

Making Australian groundwater data accessible

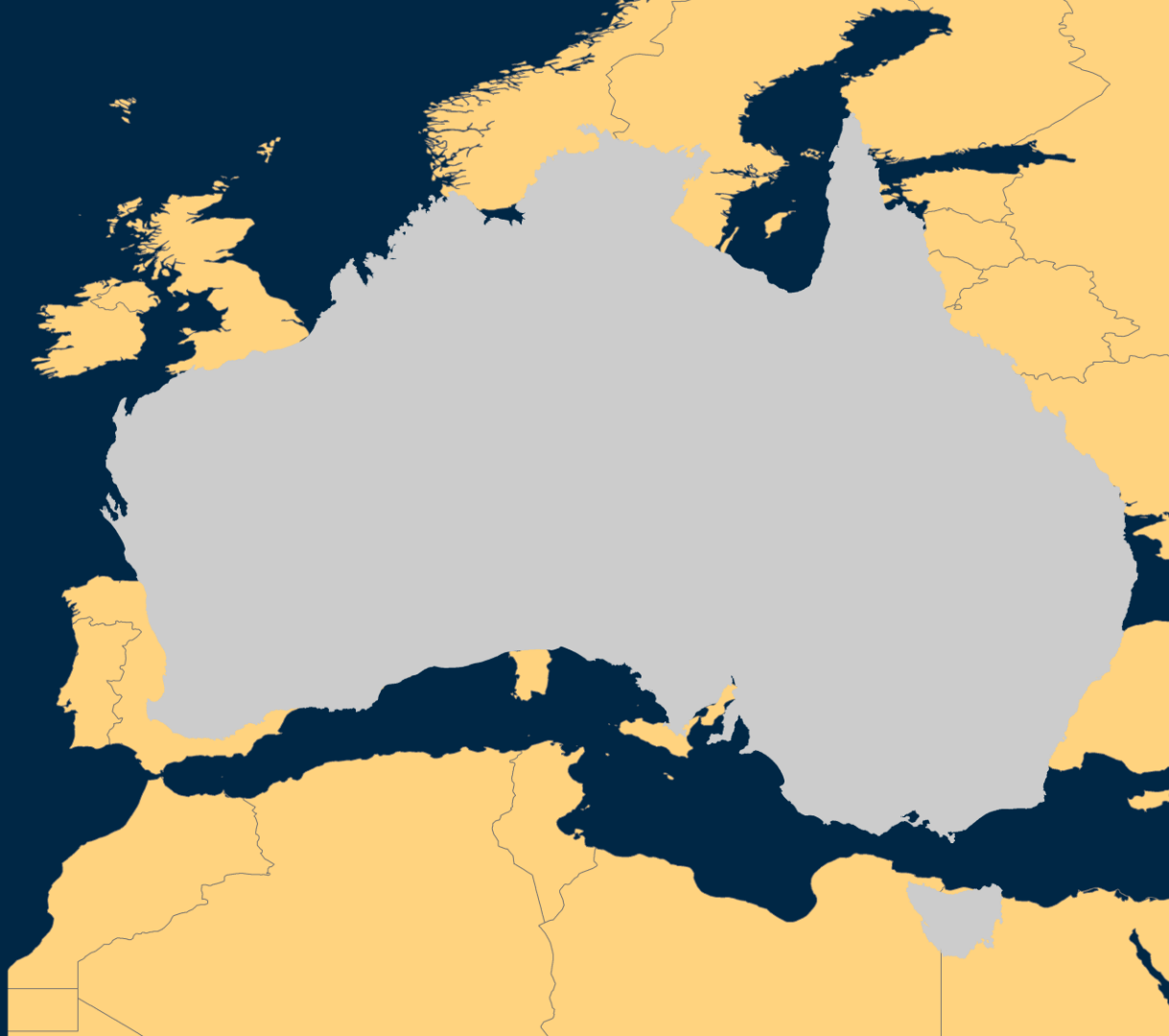
John Sharples, Elisabetta Carrara, Eloise Nation
Bureau of Meteorology



