LOWER LIMESTONE COAST WATER ALLOCATION PLAN POLICY PRINCIPLES

LOWER LIMESTONE COAST WATER ALLOCATION PLAN TASKFORCE

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DEPARTMENT FOR WATER

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BACKGROUND

The South East of South Australia is an important region, both economically and ecologically. It provides employment for 33,000 people, contributes $2.7 billion annually to the state's economy, and attracts 600,000 visitors a year. The region boasts great beauty and diversity and is one of only twelve biodiversity hotspots in Australia. It is home to the World Heritage-listed Naracoorte Caves, as well as internationally important Ramsar wetlands.

Most of the water for irrigation and domestic use in the South East is extracted from groundwater resources. This groundwater is managed as two distinct systems: an upper unconfined aquifer (commonly called the Tertiary Limestone Aquifer); and a deeper confined aquifer (referred to as the Tertiary Confined Sand Aquifer). Most of the groundwater allocated to support economic activity is sourced from the unconfined aquifer. The management of the upper unconfined aquifer is of particular importance as it interacts with groundwater-dependent ecosystems that support wetland fish, bird and plant communities.

Wetlands once characterised the landscape in the South East. However, since European settlement, drainage and land clearance has seen them reduced from 44% to 6% of the region. Recent research has concluded that less than 10% of these remnant wetlands are intact and that 77% are highly likely to be groundwater dependent.

Water has historically been abundant. The irrigated dairy industry has flourished in the cool wet climate and drains have been put in place across the landscape to remove water and make it more productive for agriculture. The climate and soils are also conducive to grape and wine production, and the past few decades have seen a significant expansion in vineyards. High rainfall also makes the South East SA's most suitable region for large-scale forestry. It has a long tradition of softwood production and, in recent years, a hardwood industry has emerged.

However, there are growing signs that the region is reaching the limits of sustainable water use. During the recent drought, water tables fell at an alarming rate in some areas.

Measured drops in the water table over the past five to 10 years set off water management triggers in a number of prescribed groundwater Management Areas. The result was a recommendation by the South East Natural Resources Management Board for a reduction in water allocation and use in some management areas to protect the integrity of the water resource and the ecological systems that depend on it.

In June 2009, the Government released the state-wide policy framework, *Managing the water resources impacts of plantation forests*, developed by the Water Resources and Forests Interdepartmental Committee (IDC). This framework outlines policy principles and management options for forestry water use through regional Natural Resources Management (NRM) plans and water allocation plans (WAPs). Following the release of the framework, the Water Resources and Forests IDC continued to meet during the latter half of 2009 to provide further advice to the Ministers for Environment and Conservation, Forests and Agriculture, Food and Fisheries on science and policy for the draft Lower Limestone Coast Water Allocation Plan (LLC WAP).

At the same time, amendments to the *Natural Resources Management Act 2004* were prepared to provide a mechanism for licensing and introducing an improved permit system to manage the impacts of commercial plantation forestry on water resources. These amendments were first introduced into Parliament in 2009. The amendments were introduced again on 24 November 2010 and were considered by Parliament in 2011. These amendments were assented to by the Governor in November 2011. Importantly, these amendments only establish instruments for licensing and introducing an improved permit system. They do not dictate where or how those instruments should be applied.

Early in 2010, a small taskforce was convened by the Department for Water to review the relevant available science and to develop a policy framework that could be used both as a basis for informal consultation with stakeholders, and to help the South East NRM Board develop a new water allocation plan for the Lower Limestone Coast. Information contained in the *South East Water Science Review* has been used to inform this document.

A Lower Limestone Coast Water Allocation Plan Policy Issues Discussion Paper was developed by the Taskforce in close consultation with the Stakeholder Reference Group (which includes representatives of the dairy, dry-land farming, forestry, potato and viticulture industries, as well as representatives from the South Australian Farmers Federation and the Conservation Council of South Australia). This Policy Issues Discussion Paper was publicly consulted in March-April 2011. The policies contained within the Policy Issues Discussion Paper have been amended in consultation with the Taskforce and Stakeholder Reference Group and are presented below.

