



PUMP SCREEN SUCCESS

AWMA's self-cleaning screen solutions have been proven to successfully exclude fish and debris from pumping systems with impressive results.

The wedge wire screen will not allow anything larger than 2mm to pass through to the pump system and the brush-cleaning mechanism ensures the intake will never be compromised by debris blockages.

The Trangie-Nevertire Irrigation Scheme (TNIS) on the Macquarie River in NSW replaced their intake trash racks with automated, self-cleaning screens to meet fish protection guidelines in 2020.

The TNIS Pump Station upgrade project was the first install of seven priority pumping sites, requiring 24 screens, along the Macquarie River as part of the NSW Government's Regional Recovery Program.

With stage two now complete, the TNIS benefits from four Cone Screens and a T-Screen. Combined, they screen up to 800 million litres of raw water per day which is delivered to 33 regional farms.

"We can still obtain the pumping flow rates and volumes we require without any negative impact on the river system or the pumps. In fact.. our Scheme Members have noticed cleaner water from the pump station, resulting in better irrigation on-farm due to reduced debris being delivered. Improved water delivery, combined with native fish protection, is a win-win for our members and the environment."

- Shane Smith TNIS Manager

The results are:

- Consistent, optimum pump performance.
- Reduced energy consumption; less greenhouse gas emissions.
- Reduced wear and tear on the pump.
- Minimal maintenance.
- Extended pump life expectancy.
- Reduced whole of life costs.
- Minimal backwashing required.
- Improved pumped water quality.
- No loss of native fish or other aquatic animals.

GENERALLY SPEAKING

It's great to be actively travelling again.

Recently I have travelled extensively both internationally and domestically to catch up with clients, projects and prospects.

It might seem strange but when I travel I spend a lot of time looking at welded fabrications, not just water control infrastructure, all kinds of welding, anywhere.

We get regular feedback from our clients and others that the quality of welding at AWMA is extremely high, so I like to check that against what I see when I am out and about. It is very nice to say that, in general, I don't see much that matches the quality that our guys lay down.

Weld quality in water control infrastructure is not just about strength, which is vitally important, but also about corrosion resistance. If there are flaws in the weld it can be a point where accelerated corrosion can originate, which would lead to a reduced asset life expectancy.

Many of our projects involve fabricated water control infrastructure being installed and operated in hostile environments such as estuarine waters, sea water and sewage. The asset is typically installed in a location that is very difficult or impossible to access for maintenance. With an engineered design life specification of up to 100 years, the integrity of the welding is critical.

Quite a few of our projects have third party weld inspection as part of the client's specification, last month a sample of over 400 welds were independently inspected with zero reported defects. An impressive endorsement of the professionalism of the AWMA fabrication team.

By writing this our customers may start looking a bit closer at the welding on their products when delivered. If so, go for it, we are very proud of our fabrication team.



Brett Kelly
Managing Director

awma
Water Control Solutions

HONG KONG PENSTOCKS

AWMA were engaged by Enviro Process Engineering (HK) Co. Ltd to design and manufacture a downward opening decant weir penstock as part of an upgrade to the UV treatment area of the Siu Ho Wan Sewage Treatment Works in Hong Kong.

The UV outlet penstock is a critical part of the UV treatment process. Matthew Ho (Enviro Process Engineering (HK) Co. Ltd.) stated that *"the outlet weir needs to regularly adjust position to control the upstream water level passing over the UV lamps. This water depth is critical to ensuring the correct operation of the UV disinfection process. AWMA understood these requirements and offered a design capable of modulating duty inclusive of a dual spindle drive with automated spindle lubrication system."*

AWMA's DLF Penstock solution was custom designed to suit the 2800mm wide x 1150mm high UV channel. To address issues associated with the highly corrosive service environment, the penstock was manufactured from grade 2205 duplex stainless steel.





NT FLOOD MITIGATION

FLOOD/FREE

The Northern Territory Government's Department of Infrastructure, Planning and Logistics have successfully completed the Katherine Flood Mitigation Project.