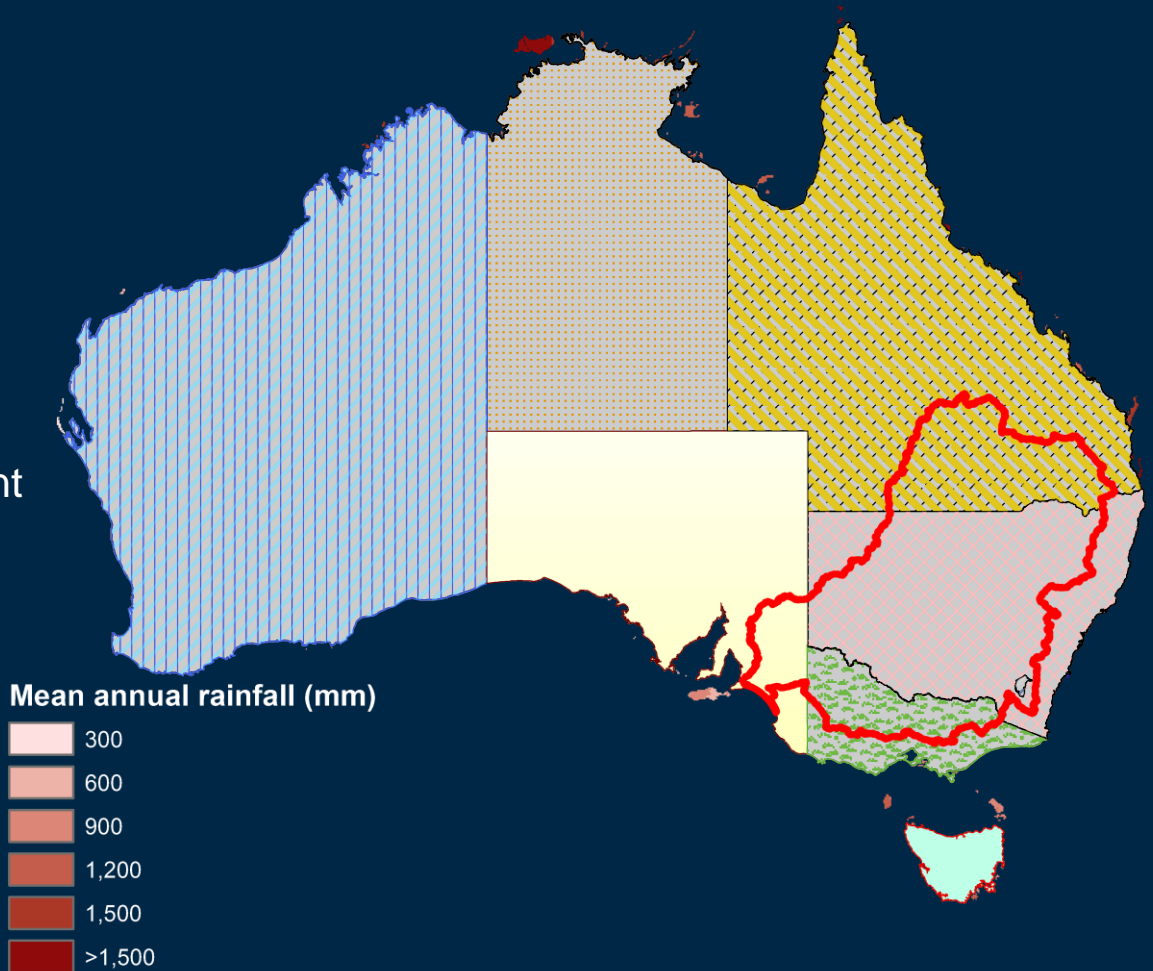
Overview

- Groundwater at the Bureau
- What data do we collect?
- How do we publish data?

