Government of **Western Australia**
Department of **Water and Environmental Regulation**

Cockburn

groundwater allocation plan

Statement of response to public submissions

January 2021

WATER WISE PERTH Action Plan

This initiative is part of the State Government's Waterwise Perth Action Plan that sets the direction for transitioning Perth to a waterwise city. Our ambition is for Perth to be cool, liveable, green and sustainable – a place where people want to live, work and spend their time.

The Department of Water and Environmental Regulation acknowledges the Whadjuk Noongar people as the traditional owners and custodians of the lands and waters covered by this plan and we pay our respects to their Elders past and present.

Cockburn groundwater allocation plan

Statement of response to public submissions

Department of Water and Environmental Regulation

January 2021

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For more information about this report, contact the Kwinana Peel Regional Office on 08 9550 4222 or via email at allocation.planning@dwer.wa.gov.au.

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Cockburn groundwater allocation plan: Statement of response

This statement shows how the Department of Water and Environmental Regulation (the department) has used responses to the comments, issues and questions raised in submissions on the *Cockburn groundwater allocation plan: For public comment* (the department, 2018a) to inform the final plan.

Public comment process

The *Cockburn groundwater allocation plan: For public comment* was open for submissions and feedback from 28 May 2018 to 3 September 2018. The plan was accompanied by the *Cockburn groundwater allocation plan: Methods report* (the department, 2018; methods report).

During the public comment period, the department sent more than 100 letters to licensees and stakeholders to notify them that the plan was open for public comment.

An invitation to receive a copy of, and submit comments on, the plan was advertised in the following newspapers:

- The West Australian (4 June 2018)
- Cockburn Gazette (5 June 2018)
- Kwinana Courier (8 June 2018).

The department gave presentations to, and held informative workshops with, representatives from several interested parties to brief them on the allocation limits and plan. The department provided copies of the plan and supporting methods report at these meetings.

Completing the plan

The department considered the submissions received through the public comment process when finalising the 2020 *Cockburn groundwater allocation plan* (DWER, 2020). The plan is a deliverable of the *Waterwise Perth Action Plan* (State Government, 2019) under Action 14.

We value the support that respondents expressed for the plan and thank them for their submissions and interest in managing groundwater in the Cockburn plan area. The department will continue to engage with stakeholders, licensees and the community as we implement the plan and the *Waterwise Perth Action Plan* (State Government, 2019).

Submissions received

During the comment period, the department received 12 formal submissions from a range of interested stakeholders (Table 1). We also considered all the comments, issues and questions raised during the public comment period that were captured in presentations and meetings.

Table 1: Respondents

Respondent	**Interest group**
Blueprint	Consultancy – Environment and Conservation
BP	Mining and industry
Cameron Schuster and Associates Pty Ltd	Mining and industry
City of Cockburn	Local government
City of Kwinana	Local government
City of Rockingham	Local government
CSIRO	Commonwealth Government
Kwinana Industries Council	Mining and industry
Synergy	Electricity service provider
Two individuals	Individuals
Water Corporation	Water service provider

Comments received and the department's response

The comments received by the department are summarised in Table 2. The comments are grouped by water allocation issue and how they link to the plan.

The highlighted text shows where the department improved the plan.

Table 2: The department's responses to comments and questions received on the plan

Comment	Response
The plan	
When did the plan come into effect? Will the review and consolidation of state water legislation impact on the plan?	Section 1.8 of the final plan was updated to clarify when the plan is in effect. The department actively implements a plan once it is released for public comment. The department adapts how the plan is implemented if changes are made in the final endorsed plan. Section 1.8 of the plan also explains how long the plan will remain in effect and when it will be replaced, amended or revoked. New water legislation will not impact on the plan.
Land use change	
Are people's livelihoods considered when decisions are made regarding the Hope Valley Wattleup redevelopment project master plan?	The Hope Valley Wattleup redevelopment project is a broader State Government commitment led by DevelopmentWA (formerly LandCorp) and the Department of Planning, Lands and Heritage. It is recognised that water is an intrinsic part of this redevelopment project and will be considered throughout decision-making processes.

