



Government of **Western Australia**
Department of **Water**

Strategic policy 2.09: Use of mine dewatering surplus

May 2013

Looking after all our water needs

Strategic policy 2.09:
Use of mine dewatering
surplus

May 2013

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ISBN [ISBN] 978-1-922248-05-3

The recommended reference for this publication is: Department of Water 2013 *Strategic policy 2.09: Use of mine dewatering surplus*.

Acknowledgements

This document has been prepared by the Strategic Policy Division of the Department of Water, in collaboration with the Department of Agriculture and Food, Department of Environment and Conservation, Department of Mines and Petroleum, Department of Regional Development and Lands, and the Department of State Development.

The Department of Water would like to thank the following for their contribution to this publication:

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1 Strategic policy

1.1 Background

Mine dewatering surplus is the volume of water from a mine dewatering operation which is surplus to the water requirements of a particular mine (see Section 1.4).

Mining operations that extend below the watertable require dewatering to allow the extraction of mineral resources. Proponents are required to use dewatering volumes to mitigate any environmental impacts in the first instance, then use the water on the mine site for fit-for-purpose uses (e.g. dust suppression and ore processing) and, if required, for the mining camp.

Surplus water remaining after the fulfilment of these requirements has historically been disposed of via aquifer injection or discharge to watercourses. However, this water represents a potential resource that could support other mining operations or sectors such as irrigated agriculture, industry, or recreational and social needs in the community. However, it needs to be acknowledged that the use of mine dewatering surplus is an opportunistic use linked to the mining process, and security of supply will be determined by a range of factors but particularly dewatering profiles, the mine schedule, the mining industry's economic health, and development near the mine.

Until recently, it appeared that section 85(1)(c) of the *Mining Act 1978* (WA) restricted the use of mine dewatering surplus for applications not associated with mining. The Department of Water (department) and Department of Mines and Petroleum (DMP) have since formed the view that neither the *Mining Act 1978* nor the *Rights in Water and Irrigation Act 1914* (WA) impose any impediments to the use of mine dewatering surplus. Proponents will, however, need to obtain the relevant approvals to authorise use of the water (see Section 2.3).

Some State Agreements may limit the use of mine dewatering surplus. This will be the case where a State Agreement is explicit about the use of this water. However, most State Agreements refer only to the *Rights in Water and Irrigation Act 1914* and are silent with regard to the use of mine dewatering surplus. For these State Agreements, the surplus water may be provided to third parties and used for other purposes, as long as other relevant approvals are obtained.

The department currently administers more than 200 licences to take water for dewatering purposes across Western Australia. Total dewatering volumes exceed 300 GL per year and this figure is likely to increase as new and existing mines target mineral resources below the watertable. A proportion of this total volume will be surplus to the needs of the individual mines. However, some mines may have no surplus water, or even have a deficit and require additional supplies of water.

This policy outlines the state government's position on the use of mine dewatering surplus and describes how using this water as a resource may be facilitated. It broadly identifies opportunities for using mine dewatering surplus, and outlines the approvals required to use the water for non-mining related purposes. The policy also

describes the characteristics of mine dewatering surplus and the inherent limitations in using this water as a resource.

The policy is closely linked to the *Western Australian water in mining guideline* (DoW 2013), which guides proponents through the approvals process for water issues over the whole mine life.

1.2 Position statement

The appropriate use of mine dewatering surplus for purposes beyond the individual mining operation is supported in Western Australia, given it presents significant opportunities for local communities and the state.

To ensure the benefits of this potential water resource are realised, this policy promotes and encourages the appropriate use of dewatering surplus from mining operations for other purposes.

As opportunities arise, the department will work with proponents and other agencies to consider options for facilitating the productive use of this water.

1.3 Objectives and guiding principles

The objectives of the policy are to:

- acknowledge that surplus water from mine dewatering operations is a valuable resource with the potential to benefit the state, its industries, towns and social water requirements
- recognise the characteristics of mine dewatering surplus and the issues related to its use for purposes other than the particular mining project.

This policy has been developed according to the following water resource management principles:

- optimise the use of all available water resources
- foster opportunities to develop innovative solutions to use water efficiently and effectively
- encourage high-value uses of water to maximise benefits to the community, industry and the state
- efficient and effective use of the available mine dewatering surplus
- provide an enabling policy setting for meeting the water requirements of communities and industries (i.e. operational, potable, social, recreational, cultural and environmental)
- promote the fit-for-purpose use of water.

