

Water in Mining Fact Sheet

1. New South Wales - Mining and Energy Activity

Mining has been a central component of NSW's economy for over 200 years and is now worth over \$22 billion each year. The first coal shipment left from Newcastle in 1799. Now, Newcastle is the world's largest coal export port. While coal accounted for 31% of the mining industry in the State, NSW also exports copper, gold, silver, iron ore, unconventional gas and mineral sands.

Many regional centres across NSW were established through mining, including Newcastle, Broken Hill, Wollongong, Cessnock, Muswellbrook, Lithgow, Orange, Gunnedah and Cobar. The industry also provides over 40,000 jobs across the State. Furthermore, the industry provides jobs through secondary uses. For example, approximately 85% of electricity supplied in NSW is sourced from coal-fired power stations.

2. Policy and Environmental regulation issues

Relevant State Legislation	Department	Key Challenges	Water Practitioners - Areas for Awareness
Water Management Act 2000 (NSW)	NSW Department of Primary Industries - Water, NSW Department of Industry - Resources & Energy, NSW Department of Planning and Environment, NSW Environment Protection Authority	Key challenges relate to water source integrity, water quantity and flows and water quality. Particularly relevant is the close proximity of large mining operations to major urban water catchments, for example the presence of four active longwall mining operations in Greater Sydney's drinking water catchment.	Damage to streams and uplands, changes to flood flow dynamics, impacts on aquifer integrity, surface/ground water pollution, sub-surface diversion of streams, etc.
NSW Water Act 1912 (NSW)			
Protection of the Environment Operations Act 1997 (NSW)			
Environmental Planning and Assessment Act 1979 (NSW)			
Mining Act 1992 (NSW)			
Petroleum (Offshore) Act 1982 (NSW)			
Petroleum (Onshore) Act 1991 (NSW)			

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3. Mining Regions and Commodities – Overview

Mining is spread across the state, with multiple isolated mining areas. There are a number of mines clustered in the far west near Broken Hill, as well as in the central west surrounding Cobar and Nyngan.

Commodity	Geographic Location	Water Management Challenges
Copper	Northparkes, Cadia-Ridgeway, Cobar and Tritton	<ul style="list-style-type: none">• Access to fresh water for processing• Waste water reuse
Gold	Cadia Valley, Cobar and Mitchells Creek	<ul style="list-style-type: none">• Access to fresh water for processing• Waste water reuse
Silver	Broken Hill	<ul style="list-style-type: none">• Access to fresh water for processing• Waste water reuse
Coal	Sydney-Gunnedah Basin	<ul style="list-style-type: none">• Water access and proximity to ranges• Closure related issues
Iron Ore	Cobar, Cadia Valley and Lachlan region	<ul style="list-style-type: none">• Access to water• Desalination
Unconventional Gas	Gunnedah, Gloucester and Sydney Basins	<ul style="list-style-type: none">• Interface with other land use
Mineral Sands	Balranald region, Nepean and Broken Hill	<ul style="list-style-type: none">• Dewatering and water supply

4. Water Practitioners - Key Areas to Note

Particular areas of note include the potential intersection of aquifers through excavation activities, as well as the runoff and discharge of effluent into rivers or aquifers. Effort should also be made to reuse low quality water, such as treated effluent or saline groundwater, with some mines recycling and reusing up to 80% of their water.