Initial flood modelling identified that construction of flood mitigation works, including levee bank construction and upgraded drainage systems, were the most effective way of reducing flood impact on Katherine properties.

The \$10 million project, jointly funded by the Australian and Northern Territory governments, will increase the towns flood resilience, providing flood protection for residential, commercial and community areas.

AWMA was engaged to supply FloodFree Demountable Barriers to protect levee access

points, as well as Flap Gates to facilitate stormwater drainage and backflow prevention during flood events.

Demountable Flood Barriers (DFB) are often manually installed to protect places where there are breaks in levees for roads, railway lines or pedestrian crossings. The DFB flood levee extensions provided for this project are 20m, 25m and 45m in length and situated in locations such as across Katherine's Stuart Highway, NT.

Demountable flood barriers have end posts and in-ground footings permanently installed. Upon the

threat of a flood event, a storage rack of barrier segments is brought to the site and manually installed to complete the levee across designated road crossings.

AWMA was also engaged to design and manufacture 86 aluminium Flap Gates for this project. Flap gates provide a dual function; protecting the township by preventing floodwater from passing up the stormwater drains under the levee, while also allowing stormwater from the township to discharge to the river during normal wet weather events.

Congratulations to Black Cat Civil for the recognition they received for this project at the CCF NT Earth Awards earlier in the month.



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BILLABONG REGULATION

Catfish Billabong is a 65-hectare wetland within the Mallee Catchment in north-west Victoria. The site has been identified by the Mallee Waterway Management Strategy (MWMS) as a priority for management because of the high environmental, social and cultural heritage values it supports.

The development of a new billabong regulator structure enables the billabong to replicate a more natural state, through wetting and drying cycles, giving local flora and fauna opportunities to benefit. Fish will also be able to enter the system when the gates are open, while fish eggs and larvae can leave the wetland system during the drawdown (draining) phase.

AWMA partnered with Ertech and the Mallee CMA to deliver a custom-designed dual-leaf Combination Gate measuring 1500mm wide x 3050mm high. The Combination Gate operates in several modes, including undershot and overshot, to create safe fish passage and regulate flows to and from the wetland for environmental watering.



RECENT PROJECT GALLERY

INNOVATIVE - CUSTOMISED - SUSTAINABLE

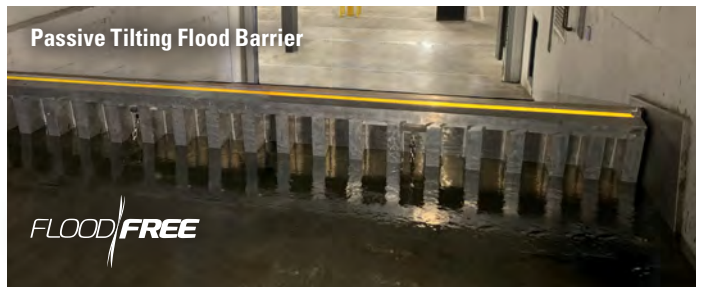


Self-cleaning Submersible Intake Screen



Self-cleaning Cone Screen

Photo courtesy of OzFish Unlimited



Passive Tilting Flood Barrier

FLOOD FREE



Self-cleaning T-Screen



Demountable Flood Barrier

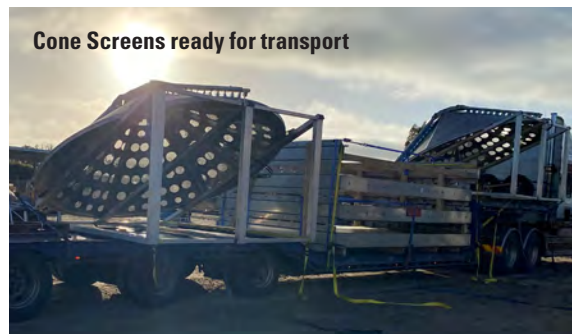
FLOOD FREE



AWMA Manufacturing Facility



Flap Gates



Cone Screens ready for transport

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



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