awma Water Control Solutions
NEWS
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RIVER BARRAGE & FISHWAY

The Fitzroy River Barrage & Fishway upgrade is a significant initiative under Sunwater's Rookwood Weir Project, focused on enhancing native fish migration and supporting the long-term sustainability of the region's aquatic ecosystems.

AWMA collaborated closely with Sunwater throughout the entire design and planning process. During the preliminary design stages, AWMA's engineering department worked alongside Sunwater's team to ensure the integration of innovative, effective, and sustainable water control solutions. This assisted in refining the design concepts, addressing technical challenges and optimising the functionality of the fishway.

AWMA was commissioned to design and manufacture specialised water control gates for the fishway, located on the north side of the Fitzroy River Barrage.

This included a custom-designed Sidewinder Gate for the fishway entrance. The sidewinder was manufactured from grade 2507 super duplex stainless steel, suitable for 3.7m on and off seating head pressure. Weighing two tonnes and measuring, 1990mm W x 3700mm H, the gate is equipped with a hydraulic cylinder to ensure long-lasting, reliable performance in river conditions.

In addition, AWMA supplied a number of segmented stop logs for the fishway's entry and exit. The removable stop logs were manufactured from marine-grade aluminium, while the permanently fixed frames were fabricated from stainless steel for enhanced control and durability. AWMA also supplied a self-engaging lifting frame and storage system to facilitate the safe operation and protection of these components, prioritising ease of use and operator safety.

AWMA continually work with project partners to develop innovative water control solutions that meet project outcomes and provide environmental benefits while supporting the needs of local communities. This project serves as a vital step toward enhancing environmental sustainability and fostering economic growth in the Fitzroy River region.

GENERALLY SPEAKING

As we near the end of another year, it's a great opportunity to reflect on what has been a successful and rewarding journey for AWMA, as we trust it has been for you.

One of the highlights has been our growing role in collaborating with industry and environmental leaders. AWMA recently sponsored the Australian Society for Fish Biology's Annual Conference and Exhibition, 'ASFB 2024'. A few years ago, we shared modern fish screen concepts with only a handful of attendees. Last month, we proudly presented to an audience of over fifty, a reflection of the increasing interest in sustainable and innovative intake screening solutions.

This event brought together passionate and inspiring professionals committed to advancing both operational productivity and environmental sustainability; to save our fish, assist our farmers and reduce water losses. We were honoured to share our work in adapting international fish screening technology to benefit local needs, protecting native aquatic species, and helping shape guidelines that benefit ecosystems and water users alike.

As we look ahead to 2025, we are excited about the opportunity to continue partnering with you. Whether it's water control solutions, innovative screening technologies or flood mitigation systems, AWMA remains dedicated to delivering purpose-engineered products to meet specified outcomes that exceed expectations.

Thank you for your trust and collaboration throughout this year. Here's to continuing our shared success in 2025 and beyond!

Brett Kelly
Managing Director

At the Australian Society for Fish Biology Annual Conference and Exhibition AWMA were asked to present on a number of topics including how asset owners and organisations are encouraged to Adhere with Fish Screen Guidelines. Please scan the QR code to view the poster, or contact our Screen Team directly for more information.

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NEW SUPPORT FOR NEW ZEALAND

Over the past nine months, we have been fortunate to have David Smith as our AWMA National Regional Sales Manager for New Zealand.

David brings extensive experience within the New Zealand water industry. His background spans business development, sales management, and technical expertise in pipeline infrastructure, with a particular focus on water control and rural water infrastructure.

David leverages his in-depth industry knowledge to support both new and existing clients, project partners, and industry alliances. At AWMA, he works closely with our team to deliver tailored, site-specific solutions for sustainable water control and intake screening, ensuring the successful design and implementation of custom solutions for a variety of applications.

David is actively involved in Early Contractor Involvement (ECI) partnerships, site visits, and regularly participates in industry events, including the Water New Zealand Conference and Exhibition. His collaborative approach and experience make him a trusted partner for driving successful outcomes throughout New Zealand's water sector.