- Australia is big



- Australia is big
- Australia is dry
- Six states and two territories
- Water planning and management sits with state agencies
- States borders are not hydrological divides



The Millennium Drought

THE BIG DRY

PUBLISHED IN MELBOURNE SINCE 1854

DROUGHT

Farms to lose vital irrigation supplies unless rain falls within weeks

FRIDAY, APRIL 20, 2007

PM's dire warning on water

By JEWEL TOPSFIELD,
JOHN GORDON
and ORIETTA GUERRIERA

LARGE sections of rural Australia are facing economic ruin and consumers have been warned of soaring prices for basic food items unless drought-relieving rain arrives within weeks.

In the most chilling assessment yet of the water crisis, Prime Minister John Howard yesterday said he had received a report warning of an "unprecedentedly dangerous" situation in the Murray-Darling Basin — the national agricultural "food bowl" that spans four states.

Mr Howard said that unless there was "heavy rain" in the next six to eight weeks, there would be no water allocations for irrigation in the basin, which accounts for 71 per cent of Australia's irrigated crops and 41 per cent of the nation's agricultural produce overall.

And economists have warned that continued drought could have much the same effect as cyclone Larry did on the



FARMING HEARTLAND

The Murray-Darling Basin:

- Contains more than 40 per cent of all Australian farms.
- Value of agricultural production in 2000-01 \$13.6 billion, 40 per cent of the national total.
- Has 75 per cent of nation's irrigated crops and pastures.
- Intakes at lowest in 115 years.
- Population almost 2 million.
- 1.06 million square kilometres: 14 per cent of the continent.
- Uses around 70 per cent of all agricultural water in Australia.

imports made up the shortfall, it could have much the same effect as cyclone Larry did on the

have been doing already, they may have to truck in water," he said. "It is a grim situation and there is no point in pretending to the Australian public otherwise."

Victorian Farmers Federation president Simon Ramsay said Victoria's irrigated agriculture, which was worth \$2.67 billion in 2004-05, would be devastated if there were no water allocations. "Thousands of producers and their families would be suffering and struggling for income. Huge investments in irrigation industry would be ruined and thousands of jobs would be lost," he said.

But he urged farmers not to make hurried decisions based on Mr Howard's announcement, saying the federation had known from February that zero allocations were likely at the beginning of the next season.

The Prime Minister is talking about the



GROWERS IN DISTRESS

Dan Silkstone talks to drought-stricken farmers in Northern Victoria. NEWS 8

The Murray-Darling basin



DANNY LEE GRAPE AND CITRUS GROWER
"People in the city don't realise how totally we rely on water. Without water, this is a desert."



DAVID BEARD GRAPE GROWER
"I didn't think morale could go lower than this."

5
Water

level

water
farmers

Murray-Darling
basin area

- Water capacity 1.7 million megalitres.
- Water lost through evaporation and seepage: 30 per cent.
- With \$2 billion spent on infrastructure, that could drop to 10 per cent.
- This would save at least 100,000 megalitres of water a year.
- Melbourne uses about 400,000 megalitres a year.

formal position on the plan but their customers had expressed concerns.

"Our customers are very concerned this takes away the incentive for Melbourne (water authorities) to clean up their own act," Mr Commins said.

"And, once you start water flowing in that manner, jobs and factories go with it — it is impossible to move water vast distances. And, it's never going to come back."

"Politicians are considering this now because Melbourne is running out of water, and Melbourne takes what Melbourne wants," he said.

Victorian National Party water spokesman, Peter Walsh, also spoke out against the plan, describing it as "disturbing."

But in other quarters, support continues to grow. National Water Commission member Pro-

Groundwater worry

Anger at Koroit forum

The Standard THURSDAY, December 28, 2006 - 5

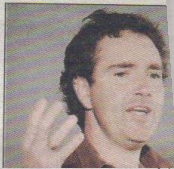
Free water for farms 'ridiculous'

TERRY SIM

HEAP irrigation water in south-east Victoria would promote its overuse in the region, Environment Victoria director Dr Paul Sinclair has warned.