1.4 What is mine dewatering surplus?

The effective and efficient use of water by mining companies is encouraged. The *Western Australian water in mining guideline* (DoW 2013) guides a proponent through a number of strategic and operational issues to address ‘whole of mine life’ water issues. This process is aligned with Environmental Protection Authority (EPA) and Department of Environment and Conservation (DEC) approvals processes – Part IV and Part V of the *Environmental Protection Act 1986* (WA) respectively.

The guideline includes a structured methodology and approach for the management of mine dewatering volumes – encouraging beneficial use over disposal.

Mine dewatering volumes must first be used for:

- mitigation of environmental impacts
- fit-for-purpose onsite activities (e.g. processing, dust suppression and mine camp use).

Any dewatering volumes that remain after these requirements have been met constitute mine dewatering surplus.

The mining guideline states the options for disposing of this water, as follows:

- transferring the water to meet other demands, including those of other proponents in the area and public water supply
- injecting back into an aquifer at sites determined by the proponent and agreed to by the Department of Water
- controlled release to the environment where the dewatering surplus is allowed to flow (either through a pipe or overland) into a designated water course or wetland determined by the proponent and agreed to by the Department of Water and DEC.

Proponents should work through these options in determining how to manage the remaining volumes of mine dewatering surplus, in consultation with relevant agencies (see Appendix 2). Other complementary economic or innovative options for mine dewatering surplus should also be considered.

2 Implementation

2.1 Determining surplus volumes

Proponents should follow the *Western Australian water in mining guideline* (DoW 2013). The following is intended to supplement this guideline.

During the feasibility stage of a mining proposal, proponents should work with the Department of Water, DMP and DEC, as well as other relevant departments to ensure any regulatory requirements can be met for using mine dewatering surplus.

The following steps are required to determine the volume, if any, of mine dewatering surplus.

Dewatering requirements

The proponent should estimate dewatering volumes required for a mining operation.

A section 26D licence is required under the *Rights in Water and Irrigation Act 1914* to construct wells and undertake groundwater investigations for dewatering.

Mitigation of the environmental impacts

An important part of a mining project is to ensure the mining operations are environmentally acceptable. The proponent needs to determine the environmental requirements in the mining lease and surrounding area, and estimate the dewatering volume that may need to be returned to the environment (e.g. through injection back into the aquifer or augmenting reduced environmental flows of groundwater-dependent watercourses or wetlands). This is undertaken in liaison with the relevant departments (usually DEC or the Department of Water). Proponents may need to refer their projects to the EPA for environmental approval.

Mine-site water requirements

Mining operations require water for various purposes such as dust suppression, washing of equipment, mineral processing and drinking water supply. These requirements need to be identified and estimated as accurately as possible. It is preferable that some or all of these requirements are met through dewatering activities. However, it is important to note that some of these requirements can only be met with high quality water and treatment may be required or other sources found. The *Western Australian water in mining guideline* (DoW 2013) advises proponents to undertake and provide a water balance to the department during the project's preliminary phase, to identify the mine-site water requirements.

Determining the mine dewatering surplus

The mine dewatering surplus is the volume of water remaining, if any, after meeting environmental needs and mine-site water requirements (as outlined above and in Section 1.4).

The mining company may use the surplus water for other purposes or provide it to another user. If there is no demand for the water, it may need to be disposed of in an environmentally acceptable manner (e.g. by reinjection back into the aquifer or through controlled release into waterways).

2.2 Facilitating the use of mine dewatering surplus

It is in the proponent's interest to make information on any expected surplus water available as early as possible. This will allow the proponent, the department and other government agencies to facilitate, where possible, opportunities for using that water. As part of the process of obtaining a groundwater licence, the mining company should inform the department of any expected surplus volumes during the scoping of the project – Stage B in the *Western Australian water in mining guideline* (DoW 2013).

The mining company may enter into an agreement with a third party to provide access to the surplus water. It is the responsibility of the proponent and the third party to obtain all relevant approvals for use of the water. These agreements are private business-to-business arrangements and government agencies are not involved in such transactions.

