

500000mE

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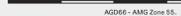
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# NORTHEAST TASMANIA GROUNDWATER MAP

SCALE 1:250000

AGD66 - AMG Zone 55



AQUIFER TYPE	PROSPECTIVITY (mine or farm)	ROCK GROUPS	NUMBER OF BORES	PERCENTAGE SUCCESSFUL	AVERAGE YIELD (L/s)	MAXIMUM YIELD (L/s)	PERCENT PRODUCTION (mg/L)	SALINITY (mg/L)	GENERAL AQUIFER CHARACTERISTICS	VULNERABILITY TO POLLUTION
POREUS (INTERGRANULAR)	HIGH	Quaternary alluvial deposits marginal to the coast consisting of fine to medium grained sand.	5	100	1.0	1.0	100	100	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	High.
POREUS (INTERGRANULAR)	MODERATE-HIGH	Quaternary coastal plain deposits consisting of sand, silt and clay, occurring on low lying areas proximal to the coast.	101	86.1	0.81 (81)	6.33	6.6	67	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	Moderate to high.
POREUS (INTERGRANULAR)	LOW-MODERATE	Quaternary alluvium and talus deposits. The alluvium consists of fine to medium grained sand and gravel deposits with varying clay content. The talus consists of boulders and usually has a moderate to high clay content. Minor sandstone and clay on a steeply bedded Tertiary origin.	25	96.0	1.28 (24)	4.56	33.3	2160	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	Low to high.
POREUS (INTERGRANULAR)	LOW-HIGH (Moderate - High on this map)	Tertiary sediments consisting of clay, sand and gravel of non-marine origin (Quaternary and alluvial deposits) ranging from small thicknesses to several hundred metres.	482	70.4	1.96 (283)	15.17	38.3	28	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	Low to high.
FRAGMENTED ROCK (intergranular on some horizons)	HIGH	Triassic sandstone (Bing and quartz), mudstone minor coal, intertidal origin. Permian mudstone, siltstone, sandstone (often pebbly), minor sandstone and conglomerate. Silurian mudstone, siltstone, slate, sandstone, quartzite and conglomerate.	20	75.0	0.82 (14)	3.74	7.1	205	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	High.
FRAGMENTED ROCK	MODERATE-HIGH (High on this map)	Devonian to Permian turbidite sequence of sandstone and mudstone (Mafra and Sapperen). Devonian mudstone, siltstone, sandstone, quartzite and conglomerate.	279	83.3	2.88 (235)	25.37	33.3	97	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	High.
FRAGMENTED ROCK	HIGH	Tertiary basalt.	357	84.7	3.24 (437)	37.83	90.3	45	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	High.
FRAGMENTED ROCK	MODERATE	Triassic dolomite, St Marys, Tertiary basalt, Scottsdale, Ringwood, Tamar.	148	56.2	0.73 (87)	8.85	11.9	85	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	Moderate.
FRAGMENTED ROCK	LOW-MODERATE	Devonian granite and porphyry. Cambrian gneiss and quartzite.	60	51.7	0.61 (21)	1.88	9.5	240	These aquifers are contained in surface deposits of limited thickness. Yields depend on the grain size of the sand and the thickness of saturated sand. Coarse sand and gravel deposits (such as near Launceston on Frisland Island) may yield up to 2.5 L/s from a single bore. In a number of cases a single bore may yield up to 10 L/s. Yields are reduced from open to even a small distance from the bore. Many bore holes have been drilled or installed in coastal areas. Quality is often good enough for the water to be used for a wide range of purposes. Aquifers are mostly unconfined.	Low to moderate.

1. Statistics provided in the legend are based on boreholes entered in MRT groundwater database (BORS) by February 2003. Boreholes shown on the map are those with locations verified by letters and from location on the map by MRT staff.  
 2. If a borehole with yield < 0.1 L/s has been considered as successful, the yield is recorded as 0.1 L/s. Boreholes with yield < 0.1 L/s are not included in the total percentage of successful boreholes but have not been used for other statistical calculations. Boreholes reported as dry holes usually have a small unreported yield (< 0.1 L/s).  
 3. Successful boreholes with a reported yield of < 1.5 L/s have been included for small irrigation supplies. Very limited irrigation is possible with very low yields.  
 4. There are many small boreholes installed for investigation and production purposes in coastal sand deposits in Tasmania. Salinity ranges for some of the Quaternary sand deposits have been obtained from these boreholes records and included in the legend (marked with a \*).  
 5. In areas where there is little or no water bore data, the groundwater prospectivity has been assumed to be similar to that in the areas where data are widely available.  
 6. The northeast part of Tasmania covered by this map encompasses areas that have low rainfall, high evaporation rates and which are subject to soil salinity problems. Low rainfall/high evaporation is also probably the cause of the relatively poor quality of groundwater at some locations in the region.

### BOREHOLE YIELD

(See separate map for borehole groundwater quality - TDS)

Scale: Location Accuracy = 500 - 2000 m 1" = 500 m

Potential usage of groundwater based on borehole yield

- Yield Unknown
- 0 (Dry borehole)
- < 0.05
- 0.05 - 0.5
- 0.5 - 1.5
- 1.5 - 5.0
- 5.0 - 10.0
- > 10.0

Outputs of boreholes are those supplied by drillers and are mostly the result of short term pumping measurements. Outputs may not be sustained for long periods of continuous pumping. Boreholes reported as dry holes usually have small unreported yields e.g. < 0.05 L/s. Conversion factors - 800 gallons per hour = 8.6 millimetres per hectare per day = 0.84 acre inches per day.

### POTENTIOMETRIC CONTOURS

Potentiometric contours of deeper Tertiary Aquifers (5 m contour interval) (Geological Bulletin 59)

### SALINITY CONTOURS

Salinity contours of deeper Tertiary Aquifers (500 mg/L contour interval) (Geological Bulletin 59)

Other groundwater and hydrogeology maps and reports are available from Mineral Resources Tasmania. Borehole data is available from the Mineral Resources Tasmania web site - [www.mrt.tas.gov.au](http://www.mrt.tas.gov.au)

This map is not the result of a concise survey therefore groundwater potential and salinity areas are indicative only. This map does not remove the need for site specific investigations.

Groundwater potential data compiled by: W.L. Matthews B.Sc. and M.Latinovic B.Sc.(Hons)

Map first published July 2006

Base data from the LIST - State of Tasmania

### GROUNDWATER QUALITY

Expressed as Total Dissolved Solids (TDS)

Potential usage of groundwater based on water quality

- < 500
- 500 - 1000
- 1000 - 1500
- 1500 - 3000
- 3000 - 7000
- > 7000

Areas of similar groundwater quality across different rock types are shown by shading as above. Solid lines indicate deep aquifers while broken lines indicate shallow aquifers. Boundaries are approximate only.

These are general limits for the use of groundwater. The use of water for irrigation with the higher levels of salinity in the above table should only be considered on particularly suitable soil types with the adoption of specific management practices, or if the bore water is mixed with fresh water. For further information see Australian and New Zealand guidelines for fresh and marine water quality.

### MEAN ANNUAL RAINFALL

Scale: 0 to 3300 mm

Scale: 0 to 500 mm

### LOCATION DIAGRAM

NORTHWEST, NORTHEAST, SOUTHWEST, SOUTHEAST