South-west irrigators pay just 65 a megalitre for groundwater while northern Victorian irrigators now pay \$2000 a megalitre, he said.

Mr Selway said that on calculations by his committee: "It already appears that about 30,000 megalitres are coming out of that



reassurances appeared to

accepted by many at the meeting. Greens parliamentary candidate Gillian Blair told the meeting her party was the only one



standard.net.au

Water wars at Tarrone

No more licences — farmers plead



GMA plea heeded

By RAELENE HESTON

SOUTHERN Rural Water will formally apply to the Department of Sustainability and Environment to declare a groundwater management area (GMA) north and west of Warragul, the group's deputy chief

"Our belief is that we need to declare a GMA and assess sustainable yields — what the government now calls permissible consumptive volumes — so we have a formal management regime," he said. SRW will refuse applications for new irrigation licences.

mental agreement (for a GMA) in November 2004," Mr Hawke said. Since then SRW had been talking with DSE officers.

"We will now make a formal application for a GMA, setting out the proposed boundary and proposed intention. Then they (DSE) have to formally consider it."

bore were built 30 to 60 years ago of mild steel, which rusts and they are now on the point of collapse. "In one case, we know of a bore which collapsed just as a neighbouring dairy was being developed. The bore needs to be reconstructed."

And SRW may not know of all

Call for a users group

The Water Act

- Created new water roles for the commonwealth
- The Bureau is required to "*collect, hold, manage, interpret and disseminate Australia's water information*"
 - including groundwater data
- The *Water Regulations (2008)* require organisation to send their water data to the Bureau



Water Act 2007

Act No. 137 of 2007 as amended

This compilation was prepared on 9 July 2008
taking into account amendments up to Act No. 73 of 2008

The Water Regulations

- Data in regulations
 - Bore and borehole data
 - Levels and pressure
 - Salinity and pH
 - Licenced entitlements
 - Groundwater use
- Data outside of the Regulations
 - Management areas
 - Aquifer boundaries
 - 3D representations