Any third party wishing to use mine dewatering surplus will need to recognise that access to this water will be limited to the mine's life or other such period as determined by the mining company. The quality and quantity of water available may also vary over time. See Section 2.5 for more detail on these issues.

Details on surplus water should either be provided to the department in a letter or included in the company's operating strategy that is linked to the groundwater licence – see *Operational policy 5.08: Use of operating strategies in the water licensing process* (DoW 2011). The information should include:

- the volume of mine dewatering surplus
- the timeframe over which the surplus water is available
- water quality of the mine dewatering surplus
- expected changes to the volume and quality of the water over the period of the mining operation
- any other plans for use of the surplus water (e.g. if the mining company has made any agreements with other water users for the provision of mine dewatering surplus).

Operating strategies are discussed in Stage D of the *Western Australian water in mining guideline* (DoW 2013).

2.3 Regulatory requirements

To dewater a mine, a licence to take water must be obtained from the Department of Water. This licence is required under section 5C of the *Rights in Water and Irrigation Act 1914* in nearly all mining tenure, from artesian wells in all parts of the state, and from non-artesian wells in certain proclaimed areas of the state. To be eligible to hold a licence to take water, the party taking water must have legal authority to access the land from which the water is to be taken.

The licence to take water does not confer any particular additional powers or rights to access land or build works. It only confers a statutory authority to take and use water, subject to the licence, which may include a number of conditions that could restrict the manner in which the mine may be dewatered and how the dewatering volumes may be used (e.g. a condition requiring reinjection of dewatering volumes or supplementation of wetlands to meet environmental requirements).

While a mining company may consider options to use mine dewatering surplus at any time during the mine's life, it is desirable that alternative uses for the surplus water are considered in the mine's initial environmental impact assessment.

Where the mine dewatering surplus is proposed to be used for purposes other than those integral to the mining operation, the mining company or third party may need to obtain some additional approvals. These will depend on individual circumstances and may include, but are not limited to the following:

- If the surplus water is to be supplied to another party, and if this supply constitutes a water service and the supply occurs in a controlled area, the mining company will need to be licensed as a water service provider under the *Water Services Licensing Act 1995*¹, or be granted an exemption from licensing under that Act. Outside controlled areas, the mining company does not need a water services licence (supply licence), but must notify the Economic Regulation Authority (ERA) if it intends to provide a water service. The *Water Services Licensing Act 1995* also enables the granting of works powers relevant to infrastructure (bores, water treatment and pipeline) construction.
- If the surplus water is to be used for drinking purposes, the areas from which the water is being sourced may be subject to proclamation under the *Country*

¹ Several Acts administered by the Department of Water will be amended once the *Water Services Act 2012* and the *Water Services Legislation Amendment and Repeal Act 2012* are proclaimed, which is expected to occur about mid-2013.

Once the *Water Services Act 2012* is proclaimed, the licensing provisions under that Act replace the provisions of the *Water Services Licensing Act 1995*. Under the new Act all water supply services must either be licensed by the Economic Regulation Authority or exempted by the Minister for Water.

Areas Water Supply Act 1947 as a public drinking water source area (PDWSA). In such cases, limitations on land use activities will apply in these areas.

- Environmental approval may be required under Part IV of the *Environmental Protection Act 1986* if use of the surplus water has the potential to adversely impact the environment (e.g. if the water is used for irrigated agriculture in an environmentally sensitive area, the use of fertilisers and chemicals may be an issue). The Minister for the Environment may impose Ministerial Conditions in such cases. Where a dewatering proposal triggers a prescribed premises category, as stipulated in Schedule 1 of the Environmental Protection Regulations 1987, it must be assessed under Part V of the *Environmental Protection Act 1986* and in accordance with a works approval or a licence.
- Appropriate land tenure for the activity on the land may entail other approvals; for example, uses on pastoral leases for agricultural or horticultural purposes may be subject to a permit being issued by the Pastoral Lands Board under the *Land Administration Act 1997*, authorising the pastoral lessee to conduct a restricted range of agricultural or horticultural activities.

