



Breaking Free from Legacy Lock-In: Modernizing West Basin for Future-Ready Water Supply

For nearly 80 years, the West Basin Municipal District's mission has been to provide a safe and reliable supply of high-quality water to the coastal Los Angeles communities it serves. The wholesale water agency was constrained by a legacy control system and continually faced rising support costs and long waits for vendor service.

To modernize its industry-leading approach to recycled water, imported drinking water, and conservation, West Basin knew it needed to break free from being locked into vendor services to reduce O&M spend, and gain access to modern support from multiple qualified integrators.

The Challenge

For West Basin, reliably delivering recycled and imported water in a drought- and climate-stressed region is a mandate taken seriously. Its recycled water system is the largest of its kind in the United States, producing five distinct types of fit-for-purpose recycled water for nearly 600 customer sites.

Yet, West Basin's aging Ovation platform relied on obsolete hardware and was increasingly unsupported, creating financial strain and significant operational risk if key components failed. Since the early 1990s, the Ovation distributed control system (DCS) has acted as the plant-wide control "brain" that led to:

- Depending on proprietary hardware, software, and networking, only serviceable or modified by engineers based in Pennsylvania.
- Aging, hard-to-replace hardware, with controllers and I/O cards long past normal lifecycle, with replacement controllers often costing up to \$40K each
- Black-box data model, with process and historical data trapped inside the Ovation environment
- Service call response that would take up to 6 weeks

To break free from the legacy platform and upgrade for the future, West Basin sought a solution provider to deliver a new system that could also extract, contextualize, and visualize data in modern tools, and feed it into AI/advanced analytics.

Our Role | RoviSys

RoviSys worked closely with West Basin as a support contractor prior to the modernization initiative, providing consistent on-site and remote support for its legacy system. This partnership was a natural launch point for RoviSys teams as the effort to replace the Ovation platform progressed.

Evaluation & Planning

RoviSys deployed a team of engineers to conduct a comprehensive onsite assessment. Over approximately two months, the team reviewed every control cabinet, instrument, and system connection in order to fully document the current environment and identify hidden challenges and legacy issues that could impact the modernization effort.

The assessment provided a detailed understanding of the existing hardware, wiring infrastructure, and control logic architecture. By thoroughly documenting the current state and associated concerns, RoviSys and West Basin established a clear picture of the operational risks, system constraints, and technical requirements that needed to be addressed within the new design.

After completing the assessment, RoviSys evaluated nearly a dozen vendors and products before narrowing the field to three options for control platforms. The team collaborated with West Basin stakeholders on a comprehensive evaluation process to determine the platform best aligned with operational goals, long-term support requirements, and modernization strategy. Schneider was identified as the best fit for the West Basin modernization.

Our Role | Enterprise Automation

As the prime contractor, Enterprise Automation architected the vendor evaluation criteria, system migration strategy, and AVEVA-Schneider platform design. The EA team's clear, detailed documentation of these plans ensured close alignment with RoviSys throughout execution. This included control narratives describing the operating logic of West Basin's existing Ovation controllers and the vendor scoring rubric that guided platform selection.

Once the client selected Schneider Electric, EA led system design and built a project-specific suite of standards covering instrumentation, controls, electrical design, and cybersecurity governance, including change control and system management documentation. Tailored to West Basin's environment rather than adapted from vendor defaults, these standards reduced configuration complexity significantly. Equally important, they gave West Basin's in-house team the foundation to develop, manage, and evolve the system on their own terms, directly fulfilling the project's central goal of ending vendor dependency.

The Solution

Schneider Electric & Top-Tier Partners

Following a thorough assessment by Enterprise Automation and RoviSys and multiple vendor evaluations, West Basin selected Schneider Electric's modern, open control architecture based on Modicon M580 PLCs, AVEVA System Platform, and AVEVA PI, scoring higher due to pricing, concrete examples, native protocols, PLC migration approach, and future AI capabilities. A strong implementation ecosystem supported by Schneider Master Alliance Partners, RoviSys and Enterprise Automation as go-to integrators, supported West Basin's confidence in available expertise and long-term support beyond a single vendor.

West Basin is moving to a modern Schneider-based architecture, combining Schneider controllers for reliable real-time control, AVEVA software for a unified operations view, and AVEVA PI for rich data and analytics, all running on a redesigned, security-hardened OT network. This integrated stack replaces the aging Ovation DCS with:

- An open, supportable platform that gives operators clear, consistent SCADA screens across 19 process areas
- High-quality historical and real-time data that lays the groundwork for future AI-driven optimization and efficiency gains across their recycled water facilities

The Result

Modern, Open Schneider Architecture Ensures Future Water Supply

The Schneider–RoviSys–Enterprise Automation solution began in June 2025, with overall deployment of the new Schneider based architecture expected to be complete in early 2028. The solution delivers standout results for West Basin:

- **Reduced cost and vendor risk:** West Basin expects annual control system maintenance spend to drop from about \$2M to roughly \$500K or less, while moving from a single vendor model to an open Schneider platform supported by RoviSys and Enterprise.
- **Data driven operations:** Schneider controllers, AVEVA software, and PI replace the old “black box” with clear, plant wide visibility across 19 process areas, giving operators real time, contextualized data and a foundation for future AI driven optimization.
- **Secure, future ready platform:** A redesigned OT network using Purdue model and DMZ best practices strengthens cybersecurity and makes it easier to safely share data with business and analytics systems, positioning West Basin as a flagship Schneider AVEVA PI reference for recycled water on the West Coast.
- **The goal of the overall project's success is clear:** To ensure West Basin breaks free from an expensive, brittle, locked control system and replaces it with a modern, open Schneider-AVEVA-PI architecture, the future water supply is guided by dramatically lower costs, unlocked data, and future-proof operations for a crucial regional utility.