Comment	Response
How will changes to land use in the Latitude 32 Industry Zone affect my water licence?	The plan was updated to include the following text in Section 4.3: Land is expected to transition from horticulture (market and turf farms) to light and heavy industry in the Latitude 32 Industry Zone. Over time, water use on the land will also change. Landholders in this area have an opportunity to transfer or trade their water licence to the new landholders, where it is needed. If water is not needed by the new landholders, the licence can be returned to the department.
Allocation limits	
How are licences due for renewal considered during groundwater modelling?	When the department undertakes groundwater modelling, we use the data and information stored in our water accounting system. Licences recorded in 2016 were used in the modelling to inform the allocation limits in the plan area. A licence due for renewal was included in this process, as it is in use.
Reducing over-allocation	
One respondent provided specific comments supporting the policy to reduce overall licenced allocation in the plan area by ~20% to match sustainable yield and use.	In the *Waterwise Perth Action Plan* (State Government, 2019), the State Government has committed to reducing groundwater use by 10 per cent across the Perth and Peel Region by 2030. We will continue to work with stakeholders and the community in managing groundwater resources through: • water allocation plans • water licensing and compliance • implementing the *Waterwise Perth Action Plan* • informing land use planning.

Comment	Response
How does allocation and recouping of water work in over-allocated subareas?	Under the *Rights in Water and Irrigation Act 1914* and in accordance with statewide policy, the department may recoup unused water entitlements. This may occur at licence renewal or following compliance activities. The final plan contains updated timeframes for undertaking targeted recouping in section 6.1.
Are all the aquifers subject to recouping and what is the timeframe for this?	The plan was updated to clarify where recouping applies in section 4.3 and 6.1. Only the Superficial aquifer is subject to active recouping over the life of the plan. Recouping may occur in the Leederville and Yarragadee aquifers as part of normal licensing compliance.
Will reductions to licensed entitlements be shared equitably amongst all licence holders?	The focus for recouping during the life of the plan is on high-demand or high-risk areas in the Superficial aquifer. Particularly where there are potential impacts to the resource if more water is taken. The department is now recouping portions of licensed entitlements with consistently high underuse.
Recouping should be resolved before any managed aquifer recharge projects are trialled.	The department agrees that recouping unused water entitlements must be resolved and this is part of implementing the plan. Investing in managed aquifer recharge trials and future projects is a viable alternative water supply when groundwater is no longer available.
The 30-day period after notification of a recoup going to occur is too short.	The 30-day timeframe is standard and in line with legislation and departmental policy.

Comment	Response
Unused water entitlements	
Is it possible to use more than three years' worth of metering data to determine unused water entitlements? Two respondents were concerned that three years of metering data was not long enough to consider dry years. Business needs can change rapidly, and a lot can happen in the short-term which can affect water use.	The department acknowledges these concerns. Statistically, three years is the minimum amount of annual metered data that can be used to calculate unused water. Generally, the department uses all verified annual metered data, or other approved measures of use, that were collected over the life of the licence to determine unused water. The department considers how water use changed during the life of the licence and why before making a decision to recoup. Water saved through efficiency measures that were applied by the licensee are not recouped.
Can a definition of unused water be included somewhere in the plan?	A definition of unused water was added to the plan's glossary.
Will the department be developing a policy for recouping water entitlements? What process will be used and what is the anticipated timing for recouping unused water entitlements?	As part of delivering actions in the *Waterwise Perth Action Plan* the department will be consolidating, streamlining and improving our suite of water policies, guidance and technical advice to drive waterwise outcomes and normalise best water practice. This includes updating the current statewide policy on recouping unused water entitlements. The current policy provides details on the statewide recouping process that will be applied. The policy on recouping is available here. Please refer to section 6.1 of the plan for more detail on recouping timeframes.
Will the department recoup an existing entitlement if it is currently not being fully used, but will be in the future?	If your business needs are changing, it is important that you discuss your water licence with the department as early as possible.

Comment	Response
Water use efficiency	
Is water saved through water efficiency measures considered as used? Can the plan clarify if any unused entitlements resulting from water use efficiency measures being implemented are tradable?	Water saved through efficiency measures can be traded. The plan was updated to provide this clarity in section 4.3. Water use efficiency is driven by water availability, the price of water, and adoption of new technologies. Benchmarks for water efficiency change as new technologies and practices are developed. It is up to the individual licensee to implement best practice efficiencies appropriate for their water use. The department's current statewide policy on water conservation and efficiency plans, to achieve water use efficiency gains through water licensing, is available here.
How rigorous will the assessment of water use efficiency be?	The assessment process is dependent on the allocation requested and the intended uses of the water. The department may place certain conditions on a licence or request the licensee carry out activities to address water efficiencies. This includes metering, monitoring and reporting on use through an operating strategy.
Trading	
The department should encourage water trading to ensure water is used productively, water is available to new developments, and there is efficient and effective use of water.	Water trading is an important avenue for the redistribution of water, particularly to meet future demand in fully allocated areas. Water trading is optional for a licensee and can only occur if there is a willing buyer and seller. The department is not involved in financial transactions that occur between trading parties.