A critical issue will be that of access to the land by the third party, particularly for the construction of any infrastructure required to transport the water. Depending on the nature and location of that infrastructure, as well as on the underlying land tenure in question, issues may arise as to the power of the third parties to access land and to construct such infrastructure. Grants of tenure and construction of works may then trigger issues relating to native title and the obligation to obtain other legislative approvals such as those which might be required under the *Environmental Protection Act 1986* or *Aboriginal Heritage Act 1972*, for example.

Where the third party does not have legal access to the land where the surplus water is to be taken from, these land access issues may be resolved through the mining company constructing and maintaining any infrastructure on its tenement.

The overall decision on the use of mine dewatering surplus and how it is to be provided is that of the mining company, or is between the mining company and the third party that wishes to use that water.

More detail on the regulatory requirements is provided in Appendix 1.

2.4 Opportunities for using mine dewatering surplus

There are many opportunities to use mine dewatering surplus throughout the state. In July 2009, the Pilbara Cities vision was launched to support, among other initiatives, the development of Karratha and Port Hedland – with a goal for each town to reach a population of 50 000 by 2035. These major settlements will be supported by the Newman sub-regional centre with an expanded population of up to 15 000. The towns of Tom Price, Onslow and Wickham are also expected to grow in population, which will turn them into major towns by 2035. This will significantly

increase water demand in this region, not only for urban consumption but for associated industry and mining. Mine dewatering surplus may supplement other water supplies to some extent, albeit temporarily.

In the state's south-west, the mine dewatering surplus could be used to supplement water supplies for new developments or to expand existing industries in areas where all the available water has already been allocated or where there is water scarcity. However, mine dewatering surplus will not be a permanent supply, given its availability is linked to the mine's operational life and is at the discretion of the mining company that holds the water licence.

Some of the current opportunities envisaged for expanding the use of mine dewatering surplus are outlined below. See Section 2.3 for regulatory requirements.

Use on other mine sites

Some mines require additional water for their processing operations, dust suppression or drinking requirements. These could use dewatering surplus from nearby mines instead of establishing new borefields to obtain a water supply for these purposes.

Mine rehabilitation and closure

Rehabilitation of mine sites generally requires re-establishment of native vegetation over large areas, or re-filling of mine voids (pit lakes). Mine dewatering surplus could be used to provide the water needed to rehabilitate areas that have been mined.

Agriculture and horticulture

Agricultural and horticultural developments established near mines could benefit from using mine dewatering surplus for irrigation purposes, rather than establishing new borefields.

Generally, however, the water supply will only be available as long as the mine is operating, so contingency and transition planning must be included in the planning phase of these opportunities. Proponents should mitigate the risk of third parties expecting an ongoing source of water (for whatever use) during development of the water management outcomes and by considering the cumulative impacts, as outlined in *the Western Australian water in mining guideline* (DoW 2013).

Town drinking water supply / community amenities

Mines that operate near towns may provide mine dewatering surplus for drinking water supply, public open space, swimming pools or sporting facilities. The demand for drinking water is likely to continue beyond the mine's life and associated dewatering operations, so contingency and transition planning must occur. However, use of mine dewatering surplus may offer some scope to delay the need for developing new water sources, and time to investigate supply options.

Power production (cooling purposes)

Surplus mine dewatering volumes may be used for cooling power plants where the water quality and volumes are suitable – reducing demand on water resources, as well as infrastructure and operational costs (e.g. establishment of borefields). This option is more suited to power plants operated by mining companies located near their operations. However, depending on the location, surplus mine dewatering volumes may also be used for cooling regional power plants.

Industrial use

There may be opportunities to use mine dewatering surplus for activities such as supporting related mining operations and maintaining port and railway transport facilities, depending on the mine's location and the availability of infrastructure such as pipelines. The surplus volumes would also need to be sufficient and predictable and the quality would need to be suitable.

Another potential use might be to control dust on port stockpiles.

2.5 Considerations for using mine dewatering surplus

Proponents wishing to access mine dewatering surplus should consider the characteristics of the supply detailed below.

Variability in supply

The variability in supply needs to be reconciled with the reliability required by the user, who may need a constant and predictable volume of water throughout the year (for process related activities or cooling of power plants) or predictable volumes over a given season (irrigated agriculture).