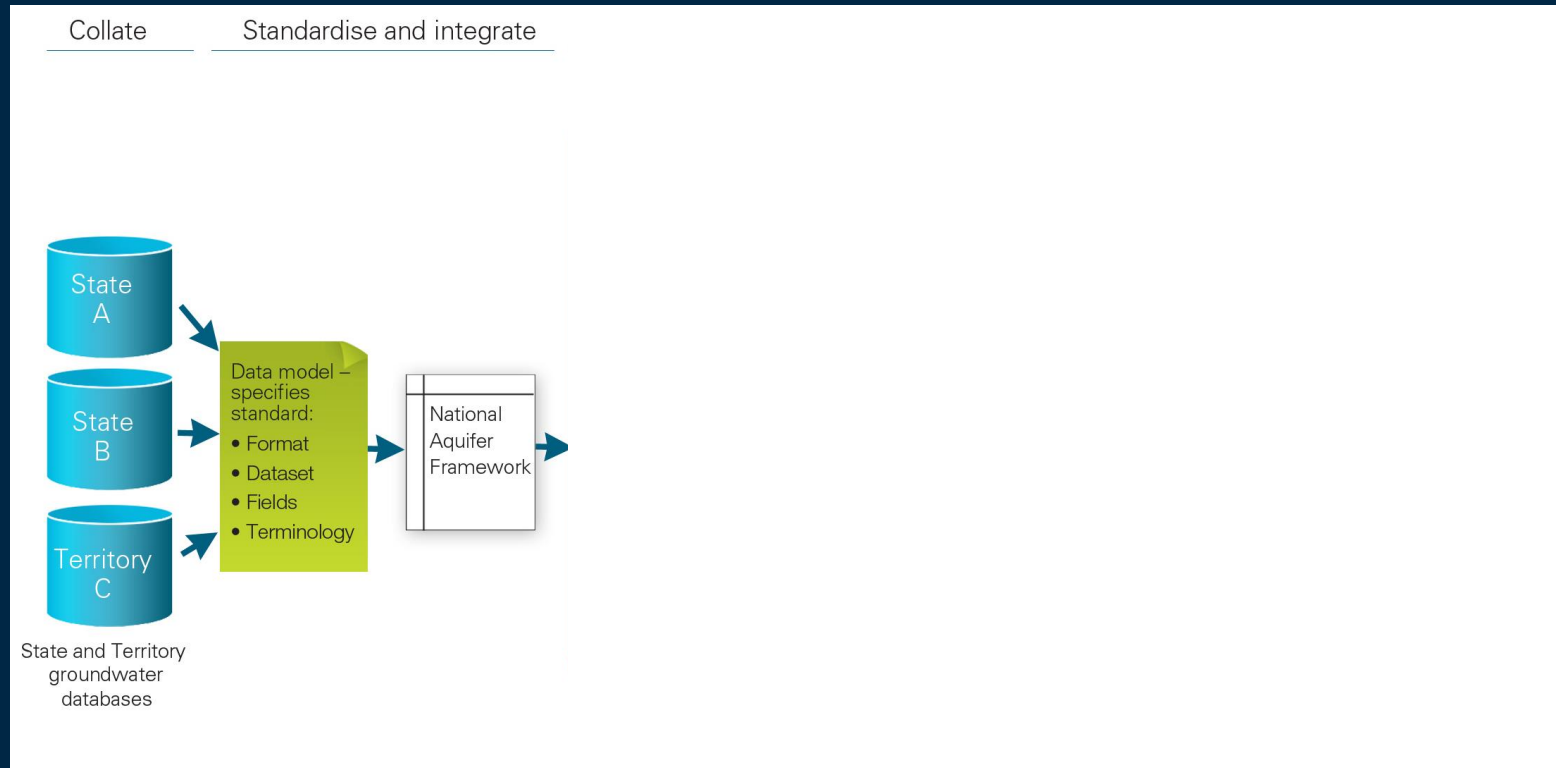


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National Groundwater Information System



Groundwater Information Suite

Australian Groundwater Insight

Interpreted national and
regional groundwater
information ... [Insight](#)



Australian Groundwater Explorer

Bore data visualisation,
selection and download ...
[Explorer](#)



National Groundwater Information System

Spatial groundwater database
for GIS specialists ...
[Information System](#)



