

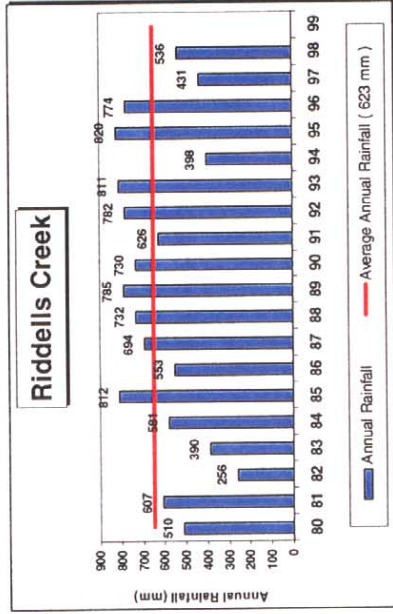
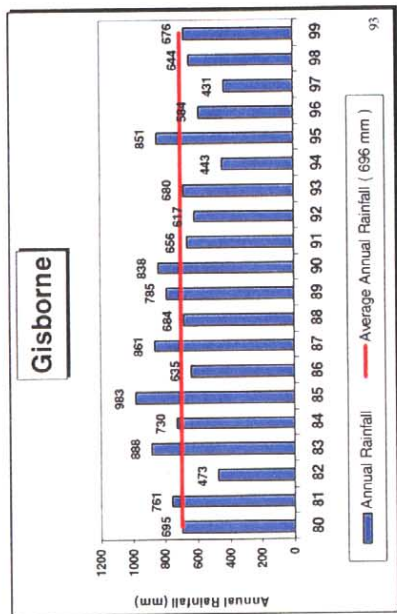
SELECTED HYDROGRAPHS FROM KEY BORES IN THE UPPER MARIBYRNONG AREA

Groundwater Trend Update

GROUNDWATER HYDROGRAPHS

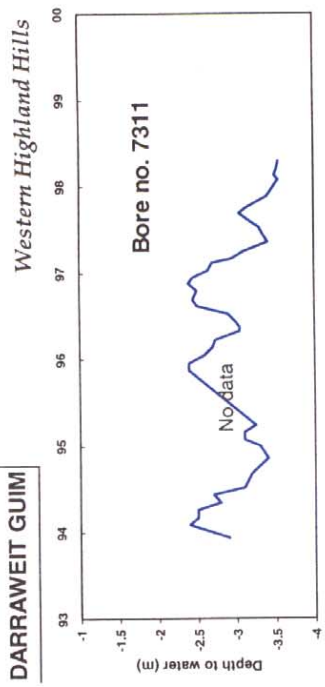
A graph of groundwater levels against time is usually referred to as a *hydrograph*. The pattern of water level variation in a hydrograph is dependent upon the nature of the groundwater system. As well as indicating long term trends, the hydrograph often also fluctuates according to the seasons. A peak is commonly observed in winter/spring as a result of recharge during this period. Where there is minimal seasonal fluctuation, only minor recharge to the watertable is suggested, though soil waterlogging may then be the significant issue.

