# Lakes Catchment Area

Groundwater in the Lakes Catchment Area in the area surrounding Green Lake, Lake Lisbon and Lake Wentworth is part of the aquifer system that is present throughout the North West. The groundwater is a source of water for the lakes that provide drinking water for Northwood and other local populations.

The groundwater flowing into the lakes comes from the unconfined aquifer (85%) and the confined aquifer (15%). AGE monitors water quality in the unconfined aquifer and some bores in the confined aquifer. The unconfined aquifer is as close as 5 metres from the surface in places and is therefore at most risk of being polluted. It is also susceptible to contamination from past and present agriculture and industry. The main pollutant found in the groundwater in the Lakes Catchment Area is nitrates.

## Assessment of Water Quality

Water chemistry data is regularly analysed to determine water quality with regard to impact on the drinking water, irrigation, livestock and local habitat. National Standards require that AGE check nitrogen, phosphorus, heavy metals, pesticides and salinity on a regular basis. Water quality is assessed as being acceptable, passable or unacceptable by interpreting this data. Groundwater samples are collected annually from 45 bores in the Lakes Catchment Area.

## Water Quality Classifications For 2010

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Indicator | Drinking Water | Irrigation | Livestock | Habitat |
| Nitrate | Unacceptable |  |  |  |
| Nitrite | Acceptable |  |  |  |
| Phosphorus |  | Unacceptable |  | Unacceptable |
| Metals | Unacceptable | Passable | Acceptable | Unacceptable |
| Pesticides | Acceptable | Acceptable | Acceptable | Acceptable |
| Salinity | Acceptable |  | Acceptable |  |

Overall, the groundwater quality in the Lakes Catchment Area is considered poor for the local habitat due to the high level of phosphates and metals. The elevated phosphorus is most likely due to current and historical improper agricultural and waste disposal practices. Water taken from the aquifers in this region should not be used for human or animal consumption without testing or filtering due to the increased risk of infant mortality.

On a positive note, while pesticides have been detected in the Lakes Catchment Area in previous testing periods, they have been absent for the past three years indicating greatly improved agricultural practices in the region.