

Miya Integrated Software Solution (MISS)

Project Sheet

New Providence, Bahamas

DURATION: November 2012–August 2013

CLIENT: The Bahamas Water and Sewerage Corporation (WSC)

Overview

The Bahamas Water and Sewerage Corporation (WSC) serves a population of about 300,000 island residents. As the island population grows, the need for more effective system monitoring became apparent. Currently, the water system loses about 6.87 million imperial gallons (MIGD) daily.

WSC partnered with Miya to implement a 10-year comprehensive water efficiency project to reduce water losses to 2.5 MIGD in 5 years and 2.0 MIGD in 7 years.

Miya's Integrated Software Solution, combining a Supervisory Control and Data Acquisition (SCADA) system with cutting-edge water network management software (Netbase), is a key aspect of the comprehensive loss reduction project.

Initially, WSC's system was updated by Star Controls, implementing a SCADA to monitor, log historical data and alert maintenance staff of problems via alarm. Once the SCADA is in place, Netbase will be installed. Together they provide a comprehensive technological solution for controlling and monitoring the entire network.

Netbase, developed by Crowder Consulting, is the world's leading water network management system, integrating corporate systems data from SCADA, Telemetry, AMR, billing programs, GIS, etc. into one comprehensive database that provides transparent status of the entire network and specializes in water loss reduction management. Miya holds exclusive rights to distribute, market, and license Netbase worldwide, with the exception of the UK, Ireland, Scandinavia, Malaysia and Australia.

Project Description

Netbase and SCADA integration takes place in three phases, concurrent with necessary infrastructure upgrades:

Phase 1 – Set up basic SCADA system, including installing updated RTUs and establishing central control room for oversight of the entire water distribution system.

Phase 2 – Once the initial SCADA was implemented, infrastructure was updated and expanded. Based on the data collected in phase 1, WSC discovered pump and station power issues. An additional 5 RTUs were installed for better efficiency control in the future.

Phase 3 – Netbase installed to incorporate SCADA with other existing corporate data systems, such as GIS, customer billing software and water quality monitoring. Netbase allows for a single entry point to all data, provides network visualization and maintains information in a single, queryable database.

Benefits of Netbase/SCADA Integrated Solution:

Functionality for Optimizing Network Operations:

- Real-time data to keep a finger on the pulse of the entire system from the control room
- Centralized monitoring of operational data, archiving and assets, in a transparent and unified manner
- Online hydraulic network model(s)
- Flexibility for hooking new field points to either the SCADA or directly to the Netbase

Monetary Savings:

- IT solution ready "right off the shelf," thus requiring a short implementation period
- Reduced maintenance costs due to dynamic network monitoring capabilities
- Proactive allocation of resources, instead of reactive
- Increased lifetime of the infrastructure
- Single screen to the whole network – Netbase integrates all data for network capital planning

Reduced Energy Costs:

- Monitoring allows for reduced power consumption during high tariff periods and automated pump selection based on efficiency
- Advanced functions for hydraulic modeling

Water Conservation:

- Identifies leaks and makes necessary shifts to reduce water losses until a leak is repaired
- Alarm handling, remote control and threshold set-up
- Monitors flows and allows for pre-programmed peak usage periods



SCADA Pump Monitor & Control – Blue Hills Station Overview