



MACQUARIE RIVER SCREENING PROGRAM

AWMA was the lead contractor for the Macquarie River Fish Screening Program, a critical initiative aimed at protecting native fish species whilst ensuring the cost-effective and efficient operation of irrigation pumps along the Macquarie River, NSW.

This project leveraged AWMA's capacity to design, manufacture and install fish protection screens, retrieval systems and associated equipment across various river pump sites.

KEY STATISTICS FROM THE MACQUARIE RIVER FISH SCREENING PROGRAM INCLUDE:

- **SITES:** 7
- **PUMPS:** 20
- **NATIVE FISH PROTECTED ANNUALLY:** 566,000 (as reported by OzFish Unlimited)
- **ADDITIONAL RIVER FLOWS SCREENED:** 1,797 ML/d
- **BENEFITS:** An estimated \$31m/yr of public benefits (as reported by Fish Screens Australia)
- **ASSET LIFESPAN:** Over 50 years

Teams collaborated with asset owners at each site, customising solutions to meet their specific needs, with a minimal environmental footprint. Retrofitting screens and retrieval systems to existing inclined axial pump systems involved the design of multiple configurations. Notably, a 17-tonne triple trough retrieval system with a T-Screen was installed to service three pumps for a combined flow rate of 200ML/d.

SELF-CLEANING INTAKE SCREENS PROTECT FISH AND OTHER AQUATIC LIFE WHILST ALSO OFFERING ASSET OWNERS:

- Reliable water delivery
- Reduced maintenance and labour costs
- Lower energy consumption
- Water savings, and
- Ease of inspection

The success of AWMA's self-cleaning intake screens lies in their design criteria. For more information please follow the AWMA project page, or contact the screen team.

GENERALLY SPEAKING

Strong partnerships deliver successful projects.

It's been a busy year for AWMA, the projects presented in this edition of our newsletter are a small sample of some of the important and interesting projects we are currently engaged in.

Over the last few weeks our teams prepared and submitted major tenders to supply water control solutions for two of Australia's largest infrastructure projects. One project is well advanced, and the other is about to kick off.

From our perspective, these projects have had very different journeys leading up to the tender submissions.

For one of these projects, we provided ongoing support over a six-year period, from the early stages of concept development. The other project has had infrequent adhoc engagement prior to tender. One tender was submitted without a single RFI, the other had over fifty technical RFI's.

The solutions AWMA offer are not 'off-the-shelf'. They typically require some degree of support to successfully integrate them into a larger project design, and to develop a viable tender scope and specification.

AWMA are committed to strong partnerships to provide successful and viable project delivery. Our commitment to this means AWMA's sales and technical teams spend a considerable percentage of their time supporting early-stage project design and development. We provide this service predominantly free of charge.

Give us a call, we will be happy to support you and your project, in any way we can.



Brett Kelly
Managing Director



AWMA Decant Gate

ADVANCED DECANT GATE FOR QUEENSLAND STP

Construction of the new Port Hinchinbrook Sewerage Treatment Plant (STP) in Cardwell, Queensland, is well underway.

AWMA was engaged by Haslin Constructions to design and manufacture a specialised downward-opening decant gate for the project.

AWMA's Decant Gates are engineered for high-frequency, high-duty cycle operations in decant applications. A standout feature is the positive cable drive system, which addresses the common wear and tear issues seen in traditional spindle drive systems under heavy use. This innovation extends the drive system's service life, leading to lower maintenance, reduced whole-of-life costs, and minimal system downtime.

The gate, constructed from grade 316 stainless steel, is 5.5 metres wide and 1.9 metres high, capable of withstanding up to 2.0 metres of off-seating water pressure. It also features an integral scum baffle to prevent surface contaminants from passing over the gate during the decant cycle.

The twin cable drive system is powered by a three-phase 415VAC electric actuator, connected to a multi-turn gearbox.

For more information on this project or to explore AWMA's gate solutions for urban applications, please visit our website.

AWMA WILL BE EXHIBITING AT THE FOLLOWING EVENTS

EVENT	DATE	LOCATION
Irrigation Australia Conference & Exhibition (IAL)	2 – 4 September 2024	ICC Sydney, NSW
Stainless Steel World Asia Conference & Expo	11 – 12 September 2024	Singapore
Water New Zealand Conference & Expo	25 – 27 September 2024	Claudlands, Hamilton, NZ
ANCOLD	11 – 14 November 2024	Adelaide Convention Centre, SA
ASFB Conference 2024 (Silver Sponsor)	18 – 21 November 2024	The Nex, Newcastle, NSW



HYDRO DAM SCREEN SUCCESS

Four years ago, AWMA was engaged to supply a self-cleaning intake screen and retrieval system for the Waitaki Dam, in New Zealand.

The AWMA T-screen was installed on the dam intake structure on Lake Waitaki for the Kurow-Dunroon Irrigation Company.

Murray Turner, Managing Director of Waitaki Irrigation Management Ltd., oversees both the Kurow-Dunroon Irrigation Company and the Maerewhenua District Water Resource Company.

Last month, Mr Turner escorted our NZ Manager David Smith on a site tour. During this time, he shared his insights and satisfaction with the KDIC irrigation intake screen, which has been successfully operating for over four years. He noted that;

"Irrigation is a 24/7 commitment, with the majority of time devoted to maintenance. Having worked in this industry for over 40 years, I know firsthand how crucial the endurance of irrigation intakes are. The time, money, and hassle involved when something breaks down are significant. The AWMA intake screens however, just keep operating, hassle-free".