This document is broken into the following seven key areas:

- Starting Positions for Policy Development,
- Learning's from the South East Water Science Review
- Guiding legislation and policy,
- Determining sustainable limits,
- Allocation of water,
- Measuring use of water
- Addressing over-allocation,
- Transfer, Conversion and carry-over rules.

The policy principles below will provide the basis for the preparation of the *Lower Limestone Coast Water Allocation Plan* (WAP). However it is recognised that the WAP will need to be more detailed and also determine how those policies will be put into operation.

STARTING POSITIONS FOR POLICY DEVELOPMENT

- Decision-making processes should effectively integrate both long-term and short-term economic, environmental and social and equity considerations.
- Policies should be consistent with the 2006 State NRM Plan's 50-year vision: 'South Australia, a capable and prosperous community, managing natural resources for a good quality of life within the capacity of our environment for the long term.'
- The role of government is to manage water resources sustainably and provide transparent mechanisms that enable the sale or transfer of water.
- The South Australian Government is a signatory to the COAG intergovernmental agreement on the National Water Initiative.
- The South Australian Government has adopted water allocation plans as its principal risk management and assignment instrument.
- The most recent scientific analysis on water resource condition should be included in the Lower Limestone Coast WAP. The science the Government uses to inform its decisions should be made available to all stakeholders. Over time, the science will improve and may better inform the future management of water resources.
- Sound policy development should be evidence-based and underpinned by a commitment to adaptive management.
- Allocation of water must be within sustainable limits, meet the needs of the environment, enable ongoing economic development, and respect the rights of existing water entitlement holders and other water users with prior-use rights.
- Water allocation at the prescribed wells area level is currently within sustainable limits, however, there is some over-allocation at the management area level.
- For planning purposes, allowance must be made for the use of all licensed water allocations, permits and other authorised water uses.
- Exceeding specified resource condition indicators (over 5–10 year timeframes) should be used as a prompt for further investigating the cause of water resource trends. Changes in allocations may occur, however, if specified indicators, such as resource condition triggers, are exceeded.
- Fair policies must be developed to enable industries to comply with sustainable limits.
- Changes in allocations should be in response to an assessment of the risk to a resource, and be implemented in a way that adaptively manages the risk while achieving a specified outcome.
- Wetland areas and their condition should be maintained – and preferably improved – to enhance the connectivity, function and long-term survival of ecosystems. Approaches to the protection and management of a wetland should be appropriate to its value, and long-term reductions in groundwater levels should be avoided to prevent the degradation of water dependent ecosystems.

- In areas where groundwater levels are in decline, scientific investigations should be undertaken to understand the associated environmental impacts and lead to a regional understanding of the robustness of groundwater systems.
- Consistent policy should be applied to determine the sustainable level of allocation, both within and outside the Border Groundwaters Agreement Designated Area.
- Dry-land farming, which facilitates recharge of aquifers, makes an important contribution to the water resource, and the rights and contributions of these industry participants should be recognised and respected. Those rights and obligations include:
    - the right to develop up to 10% of an allotment for farm forestry without the need for a forest water licence/permit;
    - maintenance of rights associated with water (holding) allocations; and
    - non-metered access to water for stock and domestic purposes.

LEARNINGS FROM THE SOUTH EAST WATER SCIENCE REVIEW

- Wetlands historically characterised the landscape in the South East. However, since European settlement, drainage and land clearance has seen them reduced from 44% of the land area to less than 6%. Recent research has concluded that less than 10 % of the remaining wetlands are intact (see Introduction).
- The majority of wetlands in the South East (77% by number and 96% of total wetland area) are highly likely to be groundwater dependent. This relationship is consistent for the Lower Limestone Coast Prescribed Wells Area (Introduction).
- In the Lower Limestone Coast Prescribed Wells Area, surface water and groundwater are intrinsically linked and should be managed in an integrated fashion (Chapter 4).
- Movement in the water table is a natural phenomenon (in response to rainfall) and can occur locally or over the entire region, regardless of water use. However, groundwater extraction, interception and drains all have the potential to affect the water table (Chapter 3).
- Water use is currently within sustainable limits at the prescribed wells area level (Chapter 5).
- There is uncertainty about the amount of water that can be extracted sustainably from the region. Proposed management relies on triggers (including groundwater drawdown, increasing salinity and seawater intrusion) to indicate a decline in groundwater condition (Chapter 5).
- Reductions in groundwater levels may indicate unsustainable water use (Chapters 3 and 5).
- Several hotspots of over-extraction/over-use exist and are evidenced by the rate and/or extent of decline in groundwater level (Chapters 3 and 5).