Selected Rainfall graphs

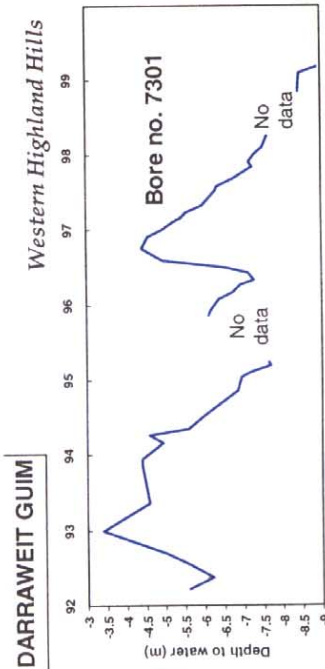


RAINFALL GRAPHS

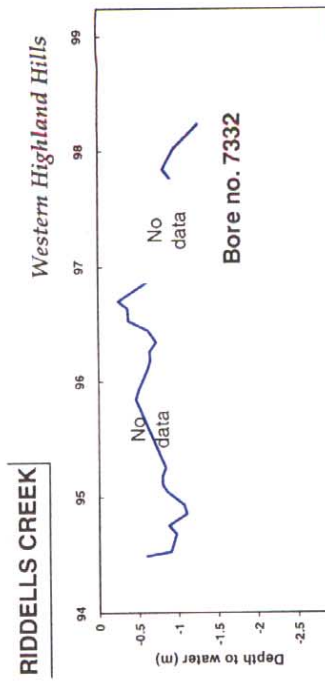
The general falling trend observed in the Upper Maribyrnong hydrographs can be directly related to a larger than normal number of dry years since the mid 1990s. Observation of the annual rainfall data at Gisborne and Riddells Ck. clearly indicates a very dry 1994, and continuous dry years from 1997.



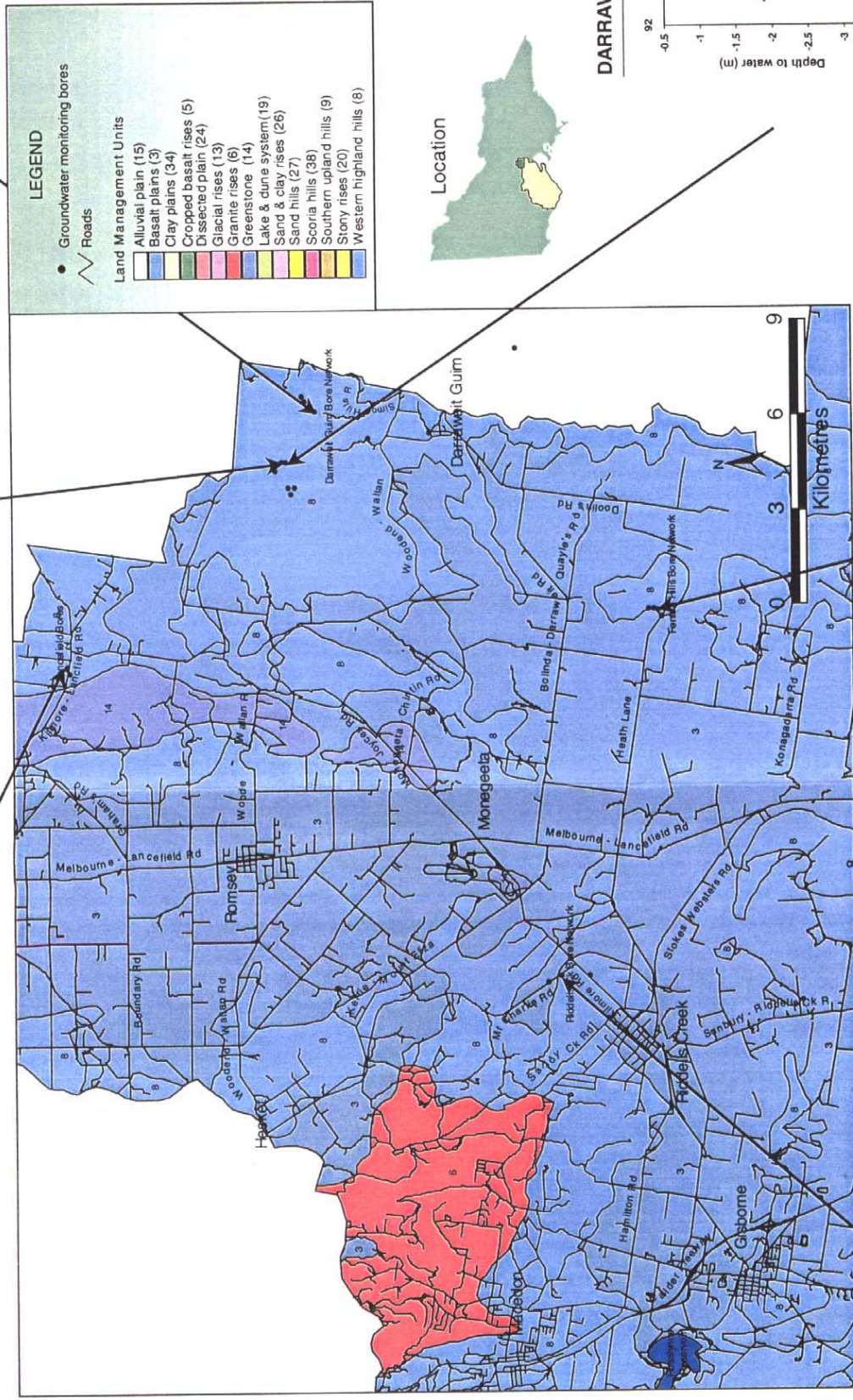
Water table fluctuation reflects the annual rainfall pattern.