Closer inspection of the intake structure found no abnormalities or deformities to the structure, with minimal wear of the internal or external brushes (which have an expected 7 - 10 year life span, subject to duty cycle and debris loading). Annual inspection of all intake structures is recommended for best practice procedures.



Self-cleaning Dam Intake Screen



Flooded



Flood Ready



FLOODFREE VENUES

In partnership with Narrabri Shire Council, AWMA recently delivered an innovative flood protection solution for The Crossing Theatre – a vital community hub for events in the local area.

FloodFree Demountable Barriers are a simple product, manually deployed to protect areas from flood and stormwater intrusion. Made from marine-grade aluminium, these barriers are 'retro-fit'; designed to fit around existing infrastructure, such as doorways, loading docks, stairwells and parking entrances. Permanent sill plates were used in areas with an aggregate concrete finish or uneven surfaces, while end frames and covers were designed to fit around circular concrete columns.

Narrabri Shire Council's Capital Works Coordinator – Property, Graham Richardson said "AWMA's flood protection system has provided us with peace of mind, knowing that we can offer the community a meeting and entertainment venue that is no longer threatened by flood events, or subsequent downtime usually required for the clean-up".

"We are relieved to know that if the barrier does need to be deployed, it is a low-fuss, straightforward process that one or two of our staff can do - allowing the show to go on!"

One of the main benefits of the Demountable FloodFree Barrier System is the ability for them to be deployed by a single person, which according to Narrabri Shire Council, is exactly what was needed at the local entertainment precinct.

RECENT PROJECT GALLERY

INNOVATIVE - CUSTOMISED - SUSTAINABLE



FloodFree Tilting Barrier **FLOODFREE**



T-Screen on a single screen retrieval system servicing two inclined axial flow pumps



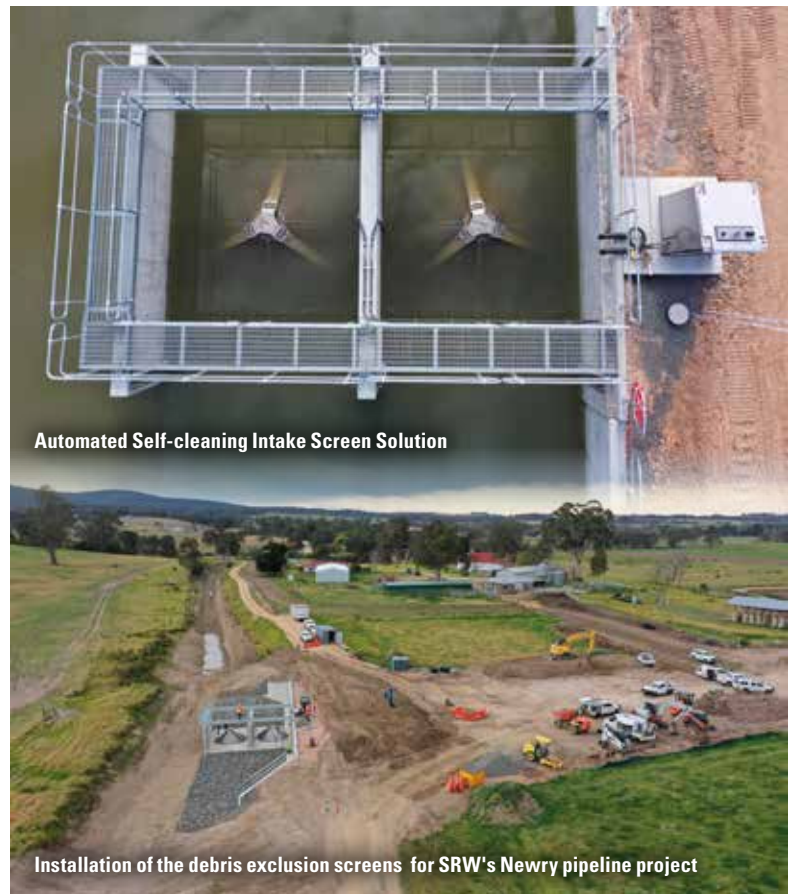
AWMA Bulkheads



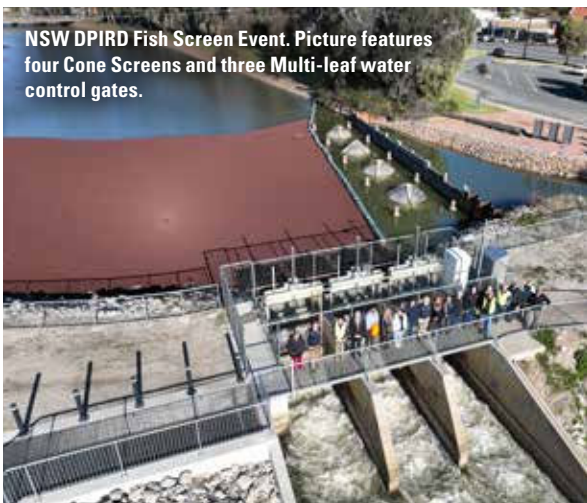
Inspection of Installed T-Screen and Retrieval System



Installation of a Concealed Flood Barrier **FLOODFREE**



Automated Self-cleaning Intake Screen Solution



NSW DPIRD Fish Screen Event. Picture features four Cone Screens and three Multi-leaf water control gates.

Installation of the debris exclusion screens for SRW's Newry pipeline project

FLOOD | ENVIRONMENTAL | IRRIGATION | WATER TREATMENT | DAMS | ENERGY & RESOURCES



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