- Plantation forests – regardless of species – reduce runoff (including groundwater recharge) and access groundwater through direct extraction when the depth of the groundwater table is less than six metres, (Chapter 1).
- In the area under blue gum plantation (primarily in the hundreds of Coles and Short), forestry has been a direct cause of groundwater decline (this is irrespective of recent dry climatic conditions). Its future impact will vary depending on annual rainfall, however, it will likely extend beyond the edge of any intensive forestry (Chapter 3).
- In and around Coles and Short, there is potential for the localised area of groundwater decline (cone of depression) to affect the character of groundwater-dependent wetlands that fall within its area of influence (Chapter 11).

GUIDING LEGISLATION AND POLICY

- The management of water resources in the Lower Limestone Coast Water Allocation Plan should be consistent with a suite of legislation, inter-jurisdictional agreements and state and national policies. Most significantly, these include: the National Water Initiative, (Commonwealth) Environment Protection and Biodiversity Conservation Act 1999, National Competition Policy, Border Groundwater Agreement, Natural Resources Management Act 2004, Forest Property Act 2007, State NRM Plan, South East Regional NRM Plan, the Statewide policy framework: Managing the water resource impacts of plantation forests, Water for Good, South Australia's Strategic Plan and No Species Loss.

DETERMINING SUSTAINABLE LIMITS

- Water allocation will be managed within sustainable limits at both the Prescribed Wells Area (PWA) and Management Area level.
- Groundwater-dependent ecosystems and processes should be given protection to ensure the long-term maintenance and enhancement of biodiversity values at a regional scale.
- Sustainable limits should be determined through the Target Management Level system for licensed and unlicensed demands on the resource.

ALLOCATION OF WATER

- Irrigation equivalents will be converted to a volume (ML) based on the Volumetric Conversion method developed by the Department for Water. Tradeable (property right) components should be applied consistently for all irrigation types. On balance, a rate of 16% is suggested.

- Where eligible, delivery supplements, specialised production requirements and bridging volumes will be added to the tradeable component of water (taking) allocations. Delivery supplements and bridging volumes are not tradeable. Specialised production requirements are tradeable only where they continue to be used on the same allotment for the same purpose. Delivery supplements must be surrendered to the Minister if the practice ceases and bridging volumes will be reduced to zero during the life of the WAP.
- As a precautionary approach, , whilst the Border Groundwaters Agreement is being reviewed, within the BGA Designated Area, delivery supplements should be based on the greatest area (in haIE) actually flood irrigated in any Management Area, or spray irrigated in the Donovans Management Area, during the 2005/06-2007/08 water use years. The flood irrigation delivery supplement will be calculated as 31 % of the tradeable component and the spray delivery supplement in the Donovans Management Area will be calculated as 7.8 % of the tradeable component.
- Water (holding) allocations in existence at date of adoption should remain accounted for at the Management Area level and be eligible for conversion to water (taking) allocations where no resource condition triggers are being exceeded, and a site hydrological test can be satisfied.
- Commercial forestry should be managed through the application of a forest water licence system after the Minister declares a forestry area.
- Water allocations (volumes) issued to commercial forests in existence at date of adoption will be based on (1) recharge interception at the time of canopy closure, plus (2) average direct groundwater extraction impacts based on the direct groundwater extraction by plantations established by seedlings. The water allocated for recharge interception in excess of the deemed rate of use will be derived from the Forest Threshold Expansion Opportunity.
- Once allocations are issued to commercial forests in existence at date of adoption, the Forest Threshold Expansion Opportunity will cease to exist.
- Deemed water-use rates will be used by forestry water licence holders when completing annual water use returns. These will be based on forest water-use science and long-term rainfall/recharge data. A selection of different deemed rates should be made available to estimate forest water impacts according to the silvicultural practices adopted (i.e. with or without a year of fallow, shorter or longer plantation rotations, additional plantation thinning regimes, establishment from coppice and change of species).
- For direct extraction, where the median depth to the water table was six metres, or less, from ground level on 30 June 2004:
    - hardwood plantations established from seedlings are deemed to extract 1.82 ML/ha/year
    - softwood plantations are considered to extract 1.66 ML/ha/year.
- Farm forestry should not require a forest water licence when it is situated on a farm and the net planted area does not, or will not, exceed 10% of an allotment, or 20 hectares per allotment, whichever is greater.

