



SAFETY FIRST FOR FLOODFREE

In Australia, floods rank as the most economically challenging natural disaster, averaging \$8.8 billion annually (as of 2017) when considering insured, tangible and intangible costs.

Additionally, many asset owners face challenges in obtaining adequate insurance coverage, magnifying the social and economic impacts of flood events.

AWMA provides a variety of flood barriers tailored to safeguard properties from flood and storm water intrusion. When required, AWMA's in-house team can provide design support to ensure the product delivered will be engineered to withstand site specifications regarding flood water height, debris loading, deployment times etc.

With an increase in flood mitigation projects, and more and more flood barriers being installed in public spaces, there have been significant design considerations around the safe operation of flood barriers.

AWMA uses AI technology to improve public safety during the operation of automated flood barriers, such as deploying large hydraulically actuated tilting flood barriers.

The FloodFree Hydraulic Tilting Flood Barrier can be deployed manually via push-button control,

or automatically using sensors calibrated to a preset water level. Once activated an audible alarm sounds and strobe lights flash. Dual acting hydraulic cylinders then raise the flood barrier.

The 'smart' controls use AI cameras to monitor the barrier and surrounding areas during deployment. If a person, animal or vehicle is detected in the immediate vicinity while the barrier is operating, deployment will cease, continuing only when the area is clear. Once closed, it remains flood free until manually reset via push-button control. This is demonstrated in the video available on our website.

Pictured is a FloodFree Powered Tilting Barrier measuring 5500mm wide x 2600mm high, protecting a government building to a flood level height of 2.5m.

GENERALLY SPEAKING

Many of the projects AWMA deliver contribute to increasing Australasia's environmental sustainability.

We are all continually challenged by Earth's human footprint, so it is gratifying to play a part in improving future outcomes.

AWMA Fish Screens protect aquatic life from water extractions and diversion systems, across a range of applications including pumped and gravity-fed irrigation schemes. These screening solutions retain millions of native fish in our rivers and creeks that would have previously been lost from natural waterways.

Hundreds of AWMA water control gates have played an integral part in implementing the plan to restore health to the Murray Darling Basin, as well as many New Zealand waterways.

AWMA penstocks have been installed in most of our country's largest wastewater treatment plants and city sewer systems. They assist in efficient and effective management of water before its release into natural waterways, or even better, diverted to re-use systems.

Thousands of AWMA gates installed throughout Australia's and New Zealand's gravity irrigation schemes allow accurate management and measurement of water deliveries. Accurate flow measurements allow for informed decisions, with improved methods of control, resulting in fewer losses and optimal accountability for our largest freshwater users.

AWMA irrigation gates and i-Risers assist with the efficient delivery of water onto farms, providing the most effective method of water use for the industry that grows our food and fibre.

The AWMA team are proud to come to work each day knowing that every water control solution we design and manufacture also delivers environmental improvements that contribute to making the world a little bit more sustainable every day.

We are also grateful for the women in our workplace. Last month AWMA celebrated International Women's Day. Women currently make up 27% of our team and this figure is rapidly increasing, with 35% of hires over the last 12 months being women. The AWMA women bring many qualities that enhance the team and the company. It's exciting to see the diversity of roles that women excel in expand here at AWMA and throughout the manufacturing industry.

The AWMA team are proud of what we do as well as the difference we make to our partners and our environment. We are continually developing our capacity to do it better. Better for our team, better for our clients and better environmental outcomes for our future.



Brett Kelly
Managing Director

awma
Water Control Solutions



AWMA T-Screen and Rail Retrieval System Install

NSW INTAKE SCREENING PROGRAM

The Macquarie River Screening Program assists irrigators to improve the sustainability of their water diversions by installing modern fish protection screens on water pumps.

AWMA has been engaged to design, manufacture, supply, install and commission fish protection screens, retrieval systems and associated equipment for the Macquarie River Fish Screening Program.

This project includes 15 intake screen solutions on 20 pumps across 7 sites between Dubbo and the Macquarie Marshes.

The program aims to:

- Protect over 888,174 native fish every year.
- Provide up to 2,597 ML/day of cleaner water to farmers.
- Reduce on-farm costs by effectively eliminating debris.
- Generate over \$45 million per year of public benefits.

Our food and fibre industries are dependent on reliable access to water to remain sustainable, productive and profitable. This project benefits from years of collaboration with industry partners to deliver water extraction solutions that will provide irrigators with substantial operational benefits as well as achieve sustainable environmental outcomes.

Note: Statistics provided by Fish Screen Australia



Removal of pumps in readiness for new screen assembly

RAW WATER SCREENING

The pump station operated by Murrumbidgee Council in Jerilderie, NSW, serves the crucial function of drawing raw water from Billabong Creek into a reservoir that supplies the town's water treatment plant.

