LAKE CARGELLIGO – POST-REGULATION HISTORY

The Structures

In 1885 landholders around the Lake Cargelligo area built a dam across Lake Creek near Lake Cargelligo. This was the first attempt to control water in the Lachlan Valley. In 1902, the Government completed works at Lake Cargelligo with the purpose of storing surplus water from the Lachlan River during periods of high flow to improve supply to the lower Lachlan during periods of low flow. These works consisted of a large fix crested weir constructed on the Lachlan River upstream of the Lake Cargelligo system, with an inlet regulator diverting water via the inlet channel through an inflow wetland (known as Sheet of Water), to Curlew Water and then into Lake Cargelligo storage. The inlet channel has a capacity of 800 ML/D. The main body of the Lake has been modified through the construction of levees to retain water at a deeper level and to stop it flowing across the floodplain as it would have done naturally in the past. However, overbank flows upstream of Lake Creek can still find their way into the Lake.

Water is returned to the Lachlan River downstream of the Lake Cargelligo Weir through Lake Creek, which is now operated as an outlet channel with a capacity of 1000 ML/D. This discharge is controlled at a regulator situated on Lake Creek itself.

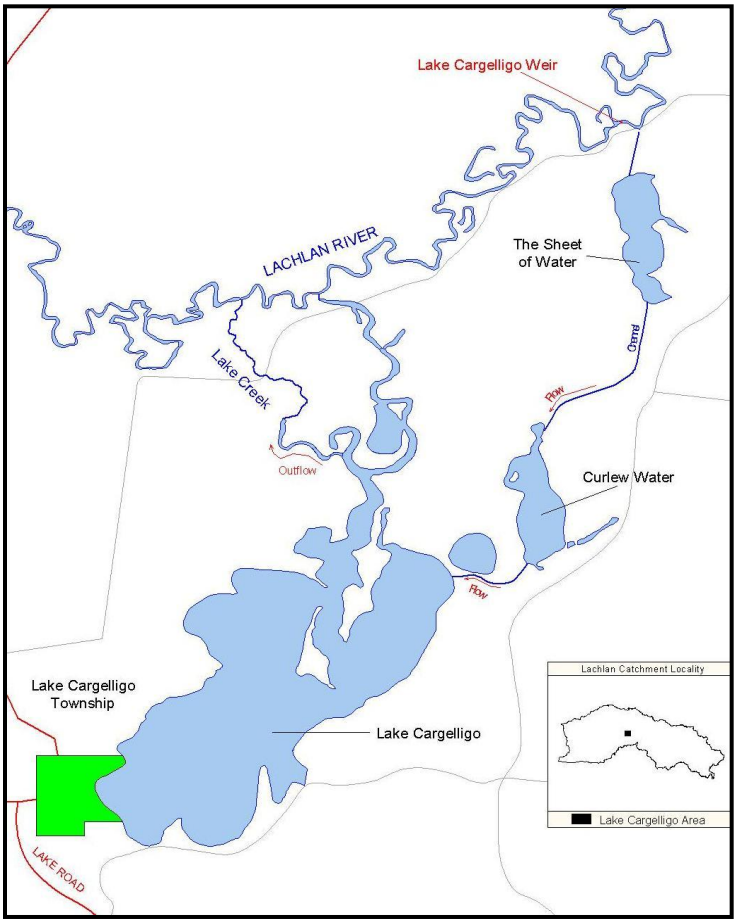
The three main waterbodies within the Lake Cargelligo system have differing characteristics. The first of these waterbodies situated on the inlet channel is Sheet of Water. It is a small, shallow lake fringed by river red gums and is also known to be cropped and grazed when dry. The shallow, sheltered nature of this waterbody makes it ideal as habitat for many waterbirds but can also make it prone to water quality problems, especially blue-green algae (Thurtell et al., 2003).

Curlew Water, situated further along the inlet channel, is a deeper and more extensive waterbody and is popular with recreational users. There is also a resident population of waterbirds, particularly pelicans and cormorants. During floods the area between the Lake and the Lachlan River becomes inundated, forming a valuable waterbird habitat.

The main lake is a large waterbody with a modified storage capacity of 36,000 ML and a maximum depth of approximately 4 m. While the

Lake has large areas of open water it also consists of valuable wetlands areas in the northern sections of the Lake, providing habitat to wetland dependent species. The variety of birds associated with the Lake and surrounding areas can be found at the link below. This list has been compiled by a life-time resident of Lake Cargelligo.

lists of birds



While Lake Cargelligo provides a significant wetland habitat and recreational facility for the region, there has been some costs associated with often "higher than natural" sustained water levels. Not only have the lake environs changed but the associated hydrological changes have resulted in the development of a persistent, shallow groundwater environment that has been known to cause water-logging and secondary salinisation in some places (Kelly 1992). Seepage and salinisation are particularly evident below the constructed levees associated with the lake. However, with the advent of the drought and rehabilitation works to address salinisation in some areas, this problem appears to have been arrested.