

FISH SCREEN SOLUTIONS

Whenever water is taken out of rivers, fish and debris are taken out with it.

Modern screens solve this and have been successfully implemented on irrigation diversions and water offtakes, worldwide, for decades.

Over the past few years AWMA have been assisting NSW DPI Fisheries to refine internationally proven screens so that they operate in a way that is suitable for Australian conditions. It has since been recognised that installing fish screens on Australian irrigation diversions and water offtakes, will make a significant contribution to the protection of native fish stocks in our rivers.

AWMA recently worked in partnership with the Trangie Nevertire Irrigation Scheme (TNIS), NSW DPI Fisheries and NSW Department of Planning, Industry and Environment – Biodiversity & Conservation, to deliver a Fish Screen Solution suitable for Macquarie River's TNIS irrigation pump station.

The TNIS pump station extracts up to 800 million litres of water per day from the Macquarie River and delivers it to 33 regional farms. Many of these irrigators operate lateral and pivot irrigation systems with spray nozzles that if blocked, set off alarms at any hour, requiring manual cleaning. A screening solution was required to reduce fish and debris entrapment whilst guaranteeing reliable irrigation flows.

AWMA engineered a fish-friendly intake screen design that extracts water through large self-cleaning wedge wire Cone Screens.

AWMA Cone Screens were specified for this project due to a number of unique features:

- **Large screen surface area;** almost 50m² of screen surface ensures even flow distribution, reliable water delivery and low velocities to avoid impingement and entrainment of fish and debris.
- **Low profile;** the low profile of the cone screen ensures flow volumes can be delivered during times of low river levels.
- **Self-cleaning function;** the unique brushed self-cleaning function of AWMA Fish Screens facilitates regular cleaning of the screen surface. Under normal operating conditions the cleaning cycle will be programmed for once a day and only take a few minutes.
- **Proven screen medium;** stainless steel wedge wire with 2mm-3mm slot size has been proven to be most effective for the protection of Australian native fish species.

The AWMA Fish Screen Solution for TNIS, funded by the NSW Government's Drought Relief Initiative, has been viewed as the 'benchmark best practice solution' for intake screens on pumped river diversions.





GENERALLY SPEAKING

Our team are celebrating AWMA's 20 years!

Established 1st July 2000, AWMA have been delivering specialised water control infrastructure to domestic and global markets for twenty years.

We would like to take this opportunity to thank everyone for their support; customers, project partners, suppliers and our dedicated team who together have enabled AWMA to continually build our products and services for two decades. Witnessing our team working with numerous project partners to design, manufacture, install and deliver innovative solutions for hundreds of challenging projects, has been very rewarding.

When we started the company, we primarily serviced the needs of the local irrigation market but quickly diversified into delivering water control solutions for all water sectors. The millennium drought began two years into our operation and still has legacy effects today. Australia was pushed to use scarce water resources more efficiently for irrigation, the environment and urban use. Complimenting this was the opportunity to more effectively recycle waste water. I am very proud that AWMA has been a part of many of the solutions and projects delivered to ensure Australia's most valuable resource is sustainable. Australia is now seen as a global leader in water efficient water delivery and use across all water sectors. At a time when there are universal global challenges with natural water resource availability it is something we should all be proud of.

Our team of over 50 continue to focus on listening to our customers and working with our suppliers to deliver cost effective but innovative solutions for water control.

AWMA's head office and manufacturing facility proudly remains in Regional Victoria and is supported by a dedicated team located throughout Australia and New Zealand.

The quality and culture of the AWMA team and what they can accomplish in partnership with asset owners, designers, contractors and suppliers is a credit to them and worth recognising on this our 20th year of operation.

We thank you for your support and look forward to working with you and your team for the next 20 years.



Brett Kelly
Managing Director



FLOOD DOOR

The Personal Access Flood Door (PAFD) provides flood protection for any standard, outward opening door.

Recent installations include access to basement car parks, industrial facilities, corporate buildings, apartment stairwells, residential properties and emergency exits.

AWMA's FloodFree PAFD complies with Australian Standard AS1428.1 (Design Access and Mobility Standards).