Mine dewatering volumes may vary both in the short term and long term, depending on a number of factors. The amount of water used for mining purposes may also vary over time, affecting the surplus volume available for other uses. It is therefore important for proponents to determine mine-life dewatering profiles and update these as required. Third parties need to be aware of the potential variability in supply.

Reliable delivery

Generally the mining company will own and operate the bores used for dewatering and its primary concern will be its mining and dewatering operations. Third parties should take such commercial and operational issues into account when developing agreements with mining companies to access dewatering surplus.

Cumulative impacts

Planning for the use of mine dewatering surplus needs to consider the potential for adversely impacting other water users, existing water resources and the environment. For example, the application of surplus water for irrigation near mining

operations may result in water infiltrating back into the mine area, requiring additional dewatering.

Water quality

The potential uses for mine dewatering surplus will vary depending on the quality of the water available and this may vary over the life of the mine as water is abstracted from different parts of the mine and from different depths. Water pumped from mine sites may contain metals leached from mineral resources and introduced chemicals (e.g. hydrocarbons from machinery or nitrates from explosives).

The water needs to be tested to ensure it is suitable for the proposed end use and may need to be treated to meet the requirements for that end use. This may add to the cost of using the water.

Availability of water after mine closure

A mine's life (i.e. duration of the mining operation) may vary from a few years to 25 years or longer, depending on the size of the resource. When mining operations cease, dewatering operations will generally also cease. There may be limited instances where water abstraction will need to continue for environmental reasons.

Third parties wishing to use mine dewatering surplus beyond the mine's life must develop plans for continuing or replacing the water supply after mine dewatering ceases. This is especially significant for long-term developments such as irrigated agriculture, potable water supply and industries.

With adequate contingency and transition planning, it may be possible to use the water supply, or part of it, beyond mine closure. This planning might include an assessment of the potential for continued use of mine dewatering surplus to mitigate the possibility of water contamination post mine closure.

Cost

The cost of using mine dewatering surplus as a water supply must be assessed against the cost of establishing a new water supply. In some cases, the cost of establishing infrastructure to allow the use of dewatering surplus may be significant. These costs are generally a factor of distance to demand.

Demand is likely to focus on opportunities near mining operations for use of mine dewatering surplus to be feasible and cost effective. A shorter distance between the mine and the demand centre reduces the distribution costs, because shorter pipelines, and less supporting infrastructure and roads will be required.

Pipeline route

Land access has to be legally secured for the route any pipeline will follow. This requires consideration of native title issues and access for the construction of roads, maintenance facilities, pumping stations etc. Normally land access for such works is provided under the *Land Administration Act 1997* or the *Mining Act 1978*.

Pipeline ownership

This also refers to the building and operational aspects of the pipeline and associated infrastructure. Pipeline ownership needs to be agreed through a contract between the mining company and the third party. For important pipelines that require significant state involvement, a State Agreement may need to be drafted. Pipelines, borefields and associated infrastructure may also be subject to works approvals provisions under the *Water Agencies (Powers) Act 1984*.

Third party logistics

Logistical issues may need to be overcome and addressed by agreement when supplying water to a third party (e.g. to another mine owned by a different company). These may include site access and conflicts with site operations and schedules. Safety issues may also need to be considered.

Mining companies will need to look at ways to overcome these issues if they are to create opportunities for using dewatering surplus and ensure maximum community benefit.

Trading of mining operations

The security of dewatering supply needs to be considered in the context of mining tenements and mining projects being sold or traded. Water users that depend on continued access to mine dewatering surplus should ensure their agreement with the mining company addresses the possibility of the mining concern being traded to another entity.

Appendices

Appendix 1 - Legislative framework

The legislative Acts that regulate aspects of how mine dewatering surplus is used are described below. These Acts provide for land access to mining operations, grant access to the groundwater resources, ensure the environmental impacts of activities are appropriately managed, and provide for agreements between the government and individual companies. Each of these Acts regulates a different aspect of the use of mine dewatering surplus and together they ensure the use of mine dewatering surplus is managed appropriately.

Commonwealth legislation

Commonwealth Native Title Act 1993

The main issue related to the use of mine dewatering surplus at the Commonwealth level is compliance with future acts provisions under the *Native Title Act 1993*. If the proposed use of the land is different to that allowed under the existing land tenure, then depending on the kind of land tenure involved, fresh native title processes may be required.

