

## HANDS-FREE DEPLOYMENT

Manoeuvring large, modular water control devices inherently involves an element of risk. During AWMA's design phase 'risk reduction' is a key consideration.

AWMA's Self-Engaging Lifting Frame has been developed to assist with the safe lifting and deployment of stoplogs, stopboards and bulkheads. The mechanical lifting frame is designed to automatically engage with the stoplog, allowing the stoplog to be safely removed from service without the need for operators to physically connect the devices. Conversely, the lifting frame can be set to automatically disengage once the stoplog is seated in the frame.

Historically, the process of deploying or removing stoplogs may have involved operators needing to enter a confined space or for the employment of specialist underwater diving contractors. With a self-engaging lifting frame, this process can be safely and easily managed from the surface.

Each self-engaging lifting frame is designed to suit the specific application in which it is to be used. This typically involves a level of customisation with all lifting frames independently certified to Australian Standard for Lifting Devices (AS4991-2004).





# GENERALLY SPEAKING

**We are all becoming increasingly aware of how our actions influence environmental outcomes.**

Many of the projects AWMA are involved in, require our team to work with asset owners, relevant authorities and constructors to develop and implement solutions that have significant and sustainable, long term environmental benefits.

The scope of works AWMA undertake to achieve beneficial environmental outcomes vary greatly and include:

- AWMA regulator gates help provide a means of controlling and managing water as part of environmental watering programs throughout the Murray Darling Basin.
- Our gate solutions enable the isolation of stormwater discharge points ensuring that contaminated water from industrial and commercial operations can be captured for treatment and disposal prior to discharge into the environment.
- Thousands of AWMA irrigation gates have been installed throughout Australia and New Zealand, encompassing most irrigation areas. These gates provide exceptional control of open canals improving efficiency in water delivery and minimising water loss.
- The vast majority of water and wastewater treatment plants servicing Australian cities operate using AWMA gates. The efficient control of water and wastewater through the plants, has assisted in reducing ocean outfalls and promoted recycled water capability.
- Our bulkheads and stopboards are deployed to isolate vital water control structures so they can be regularly serviced and maintained. This ensures the assets stay viable, to actively protect against failure that may result in destructive environmental outcomes.
- AWMA's FloodFree range of flood barriers protects vital infrastructure such as pump stations, power substations, hospitals and train stations during flood events. They ensure critical services can remain operational during the flood event and assist with efficient clean up and resumption of services post flooding.
- Whilst our flood barriers can protect critical infrastructure assets and single buildings, they also play an important role in complementing levees and large-scale flood mitigation measures to protect entire townships. Flooding of any occupied urban environment has detrimental outcomes on many levels including environmental.
- AWMA's self-cleaning fish protection screens have been installed widely throughout Australia and NZ. As such, this ensures, millions of native fish remain in the rivers to breed instead of being extracted through irrigation and urban water diversions.
- Our traditional Trash Screens mechanically remove litter and debris from waterways.
- The latest innovative AWMA Fine Brushed Debris Screens remove rubbish, pollutants, even vegetation seeds from water diversions.
- The AWMA head office and manufacturing facility operates entirely on a solar powered system utilising 100% green energy.
- All in-house processes have been streamlined and digitalised for a reduced carbon footprint.
- All materials are ordered on a project-specific basis to eliminate waste.
- Certified ISO 9001, ISO 14001 and ISO 45001 systems facilitates the company's continual commitment to improvement within quality, safety and environment.

It is a great feeling to know that as we go about our day-to-day business, we are also contributing to a sustainable environmental future.



**Brett Kelly**  
Managing Director



**awma**  
Water Control Solutions



## CUSTOM DEBRIS SCREENS

**Among the organisations that require our assistance are water authorities, who frequently seek unprecedented water infrastructure solutions.**

In one instance, a fixed bar screen on an open channel was prone to debris blockages, causing flooding across a busy Victorian highway.

Our partnership approach allowed us to fully understand the issue, consider the options and develop a sustainable solution, specific to site requirements.

Pine needles were found to be caught in the channel, matting together and choking the downstream water intake.

The solution was a mechanical trash screening and removal system, designed to accommodate expected debris loads.

The custom trash rack was engineered to replicate the trapezoidal profile of the water channel. It was designed to raise large, heavy debris out of the channel, including logs, abundant seasonal aquatic plants and animal carcasses.

A manual winch and pulley system is used to retract and extend the debris screen in and out of the waterway, eliminating manual handling risks over and alongside the channel. A track system allows operators to manually glide the screen horizontally away from the channel to clear the screen.

In their feedback, asset managers mentioned the ease of operation, even under load. This AWMA solution is amongst the many designed to reduce manual handling and accessibility risks in the industry.

