

SPA2 Wastewater Reclamation Facility

Project Name:	SPA2 Wastewater Reclamation Facility
Location:	City of Surprise, AZ
Owner:	City of Surprise Water Services Department
Project Construction Cost:	\$ 24M

The City of Surprise's SPA2 involved a design and build project for a 2 MGD water reclamation facility to deal with the City's rapid growing community. The project required fast paced and fixed budget

The facilities include: a level controlled influent pumping station, fine rotary drum screens, anoxic and aeration basins, Ultra-Filtration Membrane Treatment System, Ultraviolet (UV) Disinfection System, reclaim water holding tank, and recharge basin and wells.

Project includes the following electrical and I&C features:

- Main 480VAC, 3000A power service;
- 900KW emergency backup generator system;
- Active Harmonic Filter system;
- Motor Control Center housing: (9)VFDs, (20) motor starters, power distribution panel;
- 19 - motorized control valves and numerous solenoid valves;
- 30 - local control panels;
- Plant PLC and Membrane PLC;
- Fully automated recharging well system;
- Various process related instruments: magnetic flow meters, ultrasonic and pressure differential level transmitters, floats, and turbidity analyzers;
- Remote monitoring and alarming via unlicensed radios and antennas network system.

