

With real-time Monitoring
Modeling, Management,
and Improvement

The Active™ Series Hydrological Monitoring Solutions

Real-time environmental monitoring for real-world decision-making

Environmental and weather data from site-specific locations can be limited—especially during severe weather, natural disasters and manmade incidents. Even daily activities like irrigation and precipitation that cause runoff can increase pollutant levels in water bodies. Heavy rainfall can prompt unexpected flash flooding and threaten lives and property. So how can you get a better situational overview of the immediate and long-term impacts your community might face? How can you see live meteorological, environmental and water quality data to direct response and promote mitigation? How can you protect your community's water resources, up to the minute, around the clock? Now new technologies like wireless sensor nodes and advanced power management can make even continuous monitoring affordable and effective.

The PraxSoft Active™ Series combines unique hardware, software and communications to support accurate data collection. It combines real-time monitoring with new networking technologies and a Web-based application to transform useful data into meaningful information. Wireless sensor nodes are used to gather information about their environment, do computations and transmit important data. Each node has sensors that monitor specific parameters related to the health and well being of water resources and assets. These autonomous devices have built-in intelligence to collect, communicate and analyze data about their surroundings and the environment to improve data gathering capabilities and decision-making.



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System Benefits

- Reduced compliance monitoring expense
- Compliance assurance
- Lower total cost of ownership
- Best Practices effectiveness validation
- Contractor compliance and accountability
- Scalable data architecture

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The Approach

Autonomous sets of wireless sensor nodes are known as Wireless Sensor Networks. In lake monitoring and stormwater applications these nodes gather real-time and long-term data such as water level, temperature and rainfall and communicate this data through adjacent or nearby nodes in an ad hoc fashion. This unique communications scheme allows the scattering of low-power nodes throughout a lake or watershed to provide optimal spatial coverage without expensive installation or communications costs. The nodes can transmit/receive data and find the best path back to the base station through one or more collection points or consolidation nodes. Reachback from the consolidation nodes to the base station or server can be achieved via several long-range legacy communication methods including licensed/unlicensed radio telemetry, satellite or cellular links.

The Results

The Active™ Series delivers real-time information to improve environmental data collection, flood warning, land use and remote monitoring capabilities. The system provides an immediate ROI by monitoring water levels, quality and usage while supporting effective asset management. So let the Active Series go to work for you and your community to protect your valuable natural resources and help improve best management practices.

System Features

- Scalable hardware and software architecture
- Collects real-time data to help determine potential threats
- Built-in alarms and notifications
- Simultaneous multi-site/multi-sensor access
- Interfaces to a myriad of sensors and detectors including water quality devices
- Supports integration into various GIS-based models
- Monitors water level, flow and usage