Comment	Response
How is the plan encouraging the trading of water if unused water entitlements are excluded?	Unused water entitlements cannot be traded. This does not include water saved through efficiency measures. The department assesses an application to trade and identifies if any water should be recouped prior to the trade being approved. In over-allocated water resources, the recovery of unused entitlements protects the reliability and sustainability of existing licence holders.
Any trading policy included in the plan should not be a barrier to the beneficial use of water, or the development of fit for purpose water opportunities (including wastewater reuse).	Trading policy in this plan is clear and consistent with current statewide policy. The department sets policy, including for trading, to ensure groundwater resources are managed sustainably. It is the responsibility of water users to identify and integrate all available water sources to meet their business needs. This may include identifying opportunities for obtaining water through trades. The department's Water Register can be used to identify local licensee to trade with. Trading policy does not hinder the sustainable use of groundwater, or the development and use of fit for purpose water sources.
The process for water trading is unclear. Can the department include examples of water trading in the plan?	Examples of water trading and how trading can work may be published in future to support delivery of updates to the department's suite of statewide water policies. The department's current statewide policy on water trading is available here. Information on trading water licences is also available here.
Will licence holders be forced to take on trades/transfers that have occurred due to development?	All trades and transfers of water are up to the licensee (seller) and the prospective buyer. If water is not sold with the land then it can be traded (used portion only), transferred to the new owner, or returned to the department.

Comment	Response
Are trades temporary or permanent?	The department encourages the redistribution of water through both permanent and temporary transfers of licenced water entitlements. The Cockburn plan includes the definitions for temporary and permanent transfers of licensed water entitlements in the glossary. A trade or transfer is permanent, and an agreement or lease is temporary.
Future development	
Where are new developments going to get their water from? How will future licensing work with ongoing growth of land development?	The plan was updated to include the following text in section 1.7: Most of the land identified for urban development by 2030 is in areas with no further available groundwater to irrigate parks, sports grounds and other public open spaces. The plan provides guidance and policy on water licensing now and into the future. Where groundwater is not readily available, other options for water sources should be investigated to meet demand. These options include: • water efficiency measures • groundwater trades from the same subarea and resource • reuse of water – either onsite or from wastewater purchased from the Water Corporation • managed aquifer recharge • scheme supply. It is the responsibility of the land developer to find a secure water source for the proposed development. Developers should contact the department and their local government early to identify options. The department encourages new developments, including those in infill areas, to be more waterwise. This includes creating

Comment	Response
	climate resilient public open space, sporting grounds and recreational venues as part of urban development (State Government, 2019).
How are community expectations for developing and maintaining areas of public open space being considered or addressed?	An important step in meeting the commitments in the *Waterwise Perth Action Plan* is working together with the community, local governments and land developers, and across government agencies, to create climate resilient public open space, sporting grounds and recreational venues. The department will continue to work with land developers and the cities of Cockburn, Kwinana and Rockingham to better manage and optimise groundwater for use in public open spaces. We support water sensitive urban design and waterwise communities. Groundwater use should be minimised in open space areas such as verges and streetscapes to better meet the needs of active recreational areas. For more information on managing groundwater use to support public open spaces please refer to the *North West corridor water supply strategy* (former Department of Water [DoW] 2014) on the department's website.
The state needs to have a plan to provide access to alternative sources in the Western Trade Coast if the state is going to achieve its economic development and employment objectives.	The plan was updated to include the following text in section 1.7: The department expects that the costs of alternative water supplies will primarily be borne by those proponents requiring the water. We may identify or facilitate funding opportunities if there are significant public benefits associated with a proposal. Please also see the *Western Trade Coast Managed Aquifer Recharge of treated wastewater for industrial water supply feasibility study* (GHD and JTSI 2019).