REGIONAL FLOODGATE UPGRADE

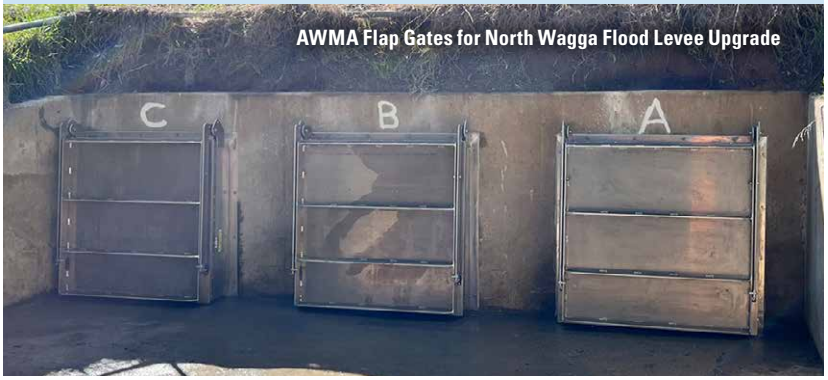
AWMA was most recently engaged by Wagga Wagga City Council to design, manufacture and install three custom flap gates to address the unique requirements of the North Wagga levee upgrade project.

Early in the project, AWMA's team visited the site alongside council representatives, to discuss the project scope and provide expert advice on the design specifications. This face-to-face engagement allowed the teams to identify key challenges and opportunities, ensuring the final solution met the unique demands of the levee system. These modifications were seamlessly integrated into the final design, demonstrating AWMA's ability to adapt and deliver tailored outcomes.

The AWMA Flap Gates were manufactured from marine-grade aluminium, designed to endure harsh environmental conditions while providing reliable flood protection. Each gate features a 1350mm W by 1350mm H aperture and is suitable for a maximum operating head pressure of 4.5 meters.

The gate specifications include features to enhance the gate's self-sealing capability at low head pressures. This ensures consistent performance even in challenging conditions.

This upgrade is a key component in the ongoing efforts to strengthen the flood protection infrastructure in North Wagga, improving community resilience against future flooding.



AWMA Flap Gates for North Wagga Flood Levee Upgrade


The Swing Flood Barrier pictured provides hydraulically operated flood protection for an urban community car park.

SMART SOLUTIONS FOR FLOODFREE CITIES

As metropolitan areas face increasing flood risks, effective protection has become crucial. AWMA specialises in creating custom, city-wide solutions that address site-specific challenges.

Recognising that one-size-fits-all systems aren't suitable for complex urban environments, AWMA collaborates with clients to design flood management systems tailored to their needs. Through innovative engineering, AWMA provides flood mitigation solutions that safeguard critical infrastructure and protect public spaces from water inundation, ensuring peace of mind 24/7, with or without human intervention.

Collaboration with Centuria Capital Group on the installation of a self-actuating flood barrier for its office building at 1 William Street, Perth, demonstrates the effectiveness of an early contractor involvement (ECI) partnership.

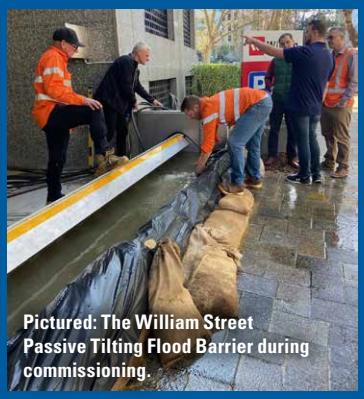
With the increased risk of flooding affecting properties in the Perth region, AWMA collaborated with Centuria to design a robust solution that met the precise requirements of the site. Flooding from heavy rain and storm drain overflow had previously impacted the building's basement, where critical electrical infrastructure is located. Centuria needed a reliable, self-deploying system to prevent water ingress.

AWMA's flood mitigation solution was the installation of a bespoke, self-actuating flood barrier system designed specifically for the conditions at the property. The barrier is a permanent fixture that automatically rises during a flood event.

The grey-coloured, non-slip surface of the tilting flood barrier complements the building's aesthetics whilst proving a safe surface for tenants and pedestrians. Once triggered, the flood barrier rises seamlessly in response to rising water, creating a buoyant wall that protects the property, keeping it flood free. The proven design protects an aperture width of over 7m and accommodates a floodwater height of 750mm, exceeding the projections for a one-in-500-year flood event.

By partnering with AWMA, clients like Centuria secure more than a flood barrier, they gain a robust, purpose-engineered flood protection system that safeguards their assets, mitigates risk, and stands resilient against future flood threats.


Pictured: The William Street Passive Tilting Flood Barrier upon completion.


Pictured: The William Street Passive Tilting Flood Barrier during commissioning.

SCREENS THAT BENEFIT FISH AND FARMERS

AWMA is currently delivering a suite of intake screen solutions for pump offtakes.

The modern fish-protection screens are a key component of the Northern Basin Toolkit (NBTK). This Commonwealth initiative is focused on enhancing the ecological health of the northern Murray-Darling Basin.

