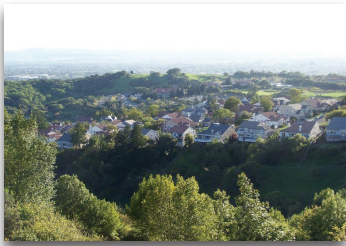# THE CITY OF SANTA ROSA, CALIFORNIA

Stratus enables **always-on water resource management** with Stratus® everRun®

The City of Santa Rosa, California Utilities Department controls water distribution for approximately 150,000 residents using Wonderware® InTouch® human–machine interface (HMI) software protected by Stratus everRun software. Santa Rosa's system includes 605 miles of potable water pipeline that fill 20 enclosed reservoirs with a storage capacity of 19.45 million gallons. The city's average water usage is 21 million gallons per day (MGD) with a summer peak average of 33 MGD and a winter flow average of 13 MGD.

The Environment

Using Wonderware InTouch HMI software, employees optimize system operations by adjusting set-points, monitoring equipment performance, as well as managing time-of-use for pumping schedules to maintain reservoir levels. InTouch HMI software detects pump station/reservoir intrusion and monitors process alarms. The control system features redundant unmanned control centers—operators access the control system from their vehicles using wireless technology.

Quick Facts

Solution Profile

- Utilities Department controls water distribution for approximately 150,000 residents

- Simple, cost-effective solution to protect critical water distribution control system from downtime due to faults, failures, and disasters

- Two identical Windows® servers run in lockstep as a single, fully redundant Windows server, enabling InTouch HMI to always operate uninterrupted

- Cost savings resulting from more efficient use of staff resources paid for the Stratus software in a short time frame

Products

- Stratus everRun software

- Wonderware® InTouch® HMI

"Water is a basic need," says Paul Doroff, Department of Technology Coordinator, City of Santa Rosa. "We needed to eliminate any interruptions in water distribution services to our residents."

> "The Stratus solution was simple, cost-effective, and provided a higher level of protection than any other solution we looked at."

Mitch Dobson
Senior Consultant, EMA, Inc.

The Requirements

The Santa Rosa Utilities Department needed a simple, cost-effective way to protect its critical water distribution control system from downtime due to faults, failures, and disasters. The protection system needed to eliminate three particularly costly downtime scenarios:

- **Downtime during a water main break** – Control system downtime could delay response to water main breaks potentially causing interruption of service, flooding, and other costly consequences.

- **Interruption of electricity usage optimization** – Downtime for the control system could interrupt a cost-saving electricity optimization function that saves electric costs by running pumps when electricity is less expensive.

- **Downtime during natural disasters** – Because Santa Rosa is located in an earthquake-prone area, the control system needs to be protected from earthquake, landslide and other natural disasters that could interrupt water distribution when it is critically needed.

The Solution

The City of Santa Rosa, along with consulting firm, EMA, chose Stratus everRun software to meet the City's high availability and disaster tolerance requirements.

"The Stratus solution was simple, cost-effective, and provided a higher level of protection than any other solution we looked at," notes Mitch Dobson, Senior Consultant, EMA, Inc.

The everRun software runs two identical Windows servers in lockstep so they function as a single, fully redundant Windows server. If one server stops running due to fault, failure or disaster, the InTouch HMI continues to operate uninterrupted using the computing power of the other server. EMA purchased, installed, and configured the everRun software quickly and easily.

The Results

Since the successful completion of the Santa Rosa project, "EMA and Stratus continue to work together using Stratus's unique redundant control systems platform at other water and wastewater facilities.

"By making our control system continuously available, we can deploy our operations staff to the locations where they are needed around the city," says John Joyner, Senior Manager, City of Santa Rosa. "The cost savings resulting from this efficient use of staff resources paid for the Stratus software in a short time frame."

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