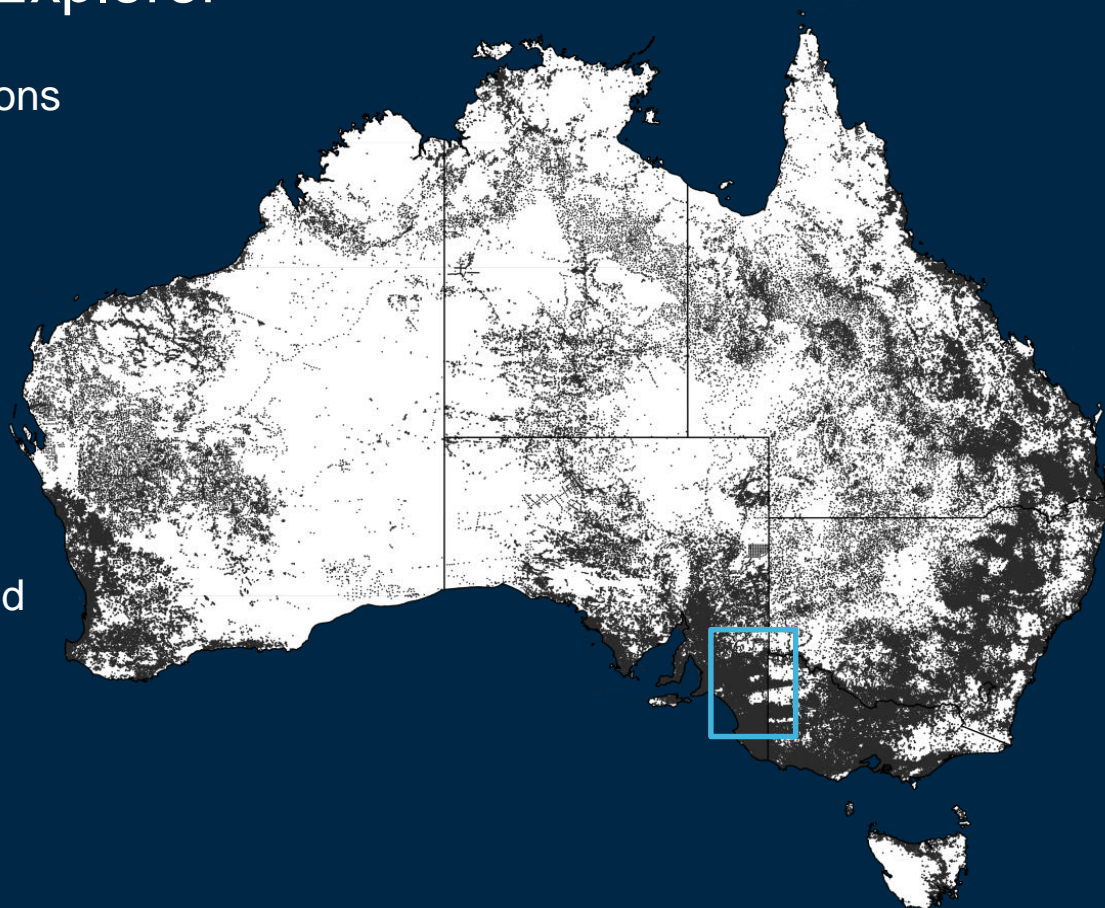
Groundwater Dependent Ecosystems Atlas

National inventory of
groundwater dependent
ecosystems ... [Atlas](#)

