

# SEW – UF Plant Secure

South East Water Ultrafiltration Plant operational but...

Boneo Water Recycle Plant (WRP) produces Class A water for returning to the environment and for supplying the local area customers with water for irrigation. The Class A water is produced by passing effluent from the activated sludge plant through ultrafiltration (UF) membranes followed by ultra violet disinfection and chlorination. The UF membranes are very fine filters capable of capturing microscopic particles including viruses. Being filters they are regularly backwashed to remove captured material. At times, chemicals are also added to the backwash water in order to maintain filter efficiency. The chemical addition to the backwash is called CEB, Chemically Enhanced Backwash.

In August 2017 Parasyn commenced technical service provision to SEW to provide upgrades to the control systems at the Boneo WRP. Parasyn's scope included Project Management, Design, System Documentation, Configuration, Testing, Commissioning and Concept Collaboration.

Modifications were made to SCADA Software and control devices for the CEB, backwash schedules and other control sequences to improve the performance of the plant. Correct plant operation prevents very costly membrane failure and ensures continuity of plant operation and continuous supply to consumers. Interlock staging also ensures chemical dosing is effective. Contingency for any operational deviations including pump faults and improper dosing performance ensures the overall plant performance is not compromised.



Parasyn engineers worked closely with SEW process engineers to ensure close alignment with the plant control philosophy which was regularly validated and revised as plant and equipment performance was monitored and new strategies developed in response to this monitoring. Both parties contributed to a successful outcome.

At project closeout when the project deliverables were completed (on time and budget) and the plant was purring, engineers from both camps were still coming up with new ideas for future consideration. We need more of that; engineers collaborating, being creative and solving complex problems by combining their knowledge.