

# WATER MANAGEMENT SOLUTIONS FOR THE MINING AND INDUSTRIAL SECTOR



National Pump & Energy (NPE) are a trusted partner to many mining and industrial companies offering innovative and reliable solutions for any dewatering and power generation projects.



NPE is a partner to many of Australia's mining and industrial companies, offering innovative and reliable solutions for dewatering, power generation and more. NPE can select and match the right mine dewatering pumps & power generation equipment to suit any specific situation and design it into a fully integrated and reliable system.

We maintain Australia's most diversified fleet of pumping and power generation equipment to ensure we have what you need and when you need it. Temperature, pH range, corrosive and abrasive content in water all play a critical role in selecting the equipment to transport water effectively. When it comes to mine dewatering pumps, the presence of solids in the water, the specific gravity, size distribution and content percentage will determine the type of pumps required.

Water is essential for mineral processing, dust suppression, and slurry transport, and without it, the entire operation would come to a halt.

A dependable dewatering plan is critical for maintaining a consistent supply of process water throughout a mine site. A dewatering plan is also required for the removal of excess water from working areas to allow excavation.

The dewatering requirements of each site differ due to environmental and geological considerations, as well as local climatic variations. Weather variations and environmental changes can have a significant impact on an operation. Before beginning a dewatering process, mine sites must assess the permeability and porosity of the ground, the amount of surface water, and geological features.

Using pump in house systems or customised barge solutions, mine operators can reclaim water from their tailings and reuse it throughout the mine site. Reclaiming process water for reuse in the plant can help an operation make the best use of its resources by overcoming the issue of water scarcity.





## Pit Dewatering

Pit Dewatering is critical to the overall safety and production of a pit mining operation. Large amounts of water on a mining or construction site can stop progress in its tracks. The removal of high volumes of water from mines which have been kept in "Care and Maintenance" can be achieved quickly using Pontoon mounted high-head pumps. Use of either diesel or electric drive high-head pumps mounted to pontoons. The pontoons will float on the surface of the water as the water level inside the open pit is dropped. The use of a pontoon also negates the requirement to reposition or lower a pump that is mounted on the ground at the side of the pit as the water level lowers.

## Groundwater Management

The basic goal of any dewatering project is to lower the water table below the working platform and maintain that level for the duration of the project. The type of dewatering system that is most successful will be determined by the soil profile and permeability at and around the site. NPE will calculate the number and size of wells needed to lower the water table in preparation for excavation. Positioning may also be considered to meet the client's construction needs. Effective groundwater management entails strategically placing wells to offer a dry working platform while also limiting the effects on the groundwater table (GWT) outside of the site.





## Assisted Evaporation

NPE offers assisted evaporation as an efficient water management option. These systems provide a unique, effective solution for customers where restrictions on discharging water off-site leads to excess water storage issues. We have significant experience offering water management services to a range of mining, civil and general construction projects throughout Australia.

A fully automated solution with remote access that can be single or multi-system, ensures compliance with EPA legislation, outperforms solar evaporation in terms of time demands and location and reduces the need for additional storage ponds.

## Generator

NPE are a specialist Australian generator Hire and Sale supplier. We provide complete generator hire and sales for mine sites, construction sites, oil & gas, heavy industry and government customers. Our generators range from 6kva up to 1250kva and anywhere in between. Our services cover the entire range from feasibility studies through to turnkey power packages. We have proven capability across all aspects of electrical, instrument, control, communications and power generation with a dedicated team of engineers, technicians and programmers.

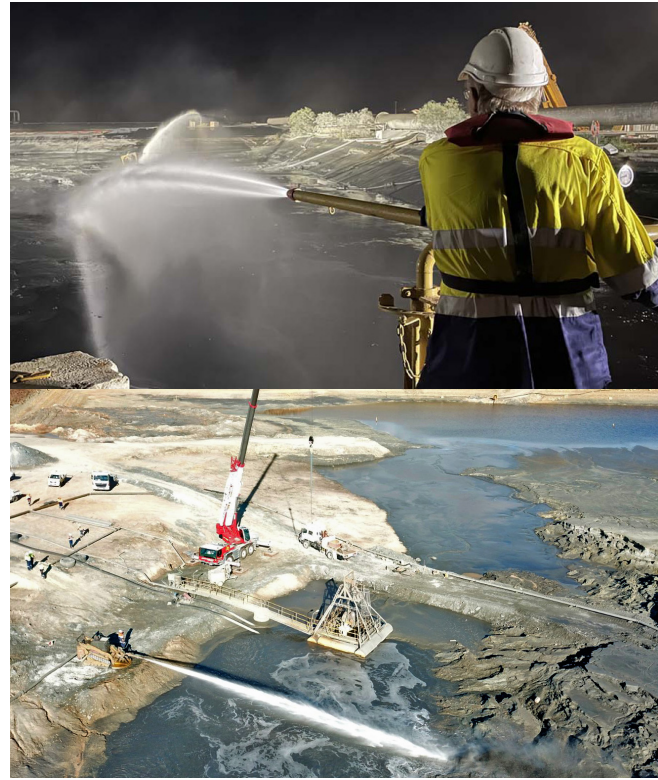


## Hydromining

Hydromining is the process where product is converted into slurry, through application of high pressure water, then pumped via a slurry pipeline to the desired location. Water is provided from an external water source via suitably rated rubber hoses, with flow and pressure controlled by using interchangeable nozzles.

The remote-controlled NPE hydromining tracked cannon is specialist hydromining equipment. This self-propelled equipment is manufactured by NPE for hydromining and pond cleaning applications.

Hydromining offers a superior alternative to loading and hauling material. It's fast, safe and cost effective, making it a viable option for many operations and situations in the mining and construction industry. We provide a world class system design, pump and pipeline supply, installation and operation.



## Tank Cleaning

Hydromining equipment can be used to remove material build up from tanks, reservoirs, thickeners, and other vessels so that general cleaning, inspection, and/or maintenance can be performed.

Our procedure can be carried out without the need for personnel to enter the confined space, minimising danger and any safety concerns associated.

A typical thickener can be cleared within a 48-hour period making it an ideal solution for shutdowns for the project to be completed safely and on time during this critical part of a shutdown.



### READY FOR RENT

**PUMPS | POWER | WATER TREATMENT | WATER MANAGEMENT**

National Pump & Energy branch network is strategically positioned to service all parts of Australia. These hire branches are supported by a team of NPE representatives and field service crews so that every part of Australia has access to the best equipment and service, regardless of location.