Optional extras include handle designs, locks, windows and self-closing mechanisms.



FLOODFREE

ENVIRONMENTAL WORKS

AWMA was engaged by Fulton Hogan to deliver further projects for SA Water on behalf of the Department for Environment and Water (DEW) under the South Australian Riverland Floodplains Integrated Infrastructure Program (SARFIIP), a \$155 million investment program funded by the Australian Government through the Murray–Darling Basin Authority and implemented by DEW in partnership with SA Water.

PIKE FLOODPLAIN

Located in South Australia, the 6,700 hectare Pike Floodplain is a highly valued ecological and cultural area, featuring permanent and temporary wetlands.

New regulator structures on the downstream side of the wetland were required to better manage flows, facilitating planned and controlled flow inundation to improve the health of the floodplain.

AWMA has recently received international recognition for the innovative use of stainless steel in water control applications. This project will benefit from AWMA's stainless steel water control gates; including superior strength, increased durability, extended design life and low whole of life costs.

AWMA designed and manufactured the largest ever, stainless steel MultiBay LayFlat Gates for this project. Fabricated from grade 316 stainless steel, combined with proven AWMA designs, delivers a 50+ year asset life for the client.

The major regulators at Pike River and Tanyaca Creek encompass six-bay MultiBay LayFlat Gates with Fishways. Each LayFlat Gate is 2.0m wide x 3.85m high in size, and will be manually controlled via a portable hydraulic power pack.

Ancillary Regulators were supplied as a series of fabricated Segmented Stoplogs as well as the installation of Sidewinder Gates to facilitate regulator Fishways. AWMA Sidewinder Gates are often incorporated for Fishway management due to their fish-friendly, vertical design, unobstructed flow and ease of operation.



KATARAPKO FLOODPLAIN

Located south of Berri (South Australia) and covering more than 9,000ha, the Katarapko Floodplain is of high cultural, ecological and recreational value.

The ecological health of Katarapko has been declining due to altered flow regimes, obstructions to fish passage and pest plants and animals. Improved water control structures were required at Katarapko to manage flows in accordance with more natural flow regimes.

As part of this project, AWMA designed, manufactured and installed the water control gates on 11 new regulators (two incorporating fishways), within the Katarapko Eckert Creek system. This required Segmented Roller Stoplogs, Sidewinder Gates to facilitate the required fishways and a Combination Gate.

The aluminium Roller Stoplogs were specifically designed to be inserted and removed under flow conditions. One Stoplog per regulator included an integral Sidewinder Gate used to facilitate environmental flows of up to 10 ML/day. The Sidewinder is operated from the deck above, via a removable crank handle.

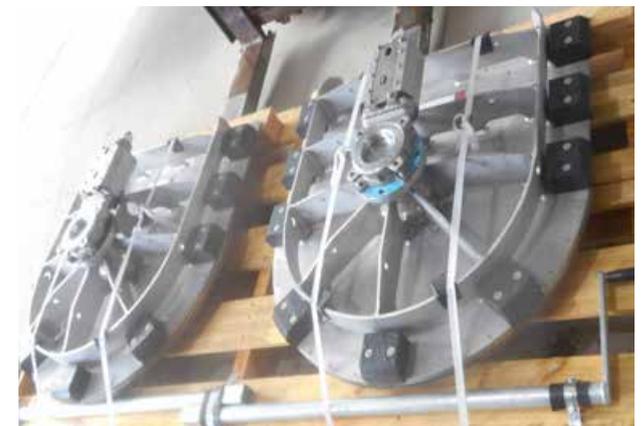
A Self-Engaging Stoplog Lifting Frame was supplied for the insertion and removal of the Stoplogs. A Stoplog Rack was also supplied for storage and transportation.

The Combination Gate delivered was similar to those supplied for the award-winning Hattah Lakes Project. Manufactured from marine grade aluminium, the Combination Gate provides overshot and undershot water management capacity, to be manually operated using a portable hydraulic power pack.



RECENT PROJECT GALLERY

INNOVATIVE - CUSTOMISED - SUSTAINABLE



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

awma
Water Control Solutions

20
YEARS

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