity
Turbidity
Ammonia



. . . or a natural setting such as a river, lake, or stream, our systems provide reliable, accurate water quality monitoring.

Data Retrieval

Voice-synthesized phone
Telephone
Cellphone
Satellite
Radio
Ethernet
Short haul
Meteorburst
Coaxial cable
Storage module