

## 2 Developing an understanding of the groundwater system

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The Eneabba Line to the north was drilled between 1972 and 1974 and comprised 28



Figure 2 Northern Perth Basin bulletin study area and the main hydrogeological investigations compiled in the bulletin

**Table 1**      *State government groundwater investigation programs in the northern Perth Basin*

Program	Prefix	Sites	Bores	Year	Reference
Deep regional investigations					
Gingin Brook Line	GB	5	6	1965–66	Sanders 1967a
Watheroo Line	WL	12	23	1967–72	Harley 1974
Eneabba Line	EL	11	28	1972–76	Commander 1978a, b
Moora Line	ML	9	19	1974–77	Briese 1979a, b
Gillingarra Line	GL				

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Program	Prefix	Sites	Bores	Year	Reference
Mt Hill	–	6	6	1977–96	Allen 1980
Nabawa	NAB	10	10	1994–95	Koomberi 1995
Chapman Valley	WRC	14	14	1998	

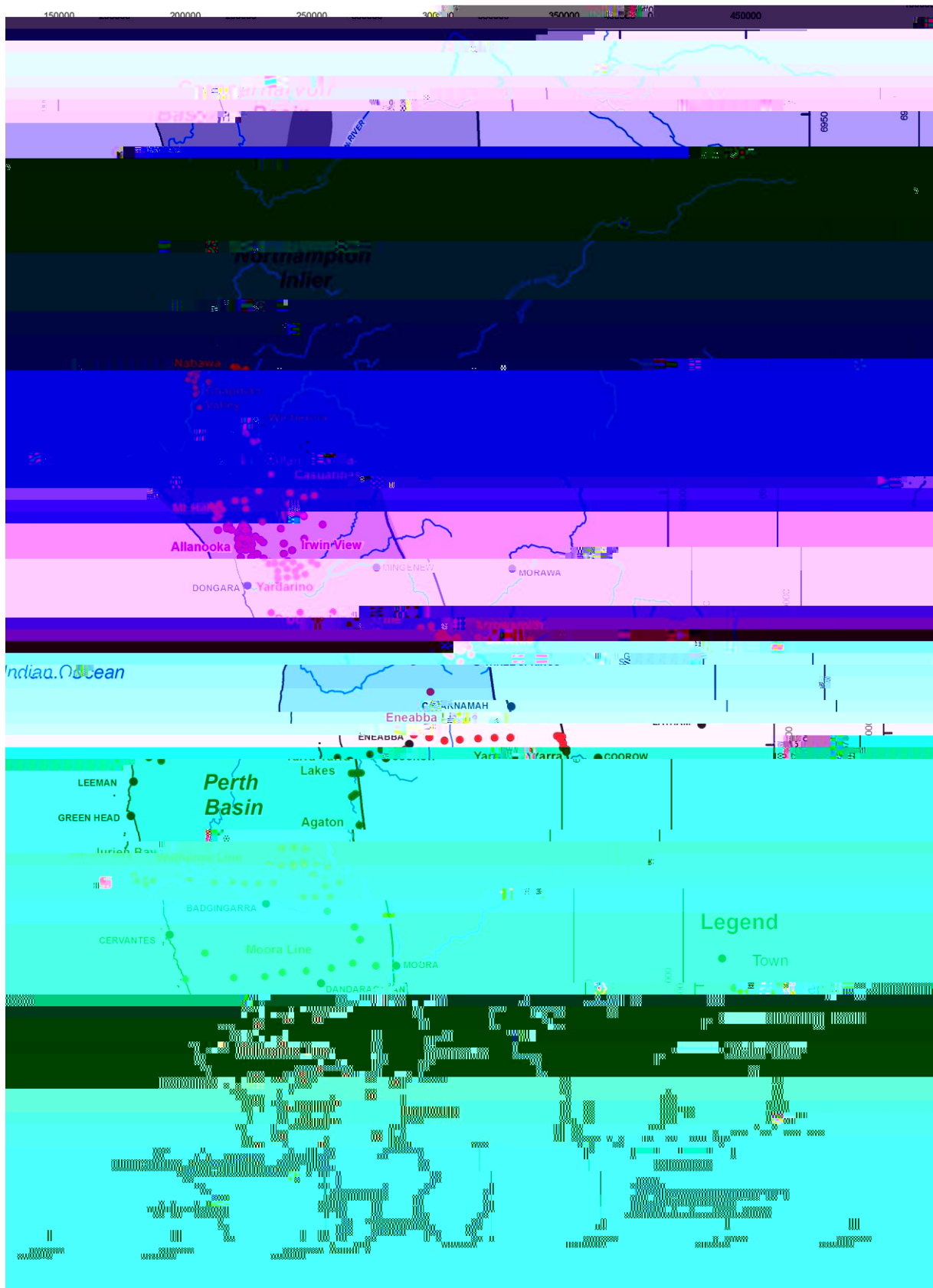


Figure 3 Deep exploration bores





Eradu. A further 17 bores were drilled between 1974 and 1977 to augment the scheme (Allen 1979, 1980). Since then, the Water Corporation has installed additional monitoring and

Superficial, Yarragadee, Cattamarra and Eneabba–Lesueur aquifers (e.g. AGC 1974, 1975; Rockwater 1977, 1980b, 1995; Commander 1980).

Similar investigations were carried out in the Cataby area in the 1980s and 1990s for the Cooljarloo mineral sands deposit, with over 30 bores drilled in the Superficial and Yarragadee aquifers (Rockwater 1992; AGC 1989b). Other significant investigations for mineral sands projects have also been conducted near Jurien Bay (AGC 1975; McPhar Geophysics Pty Ltd 1975).

In the 1980s an investigation in the Hill River area was undertaken to prove groundwater resources for a proposed coal-fired power station (AGC 1989b). While the power station was never constructed, the three production bores with aquifer test data and nine monitoring bores contributed significantly to the understanding of the hydrogeology of the Hill River area. More recently, investigations have been undertaken for a proposed coalmine in the Cattamarra Coal Measures v1 dnr6.33 TBT1 0 0 197 678.34 Tm 0 Tc[ ] 09ETBT1 0 0 18(t)-4stepart3andin( )-

*Figure 4*

## 2.2 Environmental water investigations

Numerous investigations into environmental water requirements and GDEs across the northern Perth Basin have been published since 1995. The major findings of many of these

VWXGLHV DUH VXPPDULVHG LQ WKH GHSDUW (2005). QWV + \* UHSR

Groundwater -dependent ecosystem studies

V & C Semeniuk Research Group (2001) and PPK (2001) studied



Susac (2009) produced a comprehensive literature review and report on karst biodiversity, palaeontology and hydrology of the Northern Agricultural region, for the Northern Agricultural Catchments Council. The report provides information on individual caves, in the context of a literature review on how selected caves interact with aquifers and surface water. Susac (2012) nominated one high value representative of each of seven subterranean ecosystem types, based on available information and expert cave knowledge.