Environment Protection and Biodiversity Conservation Act 1999

This Act focuses on matters of national environmental significance. It covers threatened species, ecological communities and threatening processes. Critically endangered, conservation dependent, endangered, vulnerable and threatened species dependent on groundwater (including groundwater-dependent ecosystems) or endangered ecological communities could be considered under this Act. This may influence environmental water requirements and hence mine dewatering surplus volumes, or the location of infrastructure.

Western Australian legislation

Introduction

The *Rights in Water and Irrigation Act 1914* and the *Mining Act 1978* are the key Acts governing the use of water extracted from mining tenure. The primary issue will be that of access to the mining tenement by a third party, which may be addressed through an agreement with the mining company, whereby the mining company builds and maintains any infrastructure on the mining tenement.

Mining Act 1978

The *Mining Act 1978* is the primary legislation regulating mining activities in Western Australia. Mining tenements granted under this Act permit the holder to undertake mining activities and associated works within that tenement.

The Act is not considered to present any impediment to the use of mine dewatering surplus for non-mining related purposes, as long as the appropriate approvals are obtained by the mining company or third party wishing to use the water.

Rights in Water and Irrigation Act 1914

The *Rights in Water and Irrigation Act 1914* provides a licensing regime for the taking and use of water from certain sources (including underground water sources), and for the construction of bores. It applies to artesian wells throughout the state and non-artesian wells in proclaimed groundwater areas.

A licence to take water under section 5C may include conditions to manage the impacts of taking the water, such as requiring reinjection to an aquifer or supplementation of wetlands to meet environmental requirements. Conditions may also be included requiring the development of an operating strategy. Management of dewatering surplus may be detailed in the operating strategy. Licensees must comply with these conditions.

Proponents must have legal authority to access the land to take water. The licence to take water does not confer rights of access or works powers.

The construction or alteration of wells is licensed under section 26D, to manage bore construction and protect water resources.

Country Areas Water Supply Act 1947

Where dewatering surplus is to be used for potable water supply, the catchment area from which the water is to be taken may be proclaimed as a PDWSA. These areas include the catchment areas of surface water sources (reservoirs) and the recharge and abstraction areas of groundwater sources. They are presently proclaimed as water reserves or catchment areas under the *Country Areas Water Supply Act 1947*.

By-laws under these Acts enable the regulation of the land uses and control potentially polluting activities within PDWSAs.

Most PDWSAs have a drinking water source protection plan that identifies any contaminating risks to the water source and provides relevant strategies to protect the drinking water source. Any new drinking water source (including mine dewatering surplus if that is to be used for drinking water purposes) may need a drinking water source protection plan. For further information, please contact the Drinking Water Source Protection and Planning branch of the Department of Water.

Environmental Protection Act 1986

The EPA and the Minister for the Environment are charged with considering proposals that may have a significant effect on the environment by way of the

environmental impact assessment process under Part IV of the *Environmental Protection Act 1986*. DEC is responsible for regulating environmental harm and waste laws and administers licences for prescribed premises, works approvals and clearing permits under Part V of the Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 and Environmental Protection Regulations 1987.

A proposal to use dewatering surplus may need to be assessed under Part IV of the Act and may have Ministerial Conditions imposed by the Minister for the Environment. Where a dewatering proposal triggers a prescribed premises category, as stipulated in Schedule 1 of the Environmental Protection Regulations 1987, it must be assessed under Part V of the Act and in accordance with a works approval or a licence.

The *Environmental Protection Act 1986* overrides all inconsistent state legislation (see section 5 of the Act).

State Agreements

At present there are approximately 50 active State Agreements granting rights to land access and the activities that can be undertaken. Depending on the provisions of individual State Agreements, companies may have an explicit right to supply surplus mine dewatering volumes to third parties. Moreover, some State Agreements have special provisions for the mining company to supply water to a third party, such as for drinking water purposes. State Agreements also override inconsistent other laws, other than the *Environmental Protection Act 1986*.

Health Act 1911 (WA)

Proposals to use mine dewatering surplus for non-mining purposes may be regulated under the *Health Act 1911* where the proposed end use of the surplus water from dewatering activities has the potential to affect human health.

