



Water Management

australia's aluminium

Alcoa's mining group actively works to reduce our overall consumption of water and increase water use efficiency. Approximately 80 per cent of water used at the mines is for haul road dust suppression and construction. Other uses include vehicle and equipment cleaning, drinking water, crusher plant cleaning and dust control, garden reticulation, toilet and shower facilities and fire control.



Alcoa accesses water from the Darling Range through its own storage facilities and from drinking water dams under agreements with the Water Corporation. Water quality and quantity are regulated by the Water Corporation and the Department of Water. Additional water is harvested at both mines by collecting and recycling stormwater runoff and treated wastewater.

Water management must be considered in every phase of mining operations from initial clearing and road construction through to completion of rehabilitation.

In WA, we continue to work with the Water Corporation to identify possible alternative water sources for mining use. Any solution must involve high quality water because of the location of the mines in drinking water catchments. Our need for high grade or potable water from licensed water sources will be reduced with the implementation of saving strategies.



Alcoa's Willowdale mine site licensed water source is the Samson Dam.



WANT TO KNOW MORE?
Come on a tour and see our mining operations
Call Alcoa Discovery Centre 9530 2400
Visit the Website <http://www.alcoa.com.au/bauxitemining>
Call Willowdale Neighbour Relations 9733 8942
Call Huntly Neighbour Relations 95302527



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Working Arrangements

In accordance with the agreement with Department of Environment and Conservation (DEC) and the Water Corporation. The following criteria must be satisfied during mining operations:

- Minimal topsoil erosion within pits;
- Mining, rehabilitation and associated activities will not contribute to any significant or long-term deterioration in water quality of adjacent streams;
- No long-term ponding of water either within or below pits or roads unless planned and designed;
- Long-term maintenance requirements are minimal;
- Peak flood levels should not be increased by mining in catchments such that they endanger or pose an unacceptable risk to neighbours, water storage dams or other infrastructure; and
- Drainage systems must be acceptable in terms of costs, aesthetics and the land use priority.

McCoy Crusher Facility

In January 2005, the McCoy crusher facility was fully commissioned, with the aim of contributing to the sustainability of Australia's water supplies. This is done by successfully minimising water consumption, maximising harvesting and recycling of water, and ensuring the effective treatment and management of hydrocarbon contaminated water, therefore protecting Perth's drinking water catchments.



The McCoy crusher region was designed with a particular focus on water conservation management.

Water carts are modified with water efficient sprays to minimise water use.



What is being done to minimise water use?

Alcoa is committed to minimising water use at the mines and has implemented a number of initiatives to minimise water consumption and to improve water use efficiency. These include:

- Trialling and use of haul road dust suppressants (e.g. Aquatain);
- Reducing the haul distance in the summer;
- Modifying spray bars on water carts to optimise the rate and distribution of water applications;
- Deploying water conservation training packages to all mining staff;
- Implementing an employee suggestion scheme that encourages suggestions for more efficient water use, or reduction;
- Reducing water used for conveyor belt washing; and
- Using mobile sucker units to clean workshops floors instead of washing with water.