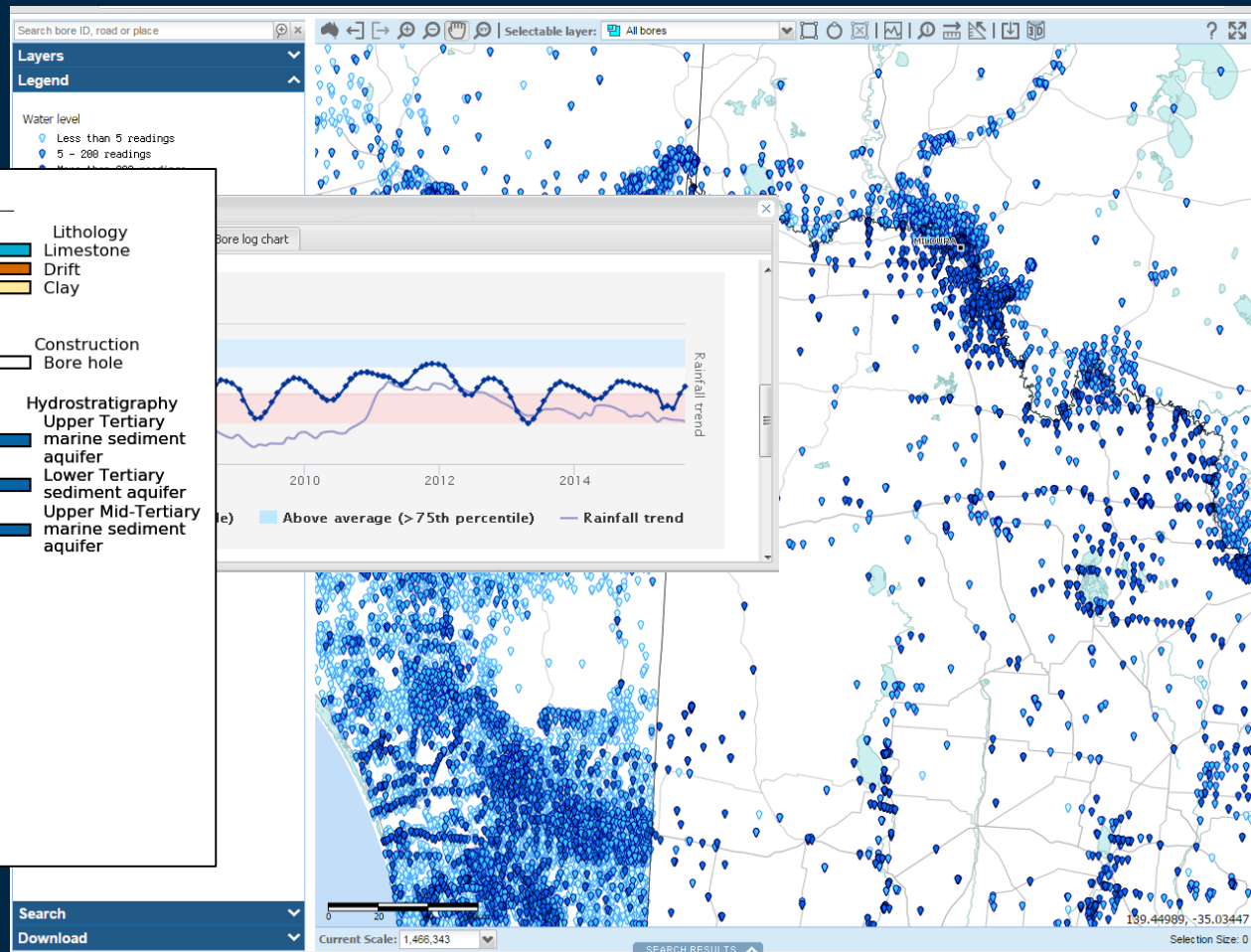
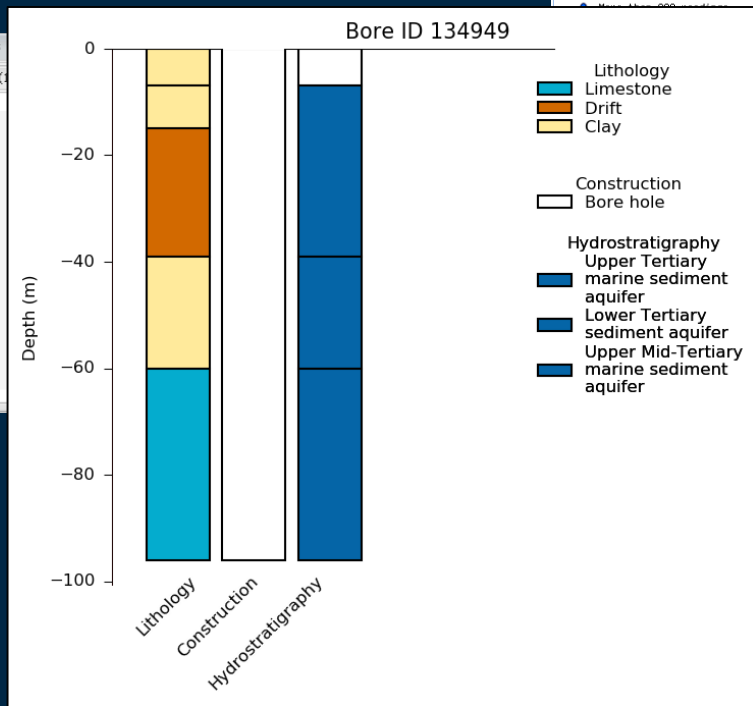


NGIS & Groundwater Explorer

- More than 850,000 bore locations across Australia
- Bore and borehole information
- Construction, lithology and hydrostratigraphy logs.
- Multiple interpretations included where available



Accessible, standardised data



Groundwater Information Suite

Australian Groundwater Insight

Interpreted national and regional groundwater information ... [Insight](#)



Australian Groundwater Explorer

Bore data visualisation, selection and download ... [Explorer](#)