Land Administration Act 1997

Uses on pastoral leases for agricultural or horticultural purposes are subject to a permit being issued by the Pastoral Lands Board, under the *Land Administration Act 1997*, to authorise the pastoral lessee to conduct a restricted range of agricultural or horticultural activities.

Mining leases may be granted over pastoral leases. Water taken from land covered by both a mining tenement and a pastoral lease may be used for either mining or agricultural/horticultural purposes, provided the proponent meets the requirements of the *Mining Act 1978* and *Land Administration Act 1997* and obtains the relevant permit(s).

Pastoralists may apply for a permit from the Pastoral Lands Board, under section 119 or 120 of the *Land Administration Act 1997*, to use pastoral land for agricultural purposes or grow non-indigenous species. It is up to the lessee to ensure they comply with all relevant legislation. In cases where the lessee has agreed with a

mining company to use mine dewatering surplus, this may be reflected in a licence to take water from the Department of Water. While not a formal requirement, it is generally recommended that such arrangements also be noted in the permit application.

Aboriginal Heritage Act 1972

This Act provides protection for all places and objects in Western Australia that are important to Aboriginal people because of connections to their culture (Aboriginal sites). This is relevant to those needing access to Aboriginal sites for works activities (e.g. pipeline construction) that could destroy such sites.

Water Services Licensing Act 1995 and Water Services Act 2012

The *Water Services Licensing Act 1995* regulates the provision of water services. The relevant parts of the *Water Services Licensing Act 1995* will be replaced by the *Water Services Act 2012* when it comes into effect. The licensing regime under the *Water Services Act 2012* is a continuation of the main existing regulatory arrangements.

Proponents wishing to use the dewatering surplus to provide a service (e.g. public drinking water supplies, water supply for electricity or irrigation services) will require a water service provider's licence under the *Water Services Licensing Act 1995*, or *Water Services Act 2012* (once it is proclaimed) or be granted an exemption under that Act.

Water service licences are issued by the ERA. Exemptions are administered by the Department of Water. The *Water Services Licensing Act 1995* also enables the granting of works powers that are relevant to pipeline construction.

Water Agencies (Powers) Act 1984

Licensed water service providers wishing to construct water supply infrastructure to use the dewatering surplus to provide a service, may be required to comply with works approvals provisions under this Act. These obligations will be replaced by similar requirements under the *Water Services Act 2012* when it is brought into effect.

Appendix 2 - Roles of state government agencies

The role of each state government agency and its legislative responsibilities related to the use of mine dewatering surplus is outlined below.

Department of Water

The department is responsible for regulating and managing the state's water resources. It manages water for use, protects dependent ecosystems, and promotes the sustainable and efficient use of water by ensuring that licensees comply with the terms and conditions of their licences.

The department encourages early engagement by proponents for strategic issues such as the use/disposal of surplus water, given the complexities of some of the surplus water arrangements. A 'whole of mine life' approach is encouraged. The *Western Australian water in mining guideline* (DoW 2013) sets out how to work through these issues and is aligned with EPA and DEC approvals processes – Part IV and Part V of the *Environmental Protection Act 1986* respectively.

The department administers the following relevant legislation:

- *Rights in Water and Irrigation Act 1914*
- *Country Areas Water Supply Act 1947.*

There may be some constraints to development associated with mining activities when the land use activities occur in a sensitive area (e.g. in PDWSAs). The Department of Planning's 2003 *State planning policy 2.7: Drinking water source protection policy* is relevant to this issue.

Department of Environment and Conservation and the Office of the EPA

DEC is responsible for protecting and conserving the state's environment on behalf of the people of Western Australia. Its key responsibilities include broad roles in conserving biodiversity, and protecting, managing, regulating and assessing many aspects of the use of the state's natural resources. DEC contributes to the development of environmental protection policies, managing the environmental impact assessment process and carrying out regulatory functions to achieve improved environmental outcomes. It is also responsible for managing contaminated sites and coordinating pollution incident responses.

DEC administers Part V of the *Environmental Protection Act 1986* under which the discharge of dewatering surplus (i.e. as a waste) from prescribed premises is regulated. Department of Water guidelines for a dewatering management plan associated with a groundwater licence in respect of any prescribed premises indicate the licensee should seek advice on the disposal methods and the required water quality for disposal from DEC.