Two pumps extract water from the creek at a maximum flow rate of 3 ML/d. The original, single 500-micron in-line cartridge filter system was frequently blocked resulting in disrupted flow delivery and debris issues downstream. Although fitted with an automatic backflush system, it was not capable of preventing these issues. De-clogging the filter required it to be manually dismantled, taken off-site and pressure washed. Subsequently, the filter's screen medium wore out quickly, resulting in substantial replacement costs that deemed the cartridge filter to be no longer viable.

To address the root cause of these issues, a primary intake screen was incorporated into the diversion system at the extraction point. Installing a fine, self-cleaning cylinder screen at the intake, instantly eradicated the issues associated with debris in the pump and pipeline system, providing a significant return on investment.

The AWMA intake screen solution incorporated an electric drive self-cleaning cylinder screen with a 1mm aperture, capable of delivering a flow rate of 10 ML/d. A custom manifold and retrieval system was also supplied for ease of inspection and maintenance as required.

The intake screen that was purchased as a debris screen solution to assist operations also grants Council compliance with the 'best practice screening guidelines for fish protection' as introduced by NSW DPI last year.

AWMA offers a range of self-cleaning wedge wire screens for sustainable, fine primary screening that extends the life of downstream infrastructure, protects aquatic animals and delivers a return on investment with low whole of life costs.



FLOODFREE LIFTS

Lift shafts are prone to water ingress due to weather events, flash flooding, stormwater issues and extreme flood events.

In these situations when water finds its way into a lift shaft the lifts are decommissioned for a prolonged period, often resulting in the relocation of residents and businesses in the affected building until it can be declared operational.

Corrective action for a lift well that has been flooded is expensive and time-consuming. Repairs can include cable replacement, structural inspections and mould treatment.

Recent flash flooding events have seen an increase in flood mitigation and asset protection projects for multi-level buildings. The FloodFree range has numerous products customised for lift wells and basements across commercial, industrial and residential building applications.

FloodFree barriers have been proven to protect lift wells from water ingress. They include options to suit

the degree of flood warning, alert times and viable operational systems in an emergency.

A range of flood barrier solutions are available for lift well applications such as passenger lifts, freight elevators, residential lifts, commercial elevators, traction lifts and low pit lifts, they include:

- **Demountable Flood Barriers** are manually deployed by one or two people, therefore requiring a greater flood warning alert period allowing time to install them. Each barrier segment weighs approximately 4kg per metre. Demountable Flood Barriers are custom-made in a variety of configurations to meet site specifications. Side panel covers, included as standard, are manufactured from a durable brushed stainless steel material, protecting the seals from exposure. A variety of storage and transport solutions are also available.
- **Demountable Bulkhead Flood Barriers** provide 100%, full perimeter sealing around lift wells and door frames. Barriers are often stored adjacent to the access point for fast and effective deployment

prior to a flood event. They are usually designed as a single-piece barrier. In the installation pictured below, the bulkhead was installed on an overhead linear rail system for ease of installation with no difficult manoeuvring required. To deploy, the barrier is disengaged from the storage rack and slid along the track, the floor sill rebate cover is removed then the barrier is positioned against the opening and bolted into place. Please see our web page for more information.

- **Passive Tilting Flood Barriers** are ideal for sites with minimal flood warning. They are a self-actuating, or passive, flood barrier. Permanently installed at the access point they self-deploy in response to rising water levels, isolating the protected assets from water intrusion. As water levels recede the flood barrier lowers autonomously. There is no human intervention involved to deploy the barrier. They require a minimal depth to install, sit flush at ground level and can accommodate trafficable loads (from pedestrians to trucks and forklifts). They also have a range of material coatings and side panel options available.



Demountable Flood Barriers



Demountable Bulkhead Flood Barriers



Passive Tilting Flood Barriers

RECENT PROJECT GALLERY

INNOVATIVE - CUSTOMISED - SUSTAINABLE



Sales Team for Screening Solutions



FLOODFREE

Demountable Bulkheads for FloodFree Lifts



Client Visit



T-screen Install



Macquarie River Screen Install



Factory Acceptance Testing of AWMA Modular Stoplogs



Demountable Flood Barriers Pre and Post Deployment

FLOODFREE

AWMA IS EXHIBITING AT THESE EVENTS IN 2024

EVENT	DATE	LOCATION
Ozwater'24	30 April – 2 May 2024	Melbourne Convention Centre
Floodplain Management Australia Conference (FMA)	21 – 24 May 2024	Brisbane Convention Centre
Irrigation Australia Conference & Exhibition (IAL)	2 – 4 September 2024	ICC Sydney
Water New Zealand Conference & Expo	25 – 27 September 2024	Claudlands, Hamilton, NZ
ANCOLD	11 – 14 November 2024	Adelaide Convention Centre
ASFB 2024 (Silver Sponsor)	18 – 21 November 2024	The Nex, Newcastle

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



HEAD OFFICE

Phone +61 3 5456 3331 Email info@awmawatercontrol.com.au
118 Roviras Road, PO Box 433, Cohuna, Victoria 3568, Australia.

www.awmawatercontrol.com

