



TARONGA WESTERN PLAINS ZOO

RECENT PROJECT

Advancements in technology over the past few decades have brought significant energy and water efficiencies to vital infrastructure.

One example is at Taronga Western Plains Zoo which used TEAM Irrigation to upgrade the river pumps that supply the entire water needs for the zoo, taking it from a primitive stop start unit to a fully integrated control system.

The two pumps on the Macquarie River need to supply the zoo with 3.9 megalitres of water each day for the drinking, washing and swimming needs of the animals, as well as for irrigation. Sydney consultant Matthew Wilson Total Irrigation Designers assessed the water infrastructure requirements at Taronga Western Plains Zoo and TEAM Irrigation won the tender to replace the two pumps, upgrade the pump site and install a level transducer to enable full pump control. TEAM Irrigation director Craig Chandler said it was a great project to be a part of but came with a few challenges.

The river was on Crown Land so they had to work with the NSW Office of Water to ensure any riverbank excavation did not change the footprint of the pumps or disturb the river.

TEAM Irrigation also needed to make sure the zoo had continued access to water throughout the project with the pumps not being able to shut down for any longer than a day.

“We had to work closely with the zoo and let them know when we were turning water on or off,” said Craig.

“We had to install one pump while the other was operating and then switch over the new one while we pulled the old one out.

Craig said the new control system installed by TEAM Irrigation had taken what was often a labour-intensive job to manually switch on or off the river pumps and made it all fully automated.

He said where previously the pumps were often turned on during peak electricity rates, the new system allowed for energy costs to be contained by scheduling pumping during off-peak times.

“We installed a level transducer which reads the water level in the dam and gives it a real time read out of water levels to a computer monitoring system for zoo staff,” said Craig.

“All readings and information is relayed to the main administration office for monitoring.

“Head office can also now set a critical water level which can generate an emergency start of the river pumps and monitor it via a telemetry system.”

The new system can control both the pump duration and pump speed.

“It should significantly cut the zoo’s costs of power, labour and give much better reliability to its water supply,” said Craig.

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