Comment	Response
Water security	
It is of critical importance for business continuity and international competitiveness that water security is maintained. The plan's strategies should support appropriate contingency plans which will assist in achieving water security.	The department acknowledges these concerns. The allocation limits in the Superficial aquifer enable a secure groundwater supply for existing and future water users until 2030. A key action for the plan (and a target for the *Waterwise Perth Action Plan)* is to reduce the volume of groundwater over-allocated in the plan area and recoup long-term unused entitlements. Where water remains available it can be redistributed or traded to support future development. Options for achieving water security from alternative supplies to meet future business needs in the Western Trade Coast area were presented in *Western Trade Coast heavy industry local water supply strategy* (DoW 2016).
Will licensing fees apply to local government?	As of 13 November 2018, water licensing fees are charged to the mining and public water supply sectors only. Further information is available here.
Domestic garden bores	
Can there be clarification on the water quality conditions that may make water unsuitable for domestic garden bores?	The department encourages households to reduce their domestic groundwater use by at least 10 per cent. Groundwater quality in land areas proposed for new urban developments in the Cockburn area is brackish and not suitable for domestic garden bores. Domestic bores are also unsuitable where proposed urban areas are located close to existing or future industry or to wetlands. Please refer to the garden bore suitability maps available here.

Comment	Response
Managed aquifer recharge	
One respondent commented on the amount of infiltration of water over the winter months, particularly: high quality water from Lake Yangebup should be used for managed aquifer recharge rather than being pumped out to sea. water flowing through the Serpentine Drain should be better managed and used for managed aquifer recharge as a high proportion of this water is coming from the Superficial aquifer.	The concept of using drainage water flowing into lakes or from urban drains as a source of water for managed aquifer recharge may be investigated in the future to meet demand. The department is developing an allocation plan for the Serpentine area. This new plan will cover how the Superficial aquifer will be regulated and allocated across the Serpentine groundwater area. The take of water from the Serpentine River, and the Peel, Birrega and Punrak main drains will also be addressed as part of the planning process. The interactions of the drains, the Serpentine River and groundwater are all considered when determining how water can be accessed to meet demand. For more information please see the department's website.
The plan needs to define what it means by short-term and long-term when referring to the location and development of a managed aquifer recharge scheme.	In the Cockburn plan, short-term refers to up to five years. Long-term refers to more than five years. This was clarified in the plan in local licensing policy 2.1.2.
A wording change was requested to local licensing policy 3.1.1 "Other approvals may also be required".	Local licensing policy 3.1.1 was updated to include: Other approvals may also be required. For more information see the licensing requirements in the department's Managed Aquifer Recharge in Western Australia policy and guideline.

Comment	Response
The use of alternative water sources such as managed aquifer recharge and wastewater is supported to meet future growth for industrial water demand across the Cockburn area. However, the department's *Western Trade Coast heavy industry local water strategy* stating that the "strategy identifies fit-for-purpose options that are 'feasible, cost effective and affordable'" overstates that ease of implementing alternative sources, such as a successful managed aquifer recharge schemes, to meet future demand.	Implementing alternative water source options in the Western Trade Coast area will be driven by business needs and identifying the right sources to fit with industry demand. The feasibility of managed aquifer recharge as an alternative storage and supply option was recently investigated. For more information see the *Western Trade Coast Managed Aquifer Recharge of treated wastewater for industrial water supply feasibility study* (GHD and JTSI 2019).
Seawater interface	
There does not appear to be many seawater interface bores. Are any more bores going to be installed to allow for a more comprehensive analysis of the seawater interface?	In 2018, the department invested in a suite of 20 seawater interface monitoring bores and infrastructure along the coast in the plan area. This has improved our knowledge and understanding of where the seawater interface is in the Superficial aquifer. Ongoing monitoring by the department and licensees will inform whether the interface is moving further inland or increasing in thickness. The plan was updated to include the new monitoring bores (section 5.1; Appendix A) and an improved conceptual model (Figure 3). The initial results of drilling and monitoring data were used to refine the location of the seawater interface zone presented in section 4.3 of the plan (Figure 6).

Comment	Response
What has the department done to reduce the risk of the seawater interface?	Limiting any increase in groundwater use is the main strategy to reduce the risk. In the defined seawater interface zone, the department may also place restrictions on how and where groundwater is abstracted. These licence conditions will minimise the risk of seawater intrusion associated with taking groundwater. The department will continue to monitor how the seawater interface moves over time. Departmental data will also be collated and assessed together with monitoring data submitted by licensees. The combined data will be used to evaluate how the resource is performing and whether the objectives of the plan are being met. The department evaluates the resource annually.
What would an increase in management of coastal areas include and what conditions would be applied to licences in the seawater interface zone?	In the seawater interface zone (Figure 6 of the plan), licensees may have conditions included on a licence that requires them to monitor, measure and report on water levels and water quality (salinity). The department may also require the installation of a monitoring bore(s). This is dependent on how and where groundwater is injected or abstracted, and the level of risk to the resource. Existing licensees may be required to improve their monitoring associated with injecting or abstracting groundwater in the seawater interface zone. New licensees will be advised by the department if monitoring is required prior to completing the assessment of the licence. The more information the department is provided with during the application process, the more we can advise the licensee on what actions they may need to take. See section 4.4 of the plan for relevant local licensing policies.

