

## Customer Case Study

# Miami-Dade Water and Sewer Department

### South Florida Public Utility Uses Proliance® Software to Improve Capital Improvement Project Execution and Elevate its Community Image

The Miami-Dade Water and Sewer Department (WASD) is one of the largest public utilities in the United States, employing nearly 2,700 people and providing direct water service to more than 416,000 customers throughout Florida's Miami-Dade County. For consumer use, WASD draws and treats nearly 350M gallons of water every day from the Biscayne Aquifer, consistently exceeding both state and federal drinking water standards. In November 2007, WASD received a historic 20-year Water-Use Permit from the South Florida Water Management District that would allow the utility to meet current and future water needs while protecting the area's natural resources. Plans associated with the permit include major capital improvements in areas such as wastewater treatment, reclamation and reuse.

At the Miami-Dade Water and Sewer Department (WASD), one of the biggest challenges around managing capital improvement projects has always been the allocation of resources. Silos of disconnected information made it difficult for various managers to track the status of a project and react accordingly. A project in the planning stage that suddenly received funding, for example, would be passed to the engineers with little notice. "You never knew what was coming at you, which made our ability to get work done very risky," laments the department's Associate Director John Chorlog. "With advance notice, we were confident that we could take a more proactive approach to reviewing and prioritizing projects and properly allocating our resources."

When WASD was awarded their largest capital outlay project to date, a high level disinfection (HLD) wastewater treatment facility costing more than \$600M, the department embarked on a search for a comprehensive project management tool

that would improve project planning, visibility and execution – from inception to completion. The goal of this search would be to replace the various disjointed systems and information silos with a standardized project control tracking system (PCTS) operating on a single database.

In August of 2007, WASD selected Proliance software from Meridian Systems to serve as the foundation of their new PCTS. As an Infrastructure Lifecycle Management (ILM) solution that allows organizations to optimize the Plan-Build-Operate project lifecycle, Proliance had the capabilities to unify all capital projects within WASD.

The selection of Proliance was made after significant research, evaluation of several systems and a site visit to neighboring Baptist Health South Florida where WASD's team saw Proliance in action. An existing relationship with Meridian (the company's Prolog® Manager software had been used for several years by a group of WASD staff to manage construction contracts) helped seal the deal.



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*John Chorlog, Associate Director  
Miami-Dade Water and Sewer  
Department*

## An Impressive Implementation Strategy

WASD requested that Runding Corporation, an authorized Meridian Business System Integrator located in Sarasota, FL, lead their implementation and provide long-term support for their PCTS initiative. “We had seen Runding’s work at Baptist Health and were impressed with their implementation strategy,” says Wilson Ross, WASD’s computer services manager. “So we brought them on-site to do our Proliance configurations, lead our training programs and help us meet our objectives.”

A phased implementation of Proliance began in October of 2007 and was designed to ease adoption of the solution across diverse user groups with varied software skills. Daily Work Journals were rolled out first, followed by Requests for Information (RFIs), Submittals and Meeting Minutes. Next, the WASD team worked their way through the Field and Office applications before moving on to Budget and Cost Management. Training, performed in small groups, was supplemented by internally-created “task aides,” or user manuals, that document how to use each function.

Throughout each phase of the implementation, WASD’s core team worked closely with Runding to ensure that Proliance was configured to meet the department’s business needs and to migrate their systems onto the new platform. “The business processes discovery phase was a great opportunity for us to develop better ways to work more efficiently and effectively,” says Rena Chen, P.E., chief of the Program Management Division and PCTS project manager on the business/functional side. “For example, the renowned ‘yellow box’ process was evaluated and adopted – and defined in Proliance. Also, one of our existing processes, Engineering

Service Requests (or ESRs), was enhanced by the Initiation Request feature in Proliance.”

With nearly two thirds of the projected 300 Proliance users already trained on the solution, WASD has seen significant benefits throughout the organization. The deployment of Proliance has not only improved processes, but it has given a broad range of stakeholders, including division chiefs, engineers, construction managers, planners, inspectors and document control staff, access to vital information.

## Greater Efficiencies Improve Community Standing

According to Chorlog, uniformity among documents like RFIs and meeting minutes was one of the first beneficial impacts of Proliance. Previously, each project manager used their own format, which made it difficult to recognize similar information across various projects. Standardized formatting has eliminated these inconsistencies. In addition, having all project information accessible from a single database has significantly improved efficiency.