National Groundwater Information System

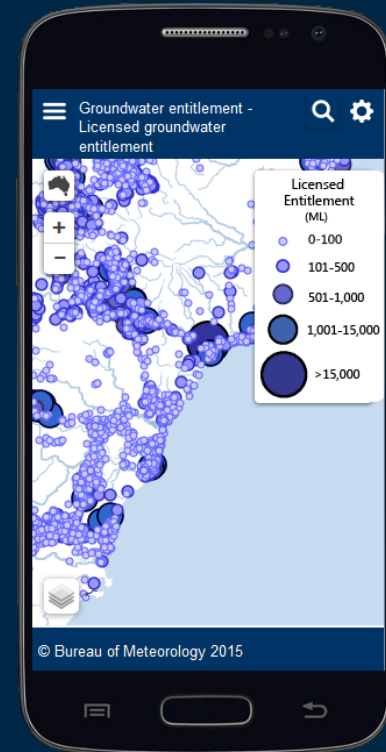
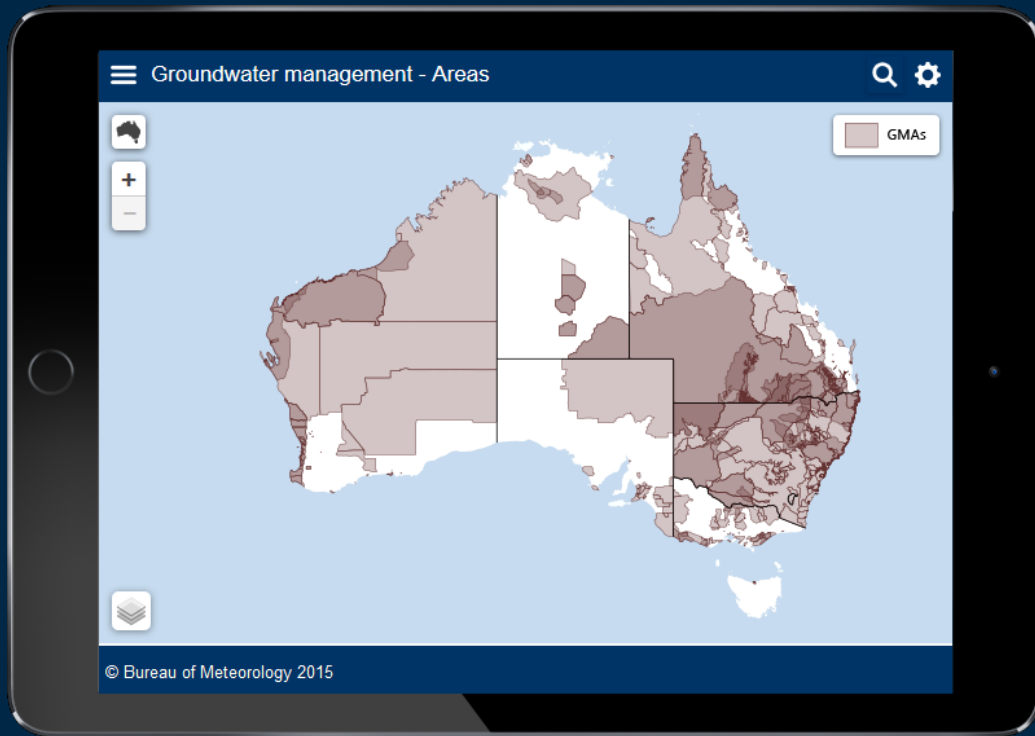
Spatial groundwater database for GIS specialists ... [Information System](#)



Groundwater Dependent Ecosystems Atlas

National inventory of groundwater dependent ecosystems ... [Atlas](#)





Summary

- The Bureau Of Meteorology is responsible for managing and publishing Australia's groundwater data
- We are achieving this through a collaborative approach with state and territory agencies
- All data is available through a suite of web portals: the Groundwater Information Suite



www.bom.gov.au/water/groundwater

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