The Office of the EPA assists the Minister for the Environment with the administration of Parts III and IV of the *Environmental Protection Act 1986*. Part IV is discussed further in Appendix 1.

Economic Regulation Authority

The ERA is the independent economic regulator for Western Australia. It regulates monopoly aspects of the gas, electricity and rail industries and licenses providers of gas, electricity and water services. The ERA's functions are designed to maintain a competitive, efficient and fair commercial environment, particularly where businesses operate as natural monopolies, for the benefit of the Western Australian community. In making its decisions, the ERA strives to promote fair prices, quality services and choice.

Where a mining company is supplying water to another party, it may need to be licensed by the ERA in accordance with the *Water Services Licensing Act 1995* (to be replaced by the *Water Services Act 2012*). The licence issued by the ERA sets minimum service standards. Exemptions from the licensing requirements of the *Water Services Licensing Act 1995* are administered by the Department of Water.

Department of State Development

The Department of State Development (DSD) provides leadership to drive responsible development for Western Australia's future. It aims to ensure the successful delivery of key government industrial and infrastructure initiatives.

DSD has responsibility for:

- developing and coordinating significant state projects
- leading co-ordination of approvals processes for major resources, industrial and infrastructure projects across government
- negotiating and managing State Agreements between development proponents and the state government
- enabling the development of strategic industrial land and infrastructure to meet industry needs
- providing strategic policy advice on state development issues
- promoting and attracting investment in Western Australia
- advising and assisting Western Australian businesses in global export activities.

DSD has a role in negotiating State Agreements with individual companies. These instruments may or may not include provisions relating to arrangements for third party access to mine dewatering surpluses.

Department of Mines and Petroleum

DMP manages the state's mineral, petroleum and geothermal resources, and is the lead agency in attracting private investment in resources exploration and

development. It provides geoscientific information on minerals and energy resources, and manages equitable and secure titles systems for the mining, petroleum and geothermal industries. The DMP administers several Acts, of which the *Mining Act 1978* is relevant to the alternative use of dewatering surplus.

Section 24 of the *Mining Act 1978* requires Ministerial-level consultation in respect to mining tenement applications applied over PDWSAs; that is, gazetted water reserves or catchment areas.

Department of Health

The Department of Health (DoH) is responsible for public health in Western Australia. This includes managing health concerns around water quality, particularly drinking water. The DoH administers the *Health Act 1911 (WA)*.

Department of Regional Development and Lands

The Department of Regional Development and Lands (RDL) is responsible for overseeing the state government Royalties for Regions initiative, managing key projects such as the Pilbara Cities initiative, and regional development matters including state and pastoral lands functions.

The Pilbara Cities Office (PCO) (formerly within RDL and now within the Pilbara Development Commission) facilitates infrastructure projects to meet the needs of the Pilbara Cities vision. Facilitation of economic diversification is also pursued by the PCO to widen Pilbara employment options, support greater economic sustainability and support Indigenous employment and enterprise opportunities.

PCO is building on the use of pilot programs to lead the way for future development in mine dewatering and agriculture development in the Pilbara.

Department of Agriculture and Food

The Department of Agriculture and Food (DAFWA) supports the state's agriculture, food and fibre sectors to be sustainable and profitable. DAFWA enhances the international competitiveness of the state's agribusiness by working with the industry to meet the increasingly demanding standards for safety and quality of food, and fibre products produced in a sustainable way.

DAFWA has a role in proposals to use mine dewatering surplus for agricultural purposes to help ensure the agrifood sector uses land and water resources sustainably in a changing climate.

Department of Indigenous Affairs

Works associated with the provision of water infrastructure may destroy Aboriginal sites to which the provisions of sections 17 and 18 of the *Aboriginal Heritage Act 1972* would be relevant. The department responsible for the day-to-day administration of the Act is the Department of Indigenous Affairs and all questions about Aboriginal sites should be directed to it.

Shortened forms

DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DMP	Department of Mines and Petroleum
DoH	Department of Health
DoW	Department of Water
DSD	Department of State Development
EPA	Environmental Protection Authority
ERA	Economic Regulation Authority
PCO	Pilbara Cities Office
PDWSA	public drinking water source area
RDL	Department of Regional Development and Lands

References

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