ADDRESSING OVER-ALLOCATION

- Reductions in allocations (taking, holding, forest water use) should be applied at the Management Area level and preserve equal shares in the resource.
- All reductions will be converted to water (holding) allocations referenced to the whole Prescribed Wells Area (including reductions to forest water licences).
- Incentives should be considered to maximise the environmental returns from any reductions deemed necessary because environmental triggers are exceeded.
- Reductions in water allocations should be implemented in a staged manner, allowing time for industry adjustment. Public water supply, recreational use and industry allocations should be exempt from reductions.
- If reductions in allocations are required in any Management Area:
    - water allocations held by a forest manager in excess of that required to offset the requirements of the estate referenced on the Forest Water Licences, will be reduced at the same time as for other water (irrigation) allocations;
    - forest expansion must not occur until all reductions have been met;
    - no premature clear felling will be required.
- Forest industry participants may propose a scheme to achieve any required reductions in water use. Schemes may include, but are not limited to:
    - decreased area;
    - increased buffers to wetlands and watercourses;
    - additional plantation thinnings;
    - increased fallow period; or
    - change of species.
- Reductions in water allocations issued to forestry licensees (from within a Management Area) will be converted to water (holding) allocations at the Prescribed Wells Area (PWA) level. Subject to hydrogeological assessment, they would then be made available in parts of the PWA not fully allocated and not subject to rates of drawdown or increases in salinity that exceed trigger levels.
- Water allocation issued to forestry licensees can be traded where water is not being used to offset forest water impacts, noting that where one or more fallow years is part of the deemed rate, the plantation is still deemed to be using water at the full deemed rate in the fallow years and that portion of the allocation is not eligible to be traded. .

TRANSFER, CONVERSION AND CARRY-OVER RULES

- Transfer between licence holders within a Management Area is to be facilitated where water resource sustainability is not compromised.
- Flood delivery supplements are not transferable. Rather, they are surrendered upon the transfer of the tradable component and reissued to the transferee, only if the intention is to continue to use them for the purposes of flood irrigation.
- Specialised production requirements can only be transferred when the relevant volume of water is traded to the same property for the same purpose.
- Water (holding) allocations which are tagged to Management Areas, are eligible for conversion to water (taking) allocations within that area, where no resource condition triggers (i.e. salinity level) are being exceeded and a site hydrological test can be satisfied.
- Water (holding) allocations which are tagged to Management Areas can also be converted in another Management Area, provided it is not over-allocated and the above conditions are being met.
- Water (holding) allocations, which are not tagged to Management Areas, are eligible for conversion to water (taking) allocations in Management Areas which are not fully allocated, where no resource condition triggers are being exceeded, and where a site hydrological test can be satisfied.
- Forest water allocations can be traded where excess water attached to a forest water licence is not being used to offset forest water impacts, noting that where one or more fallow years is part of the deemed rate, the plantation is still deemed to be using water at the full deemed rate in the fallow years and that portion of the allocation is not eligible to be traded.
- Water (taking) allocations, water (holding) allocations and forest water licences are eligible for transfer into another Management Area, providing it is not fully allocated, no resource condition triggers are being exceeded, and a site hydrological test can be satisfied.
- Up to a total of 140% of a water allocation (inclusive of those associated with commercial forestry) may be available for use in any water year. It should comprise:
    - the licensee's annual allocation
    - up to 20% of unused water from the previous year, carried forward
    - the temporary transfer in 3 out of every 5 years of up to 20% of the allocation from another licensee's unused water from the current water use year, with no assessment (additional volumes may be transferred, subject to assessment).
- In the case of specialised production requirements in the form of water for frost control for grapevines, this volume should be managed on a three-year rolling average.