# FLOODFREE ACCESS

The FloodFree Team are often asked: *"If we seal our commercial building with flood protection, how can we be sure anyone left inside can get out?!"*

At this site, demountable flood barriers were installed across access points, including the loading bay as pictured. Exterior doors can be replaced with personal access flood doors. However, this one outwards opening, double glass door, was nominated to be left accessible, as the final evacuation point.

Demountable flood barriers can be designed in a range of configurations, including the U-shaped design pictured. The area this 'U' creates allows for emergency entry and exit, visibility and communication. Even after

the demountable flood barriers have been deployed, anyone left inside the building can still safely exit without jeopardising the flood protection. Additionally, if there are people isolated inside, with no power, they will still have access to fresh air, supplies and face-to-face contact.

FloodFree Barriers can be designed to retrofit existing sites, including installations that accommodate road camber, the tapered angle of driveways, or the slope of hills.

AWMA's FloodFree team specialise in developing customised solutions to meet site specifications and operational preferences. Contact us to discuss your flood mitigation requirements.



# WELD TESTING

AWMA are a design and construct company specialising in bespoke engineered, water control and screening solutions. No two products are the same. As such, our triple certified, in-house operations system needs to be extremely comprehensive.

AWMA carry out a range of inspections on all products prior to shipment. This often incorporates welding tests facilitated by

an independent company. These tests can include radiographic, penetrant testing and visual inspection of fabricated welds.

Penetrant and visual inspection assesses the surface quality of the welds, whilst radiography is used to determine the internal quality of welds.

All welding on AWMA products is assessed to AS/NZS 1554.6 and AS/NZS 1665.



# ACROPROPS FOR FLOOD BARRIERS



To sustain a higher level of flood protection, acroprops may be specified by the AWMA engineering team.

Acroprops are typically used for industrial, commercial or community flood mitigation to support the centre posts of demountable flood barrier systems, strengthening the structure to reduce overturning loads.

As pictured, FloodFree acroprops assist in supporting the barrier wall to prevent leakage during extreme flood events.

They are quickly and easily fastened to permanent concrete footings and placed at angles to the flood barrier.

Attached by a pin, they can be adjusted to preload the barrier for structural reinforcement in emergency situations.

# 2023 EVENTS

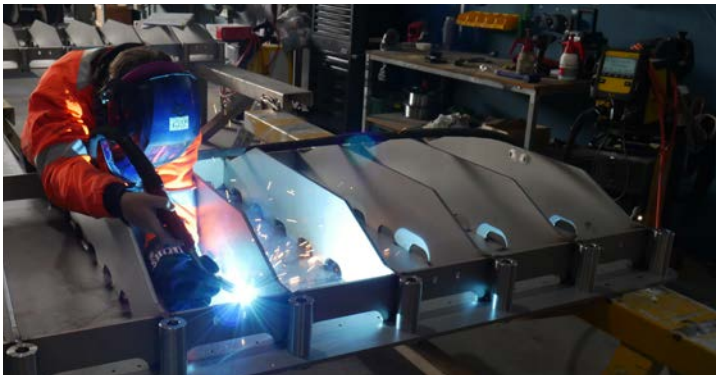
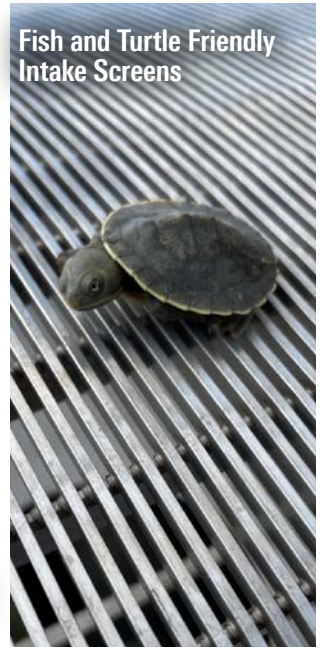
The AWMA & FloodFree teams will be attending numerous events and workshops in 2023 across Australia and New Zealand. We look forward to catching up with many of you during the events or whilst we are 'in town'.

Native Fish Forum:	3-5 May Dubbo
Australian Manufacturing Week:	9-12 May Melbourne
AWA's Ozwater'23:	10-12 May Sydney
Stormwater Conference & Expo 2023:	23-25 May Auckland
2023 Floodplain Management Australia National Conference:	24-26 May Sydney
Water New Zealand Conference & Expo:	17-19 October Wellington
ANCOLD Conference:	25-27 October Cairns



# RECENT PROJECT GALLERY

INNOVATIVE - CUSTOMISED - SUSTAINABLE



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



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