Comment	Response
The plan needs to clarify how local licensing policy's 3.2.1 and 3.2.2 will be put into effect and if existing infrastructure will be affected.	Local licensing policy 3.2.1 refers to monitoring groundwater quality across the plan area. This policy applies to both new and existing water licences. It will be assessed on a case by case basis. Local licensing policy 3.2.2 refers to constructing new bores close to significant groundwater-dependent ecosystems. Unless impacts of abstraction are observed, this policy does not affect existing infrastructure (see Local licensing policy 3.3).
Groundwater-dependent ecosystems	
Will there be any changes to the management or protection of groundwater-dependent ecosystems? Will the buffer zones be established, or bores moved?	Managing and protecting groundwater-dependent ecosystems and the seawater interface was improved in the final plan. These changes were made to section 4.4 Local licensing policies, and section 5 Monitoring program in the plan. Where observed impacts of abstraction are significant, the department may require a licensee to relocate production bores away from groundwater-dependent ecosystems. This is assessed on a case by case basis.
Are monitoring requirements relevant to the risk of abstraction? Are there higher requirements in areas of high risk?	Generally, the higher the risk of abstraction the more monitoring is required. The level of monitoring required by a licensee is dependent on where and how much groundwater is abstracted. In high-risk areas, the department requires targeted monitoring to identify if there are impacts to the resource and groundwater-dependent ecosystems. The plan details where monitoring in high-risk areas is likely in section 4.4.

Comment	Response
Is monitoring data publicly available so that water licence holders can stay informed about changes to water levels and water quality?	Water monitoring data collected in the Cockburn plan area can be accessed using the free online Water Information Reporting tool available on the department's website. Monitoring data collected by licensees is not publicly available.
Contaminated sites	
The mobilisation of contaminants in the plan area is a significant issue and needs to be avoided. Clarify the wording around protecting existing water quality during managed aquifer recharge is needed. The current wording in the local licensing policies may restrict the ability of proponents to adopt a risk-based approach to developing a managed aquifer recharge scheme that is in line with the *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2)*.	When assessing a proposal for a managed aquifer recharge scheme the department considers the risks of the proposal on changes in groundwater quality. This includes seawater intrusion, mobilising existing groundwater contamination, or exposure of acid sulfate soils. The department updated local licensing policy group two in the plan to align with the risk-based approach in *Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) – managed aquifer recharge* (Natural Resource Management Ministerial Council et al 2009). Local licensing policy 2.1.3 now includes: exceptions may apply if the applicant can demonstrate a low-risk of further mobilising an existing contaminant plume. As part of delivering actions in the *Waterwise Perth Action Plan* the department will be consolidating, streamlining and improving our suite of water policies, guidance and technical advice to drive waterwise outcomes and normalise best water practice. This includes updating the current statewide policy on managed aquifer recharge in Western Australia.

Comment	Response
How is contamination considered in the Kwinana Industrial Area and what are the implications with managed aquifer recharge?	There are several areas in the Cockburn plan which are at high-risk of mobilising contaminant plumes without carefully regulating and monitoring groundwater use. The Kwinana Industrial Area is one of the high-risk areas. The department is responsible for regulating contaminated sites and acid sulfate soils under the *Contaminated Sites Act 2003*. In all areas of the state, groundwater contamination and acid sulfate soils are always considered in our water licensing process. A risk-based approach is used to ensure that reinjecting or abstracting groundwater does not expose acid sulfate soils or adversely affect groundwater quality. The department is unlikely to approve a proposal for a managed aquifer recharge scheme in or around a high-risk area with a known groundwater contaminant plume. Exceptions may apply if the proponent can demonstrate a low-risk of further mobilising an existing contaminant plume. Additional environmental approvals may also be required before a water licence can be granted.
How will entitlements used for the recovery of contaminated water to protect environmental values be considered during recouping?	The plan was updated to include how the department will manage recouping long-term unused water entitlements associated with environmental recovery. Water licensed for environmental recovery purposes associated with conditions of a Part V licence under the *Environmental Protection Act 1986* or *Contaminated Sites Act 2003* will be considered prior to any recouping process. Any long-term unused water entitlements that are recouped will ensure the licensee can still adhere to their Part V licence.

