

## Val Vista WTP Filter Upgrade Optimization Project

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Project Name: Val Vista WTP Filter Upgrade Optimization Project  
Location: Val Vista Water Treatment Plant, 3200 E. McDowell Rd.  
Mesa AZ  
Owner: City of Phoenix Water Services Department  
Project Construction Cost: \$1.5M

The Val Vista Water Treatment Plant Process Upgrade Optimization Project analyzed the plant's existing filter semi-automatic controls and identified needed improvements to provide full operational automation and backwash controls. These improvements ranged from upgrading filter instruments, redesigning existing local and remote controls, replacing old hardwired controls to PLC, upgrading existing PLC hardware, and adding actuators to backwash isolation valves.

The project was put forward as a design/build team effort with the challenges of coordinating and scheduling design, construction, checkout, and startup around the Plant's operation and scheduled shutdowns.

Project included the following electrical and I&C features:

- Replacement of filter level instruments with HydroRanger 200s.
- Replacement of East Plant filter agitation flow meter instrument.
- Replacement of West Plant and its Common Backwash panels with Modicon Quantum PLCs.
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- Addition of actuators to backwash isolation valves and tying into new control system.

