

Value of Jandakot Groundwater Resource

Department of Water advice (20 January 2012)

- The Department of Water recommends continued protection of the Jandakot groundwater resource because it is important for Perth's water supply.
- Future planning proposals should continue to use Statement of Planning Policy 2.3 (SPP 2.3) for land use planning guidance.

Questions and Answers

How was the boundary of the Jandakot Underground Water Pollution Control Area determined?

The boundary of the Jandakot Underground Water Pollution Control Area (Jandakot Mound) was scientifically defined using groundwater modelling. This boundary reflects the area within which water is drawn towards the abstraction bores used for public water supply. Prior to computer modelling, the Jandakot Mound boundary was much larger and based on lot boundary data.

How valid is the current boundary?

The current boundary is still valid. It was based on existing and proposed bore locations, and water volume abstraction data provided by the Water Corporation. It should be noted that some bores may not be used all the time but they can be brought into service at short notice when more water is required.

What is the volume of water extracted from the Jandakot mound?

On 21 December 2011 the Department of Water issued the Water Corporation a licence to abstract 2.845 gigalitres of water from the superficial aquifer (Jandakot Mound) and 8.2 gigalitres of water from the deeper Leederville aquifer.

The Corporation has also submitted a licence application to abstract up to 6.0 gigalitres of water from the Yarragadee aquifer in the Jandakot groundwater area. This application is currently being assessed. Access to the deeper aquifer is not planned to replace access to the superficial aquifer, both water sources are required.

How many bores are on the mound now and planned for the future?

North of Rowley Road, Water Corporation has 26 bores located in the superficial aquifer (Jandakot Mound), of which 5 are not currently in use, and 3 bores are located in the Leederville aquifer. The proposed bores and infrastructure south of Rowley Road are not constructed at this time.

Is the Jandakot Mound still important as a public water supply?

Yes, water from this source and the deeper groundwater aquifers (Leederville and Yarragadee) help the State deliver a reliable, safe, good quality drinking water to protect the health of consumers and meet our water supply needs.

The MRS amendment for Jandakot groundwater was unique in that it introduced a new zone for the protection of this water supply (i.e. a 'Rural Water Protection' for P2 land). This zone reflects the historic and current importance of this public water supply.

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Desalination and water recycling are 'part of' the State's solution to its water supply needs, not a replacement for existing inherently safe (good quality), low cost public water supplies such as groundwater aquifers like the Jandakot mound and deeper aquifers, and dams.

The Jandakot groundwater resource, including the Mound is an important source in its own right. Additionally, in the future the State may store water produced from water recycling in the deeper Leederville and Yarragadee aquifers of the Jandakot groundwater area.

Water from the superficial aquifer (Jandakot Mound) is developed at a much lower cost than alternative water sources, including deeper aquifers.

The Water Corporation has advised that groundwater remains a critical part of the source portfolio for Perth, and they are committed to an investment program costing almost half a billion dollars.

What are the implications of rezoning land from rural (P2) to urban (P3)

Land use intensification will increase water quality contamination risks. This was the finding of two Parliamentary Committee reviews (1994 and 2000) and the foundation of the State's current integrated land use planning and drinking water source protection program. The simple fact is that more intense land uses introduce more hazards (ie contamination potential) and therefore they have a higher level of inherent risk. As such, low intensity land use areas (such as Crown land (P1) and rural land (P2)) are preferred for public (drinking) water supply purposes.

Have any investigations of the Jandakot mound occurred in recent years?

The Water Corporation and Department of Water undertook a review of the Jandakot Mound in 2006 to determine land use changes and risks. That review concluded that the existing land use planning and water source protection program (applied via Statement of Planning Policy 2.3) was effective in achieving the protection of this water source (i.e. land use intensification, such as rezoning from rural to urban, on the Jandakot Mound has been substantially prevented).

Are there any investigations that should be undertaken as part of the planned review of SPP 2.3?

If Planning considers that further development (rezoning) of the Jandakot Mound should be investigated, a full review of SPP 2.3 is supported to help prevent the potential incremental loss of this valuable groundwater resource to more intensified land uses. That review will need to consider changes to the land and water factors that have occurred since SPP 2.3 was finalised.

Why is urban development allowed on some areas of the Jandakot Mound and not on others?

The priority areas (P1, P2 and P3) that guide land use planning on the Jandakot Mound were developed based on the zoning that was in place when they were determined in the 1990's. At that time some areas were already approved for urban (P3) development and those areas needed to be recognised. The priority areas that exist now have protected the water quality of this valuable water resource and are recommended to continue.