Comment	Response
Can a caveat be added to land titles for properties adjacent to contaminated sites to prevent them from installing a garden bore?	The department places memorials on land titles of properties which are classified as *known or suspected contaminated sites* under the *Contaminated Sites Act 2003*. The department cannot place a memorial on a property's title where it is adjacent to a contaminated site. The Cockburn groundwater area is not considered suitable for new garden bores. The department's garden bore suitability map can be found on our website.

Where to next?

Where indicated in the tables above, responses and changes were incorporated in the final *Cockburn groundwater allocation plan* (DWER 2020). The plan is available from the department's website.

It outlines how the department will allocate and manage groundwater resources in the Cockburn area through licensing, assessment, policy and reporting.

Further information

For licensing information, please contact our regional office:

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Phone: 08 9550 4222
Email: peel@dwer.wa.gov.au

For planning information, please contact:

Water Allocation Planning Branch
Phone: 08 6364 7600
Email: allocation.planning@dwer.wa.gov.au

Glossary

Abstraction	Withdrawal of water from any surface water or groundwater source of supply.
Agreement	A temporary assignment of a licensed entitlement, or part thereof, to another person eligible to hold a licence. This allows another person to operate under the licence for the period of the agreement. Usually requiring an assessment of the likely impacts. The agreement is a civil arrangement between the two parties.
Allocation limit	Annual volume of water set aside for use from a water resource.
Conservation category wetland	Wetlands identified in geomorphic wetlands mapping (Hill et. al 1996) which are of high conservation significance.
Consumptive use	Water used for consumptive purposes considered as a private benefit including irrigation, industry, urban and stock and domestic uses.
Fit for purpose water	Water that is of suitable quality for the intended end purpose. It implies that the quality is not higher than needed.
Groundwater area	The boundaries proclaimed under the *Rights in Water and Irrigation Act 1914* (WA) and used for water allocation planning and management.
Groundwater-dependent ecosystem	An ecosystem that is at least partially dependent on groundwater for its existence and health.
Groundwater-dependent community value	An in-situ quality, attribute or use associated with a groundwater resource (or dependent on a groundwater resource) that is important for public benefit, welfare, state or health.
Licence (or licensed entitlement)	A formal permit which entitles the licence holder to take water from a watercourse, wetland or underground source under the *Rights in Water and Irrigation Act 1914*.
Over-allocation	Refers to situations where licensed water entitlements and public water supply reserves, at a given time, exceed the allocation limit of a water resource.

Reliability	The number of years over time that a water licence holder can obtain their full licensed volume.
Seawater interface	The interface is a zone where dense salty water from the ocean meets the fresh groundwater flowing out to sea below the surface of the land along our coastlines.
Seawater interface 'toe'	The point at the bottom of the aquifer furthest from the coast where the seawater wedge intrudes from the ocean.
Subarea	A subdivision, within a surface or groundwater area, defined to better manage water allocation. Subarea boundaries are not proclaimed and can therefore be amended without being gazetted.
Sustainable groundwater use	Abstracting groundwater in a way that does not result in unacceptable depletion of aquifer storage. Abstraction that causes significant long-term declines in groundwater levels is not acceptable and could ultimately have effects that cannot be reversed.
Trade	Where a water entitlement is permanently traded to another person and the water is taken from another location. An example is where a licensee sells all or part of their water entitlement to another person who will take the water from a different location and possibly use it for a different purpose. A temporary trade is an agreement, as the water will revert to the original land at the end of the agreement.
Transfer	Where the licensee changes but the water is taken from the same location. An example of a transfer is when a licensee sells their property and their development (for example, a market garden) together with the water entitlement to another person who will continue with the development.
Unused water entitlement	That part, or all, of a licensed annual water entitlement that has not been taken for three consecutive years, unless otherwise specified in licensing conditions, operating strategies, agreed development timeframes, or in water allocation plans.

Shortened forms

DPLH	Department of Planning, Lands and Heritage
The department	Department of Water and Environmental Regulation
JTSI	Department of Jobs, Tourism, Science and Innovation

Volumes of water

One litre	1 litre	1 litre	(L)
One thousand litres	1,000 litres	1 kilolitre	(kL)
One million litres	1,000,000 litres	1 megalitre	(ML)
One thousand million litres	1,000,000,000 litres	1 gigalitre	(GL)

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