Overall falling water table trend. Groundwater fluctuation correlates strongly with annual rainfall variation.

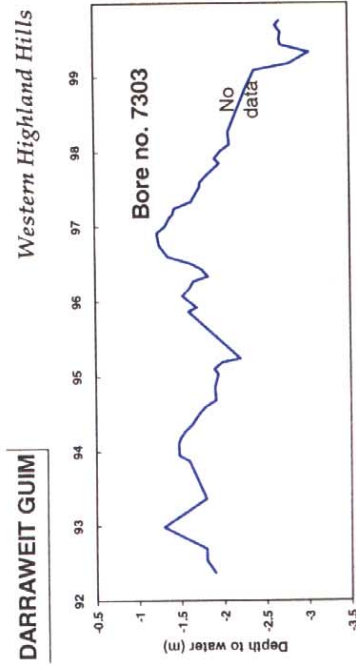


Groundwater decline since 1997 in response to below average rainfall.

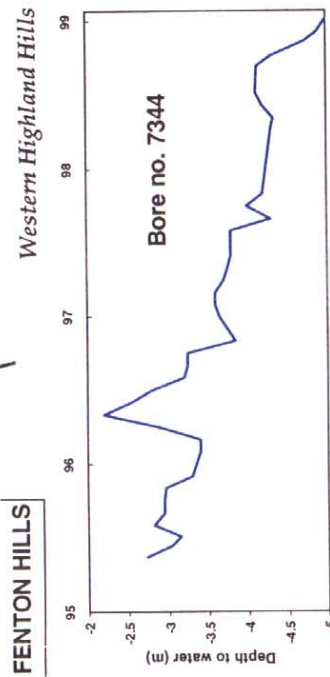


- LEGEND**
- Groundwater monitoring bores
 - Roads
- Land Management Units**
- Alluvial plain (15)
 - Basalt plains (3)
 - Clay plains (34)
 - Cropped basalt rises (5)
 - Dissected plain (24)
 - Glacial rises (13)
 - Granite rises (6)
 - Greenstone (14)
 - Lake & duna system (19)
 - Sand & clay rises (26)
 - Sand hills (27)
 - Southern upland hills (9)
 - Stony rises (20)
 - Western highland hills (8)

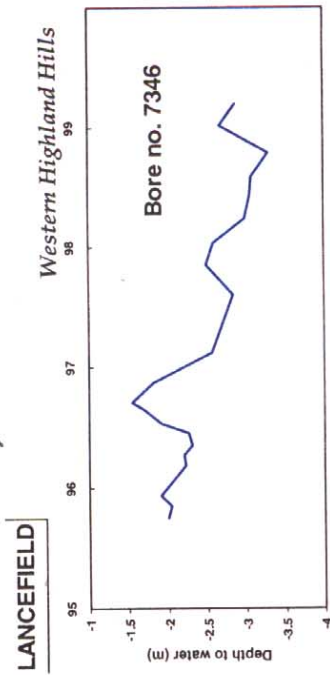
KEY BORES
Six representative or key bores have been selected across the Upper Maribyrnong region to assist in the analysis and reporting of groundwater trends. These have been selected on the basis of representative trends within a monitoring network, geographic distribution, quality and length of record. Trends from the key bores are reported on a two yearly basis.



Groundwater decline since 1997 in response to below average rainfall.



Gradual fall in watertable since 1995 that coincides with a general period of lower rainfall.



Overall falling groundwater trend.

LAND MANAGEMENT UNITS

The key bores here overlay Land Management Units (LMUs). LMUs are zones of similar geology, soils, landscape type and climate. By definition, a particular LMU would be expected to respond in a consistent manner with respect to salinity treatment.