To prepare for progress or status meetings, WASD used to print agendas and meeting minutes. Now, data from Proliance, including RFI and submittal lists, are projected onto an oversize screen. With the engineers, contractors and construction managers all looking at the same information, decisions can quickly be made. “Since implementing Proliance, two of the initial four contracts were completed 30% ahead of schedule and the other two finished on time,” Chorlog states. “All four of the currently active contracts are ahead of schedule.” While this benefit, attributed in part to Proliance, doesn’t have a direct dollar savings to WASD as the project owner, it does mitigate risk. “By completing a contract on time, we eliminate the chance that a contractor will make a delay claim.”



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Completing contracts ahead of schedule helps improve WASD's image within the community, which had been suffering due to poor execution of capital improvement projects. Visibility into project status across all divisions has led to better planning and anticipation – and smoother hand-offs throughout the project's plan-build-operate lifecycle. "Over time," Ross says, "we'll have historical data to use as a baseline for continually improving our ability to plan and schedule in the most efficient way possible."

The software's Workflow capabilities have made a big impact on operational improvement as well. "The nice thing about Proliance Workflow," Chorlog states, "is that a document can't get lost. We require so many approval signatures on documents that it was easy to misroute things. Over the years, this has been a big problem for us." Before Proliance, the department actually had people physically walk certain documents around for approvals so they wouldn't get lost, which was very expensive. Today, even though some paper is still routed manually, each document and approval is tracked within Proliance. "Workflow has been a great tool because we know where each document is and how long it's been there."

Even the Inspector General (IG) has benefited from WASD's Proliance solution because he no longer has to spend countless hours digging through paper-based files to perform reviews and audits. With access to Proliance, the IG now reviews documents online, which saves the Office of Inspector General money. "The IG told me that Proliance is a great system because it makes it easy for him to review our files for accuracy," Chorlog relates. "Although he was here nearly full time

during the first eight months of HLD, he's satisfied that we're running a tight ship and will only be making periodic visits from now on. That's a strong testimonial about the power of Proliance from an outside party."

## Optimizing Project Planning and Execution

As WASD heads into their final phase of major implementation – advanced costing – they continue to develop processes and reports to optimize their project planning and execution. "Our greatest accomplishment with Proliance to date is achieving an enterprise level platform that houses all capital project information in one place," Chen states. "Everyone at WASD is now on the same page regarding where we are and how we are performing."

Runding continues to play an integral role in the development of the department's PCTS, too. "In addition to bringing us a workable implementation strategy," Ross says, "Runding has also brought best practices to the table." One example is the creation of a structured approach to optimize contract management and use of the department's Expenditure Requisition (ER) form from a committed cost standpoint.

"Our goal with Proliance was to achieve the ability to move a project to completion in a more efficient way," Chorlog concludes. "The consolidation and standardization of processes onto a singular system supports this effort. Our people now have a database-driven system that allows them to manage their resources and plan ahead for things like funding and equipment purchases. I see this as the greatest benefit of our Proliance solution."



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## Miami-Dade WASD Project Profile

### High Level Disinfection Upgrade at the South District Wastewater Treatment Plant in Miami-Dade County, FL

Miami-Dade County's South District Wastewater Treatment Plant (SDWWTP) is currently being upgraded to improve the quality of treated wastewater through high level disinfection and to increase the capacity of the plant from 225 to 285 million gallons per day. The improvements are dubbed the High Level Disinfection (HLD) Project and consist of fourteen individual construction contracts, each with an estimated cost ranging from \$1.5M to \$135M.

The HLD Project is driven by regulatory mandates from the Florida Department of Environmental Protection and the United States Environmental Protection Agency (USEPA). A Consent Order with the state and new rules promulgated by USEPA require the treatment upgrades. The HLD Project must be completed on a strict and very short time table with potential monetary penalties for non-compliance. The design and permitting was fast-tracked by a design team comprised of county staff and consultants.

#### Key Project Elements

- › Coordinate up to 9 simultaneous contracts to prevent disputes and minimize contractor claims
- › Coordinate all work within the active 112 mgd wastewater treatment plant to minimize impacts to operations
- › Construct entire facility with 78 months of groundbreaking
- › Provide consistent and timely documentation to contractors to maintain efficiency and project momentum
- › Monitor and control costs to keep change orders to an absolute minimum
- › Provide timely status reports to management and regulatory agencies



#### Results to Date

Ground was broken in late 2007 and the initial phase is now more than 95% complete. Three of the fourteen contracts have been completed, one is nearing completion and four others are in the early stages of construction. The remaining six contracts will be awarded by the end of this year. Significant achievements include the following:

- › Two contracts completed ahead of schedule
- › Two contracts completed on schedule
- › No change orders have been issued
- › Current contracts are ahead of schedule
- › Lower than expected construction management costs have been realized due to early contract completion

**Design Team:** County Staff and Consultants

**Total Project Cost:** \$600M

**Project Completion Date:** April 2014



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