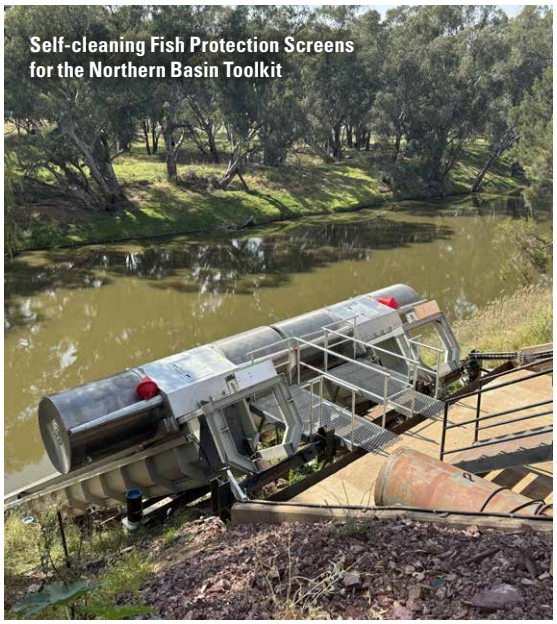
In NSW, this Australian-designed and locally-manufactured technology is being installed on 28 pumps across 10 pumped water diversions along 1,200 km of rivers, from Moree to Wilcannia, providing 2,514 megalitres of cleaner water daily to support 5,600 hectares of irrigated agriculture.

The NBTK screening program will protect approximately 39.6 million native fish over 50 years, generating $2 billion in public benefits through improved fish populations. It also supports an estimated 80 full-time jobs in regional manufacturing and installation, boosting regional economies. Installations began in mid-2024 and will continue through the winter of 2025.

AWMA worked closely with asset owners and project partners to overcome a range of challenges. These include retrofitting screens to existing sites with varied riverbank conditions, while ensuring installations were safe, viable, efficient, and environmentally responsible.

AWMA screening systems are fully compliant with NSW Specifications for Screen Design, as well as providing benefits to asset owners and operators. Cleaner water reduces pump maintenance, labour, and energy consumption, delivering cost savings and lowering CO^2 emissions.

AWMA's self-cleaning intake screens represent best-practice for industries that rely on access to water to support their long term sustainability and profitability.


Self-cleaning Fish Protection Screens for the Northern Basin Toolkit

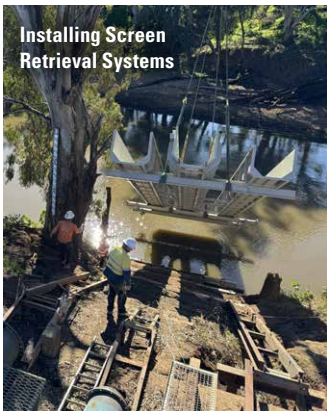
RECENT PROJECT GALLERY

INNOVATIVE - CUSTOMISED - SUSTAINABLE


FlowLab Testing Facility


Stainess Steel Sidewinder for Fishway Entrance

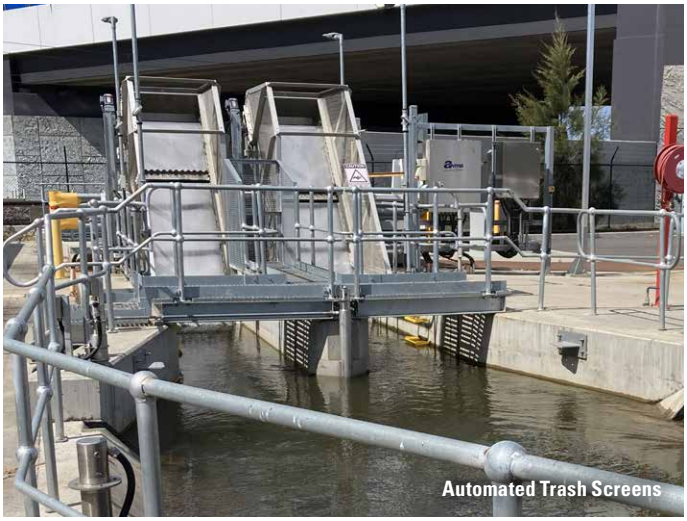

AWMA Modular Stop Logs


Installing Screen Retrieval Systems


Stop Log FAT


Custom Intake Screen Solution

FloodFree Retractable Barrier


Automated Trash Screens


In-house Stainless Steel Material Preparation

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

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