

WENTWORTH GROUP OF CONCERNED SCIENTISTS

Prof Justine Bell-James, Dr Matthew Colloff, Mr Mike Grundy, Prof Lesley Hughes,
Prof David Karoly FAA, Prof Richard Kingsford, Prof Martine Maron, Prof Bradley Moggridge, Prof Jamie Pittock,
Prof Fran Sheldon, Dr Teagan Shields, Prof Bruce Thom AM, Mr Martijn Wilder AM.

SUBMISSION TO THE WEST AUSTRALIAN GOVERNMENT ON THE CONSULTATION DRAFT OF THE FITZROY-DERBY WATER RESOURCES MANAGEMENT PLAN

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About the Wentworth Group

The Wentworth Group of Concerned Scientists is an independent group of scientists, economists and professionals working to secure the long-term health of Australia's land, water and biodiversity. Our Members comprise leading Australian experts in water resources, climate science, biodiversity conservation and natural resource management, as well as eminent environmental lawyers, sustainable business leaders and natural capital market experts. We focus on solutions based, science driven policy reforms and work strategically to drive outcomes that benefit the environment, communities and the economy.

Introduction

The Wentworth Group welcomes the opportunity to provide a submission on the *Consultation Draft Fitzroy-Derby Water Resources Management Plan*. The draft plan is an important step forward in protecting the ecological, cultural and social values of the Martuwarra (Fitzroy River), one of Australia's most intact river basins.

We strongly support the proposal to maintain the Fitzroy River and its tributaries as free-flowing rivers (Policy Position 1), prevent further growth in surface water extraction (currently 6.083 GL/year) (policy position 4), prevent extractions from the Alluvial and Devonian Reef aquifers (Policy Positions 3), and establish an Aboriginal Water Holding (Policy Position 5). We also support the recognition that groundwater and surface water are interconnected components of a single hydrological system and should be managed conjunctively and on a precautionary basis.

Yet we do not support the draft plan in its current form. Our submission highlights several aspects which should be strengthened within the final plan to ensure future water allocation decisions remain scientifically robust, precautionary and consistent with the rights and interests of Traditional Owners.

Water management planning based on best available science

The plan should include an explicit principle that water allocation decisions be based on the best available scientific evidence, including Indigenous science. This principle should guide allocation decisions, monitoring, review processes and adaptive management arrangements. The plan would also benefit from a clear hierarchy of water use priorities which include ensuring water for the health of the river and its dependent ecosystems, coupled with mechanisms that give effect to those priorities at all times.

Groundwater extraction limits require a stronger scientific basis

The draft plan adopts the precautionary principle but the proposed increase in groundwater allocations to 75.7 GL/year does not reflect such approach. The proposal to permit a

substantial increase in groundwater extraction from current levels does not reflect the significant uncertainty regarding recharge rates, groundwater-surface water connectivity, ecological thresholds and climate change impacts.

Further, the methods document does not explain why 40% of estimated recharge was selected as the basis for increasing groundwater limits, rather than a more conservative threshold (e.g. 25% or other). Recharge estimates are inherently variable and uncertain due to complex hydrogeology, limited monitoring data and climatic conditions. Groundwater extraction limits should therefore be justified based on sensitivity testing across a range of recharge scenarios and climate futures.

Groundwater licence conditions should include enforceable hydro-ecological limits

Fixed annual extraction limits are an important management approach but are not sufficient on their own to protect groundwater dependent ecosystems from localised or cumulative impacts. Groundwater extraction under licences may be concentrated in particular locations or occur simultaneously during critical low flow periods, creating cumulative risks that are not addressed through annual allocation limits.

We recommend that extraction under all groundwater licences should be conditional on acceptable drawdown rate or bore levels (or other appropriate hydro-ecological threshold such as water quality). These would provide for an adaptive management approach that provides better protection for important values including groundwater dependent ecosystems, maintenance of drought refuges, and cultural values identified by Traditional Owners. Extractions should be conditional on meeting these thresholds through mechanisms including cease-to-pump and commence-to-pump provisions specified on water licence conditions.

Floodplain harvesting and rainfall-runoff capture should be prohibited

The final plan should explicitly prohibit any further growth in floodplain harvesting take and other forms of floodwater or rainfall capture that could alter natural flow regimes and undermine the objective of maintaining the Fitzroy River within its natural range of variability.

Monitoring, transparency and accountability

Effective precautionary water management depends on comprehensive monitoring, transparent reporting and enforceable adaptive management. The final plan should require all pumps to have telemetry to help measure and report on key indicators such as groundwater levels, groundwater quality, with data provided to state government and made publicly available through a register.

The plan should also include the monitoring results that trigger management intervention and the actions that will follow when thresholds are exceeded. Transparency in monitoring data, compliance reporting and ecological assessments is essential for maintaining public confidence and enabling independent scrutiny.

Account for climate change and coastal groundwater risks

The draft plan acknowledges climate change but does not yet adequately incorporate future climate risks into allocation decisions. Historical recharge patterns cannot be assumed to persist under future climatic conditions. The final plan should incorporate climate-adjusted

recharge scenarios and require periodic reassessment of allocation limits as new information becomes available.

Particular attention should be given to coastal and estuarine aquifers where groundwater extraction may increase the risk of saltwater intrusion. Rising sea levels, changing recharge patterns and declining groundwater pressures can interact to create significant and potentially irreversible impacts on freshwater resources and groundwater-dependent ecosystems. Monitoring programs should therefore include groundwater salinity, recharge rates and indicators of seawater intrusion.

Embed the principles of UNDRIP and provide for joint decision-making with Traditional Owners

The Wentworth Group also supports the establishment of an Aboriginal Water Holding and recommends that its governance be consistent with the principles of self-determination embodied in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

Governance arrangements should involve Traditional Owners and supported through long-term investment in planning, capacity building and institutional development. Traditional Owner science, knowledge, cultural values and objectives should be embedded within the operational framework of the plan and given equal standing alongside scientific and ecological indicators in management decisions.

In the first instance, recommendations from the submissions put forward by the Traditional Owners of the country across which the Fitzroy-Derby management plan applies should be supported and adopted.

Support regional governance and implementation

The proposed Water Advisory Committee is supported as an important first step towards regional water governance. It should be required to make decisions based on best available scientific evidence, and include expertise in integrated natural resource management, climate change and ecology. Experience from catchment management groups across Australia demonstrates that effective water governance is strengthened when regional stakeholders share responsibility for planning, implementation and adaptive management.