

WATER LEVELS — LAKE GOOLLELAL

Grievance

MS A.R. MITCHELL (Kingsley — Parliamentary Secretary) [9.43 am]: My grievance is to the Minister for Water, and I thank the minister for taking this grievance. My grievance concerns the water levels at Lake Goollelal in Yellagonga Regional Park, which is one of the lakes in my electorate. It has featured in a number of grievances in this place over many years, but they have only ever gone to the Minister for Environment and are based on the midge levels that occur and the problem that that creates for many of my residents during the summer months. Prior to last summer, I was briefed by Associate Professor Mark Lund from Edith Cowan University who was doing some research into the water quality issues and water levels in the lake system in Yellagonga Regional Park. The research was being undertaken with the support of the Cities of Joondalup and Wanneroo, the Department of Water, the Department of Parks and Wildlife and other environmental groups in the area. Associate Professor Lund made some very interesting points as he outlined his research, and it certainly opened my eyes and the eyes of representatives from the City of Joondalup, with whom I work closely. He identified that the impact of the water level on the environmental system was very important. I suppose that is obvious, but we did not realise the extent to which the water levels were of importance in this area. One of the things he went on to further explain to me with my interest in midge larvae is that the higher the water level pre-summer, the less likely there is to be a problem with midges. This was quite exciting news. He showed which seasons had very low water levels, and I could identify with those seasons, particularly as I get videos, photographs, daily complaints and things like that through my office from local residents. They are not against looking after the environment; in fact, they are very keen about it and they chose to live there. They understand the situation and they take the management of the lake system and Yellagonga Regional Park very seriously and want things to be right in the area.

I have always been told and we have always been of the opinion—I will put the City of Joondalup and everyone else into that mix—that the increased midge population was a result of nutrients in the lake system, and that that was the only factor that was a problem. No consideration has been given to the water level, so Associate Professor Lund's research was quite eye-opening to many of us. It then hit me that this summer I got only one phone call about midges, and I got that in February this year. I did not receive one phone call about midges before summer, I did not get one email and I did not get one photograph—I did not get anything at all. Obviously, when we checked, the water levels in Lake Goollelal were higher than in previous years in that summer period. I guess, anecdotally, we could say that this seems to be working. I know that they are still working on that whole process, but it was very reassuring to think that there could be something else that can be looked at to make life easier for residents in my electorate. I also want to say that it will make a great difference to the total environment of the area. I would like to put the two factors together. Yes, the nutrient factor is great but, at the same time, if the water level can make such a difference in the area, it would be wise to look at some way to ensure that that water level is a little bit higher than at base level—that would be nice if possible.

The Department of Water and the Department of Environment Regulation should work together—I know that the minister's departments do that quite well in the area—because the opportunities are beneficial in so many ways, and these two factors have probably not been worked on together in the past. We always thought the cause of the midge problem was the quality of the water rather than the level of the water. I know that the City of Joondalup has refurbished or upgraded its drains so that the water that comes into the lake contains fewer nutrients. It is certainly not a perfect solution but every endeavour has been made to reduce the nutrient level because we still have to do that. I will not say that water levels are the only way to fix the problem—we still need to monitor nutrient levels. I am also aware that the water flows from east to west and comes off that land that has had a lot of work done on it, but if we can manage that as well as the water levels, we could make quite a difference.

The other matter that I am quite excited about as well, though indirectly because it is a bit further away from the lake system at my end of Yellagonga Regional Park, is that most of the pines at the pines plantation have been removed. Naturally, we should see an increase in water levels. However, I am also aware that the Water Corporation has to monitor the uptake of water from the area and is doing that through the licensing of the bores. I know that directly east of Lake Goollelal is the largest sporting complex in the northern area, which contains the Kingsway Playing Fields. Of course, they are very green and are watered very often. I am cognisant that other issues in the area may impact on water levels, but research has highlighted the fact that water levels can have a huge impact on the environment. I know that the members for Joondalup and Wanneroo and I certainly want a vibrant Yellagonga Regional Park from both an environmental and aesthetic point of view. There is an opportunity to look further into this research and to see what can be done to maintain water levels. Lake Goollelal is the first lake in the system and the water flows from that lake down to the others. It is the most important lake, and it needs to be looked at more favourably. I understand that the minister has some control over the permitted levels of water in lakes. I am asking the minister to ensure that water levels are sufficient to

maintain the environment, and also to keep my constituents a little happier over summer, so that the midge problem does not happen year in, year out.

MS M.J. DAVIES (Central Wheatbelt — Minister for Water) [9.51 am]: I thank the member for Kingsley for raising this issue and providing me with some notice of this grievance. I know that she has recently met with the Department of Water to discuss Lake Goollelal, and she has been an excellent advocate. As she said, this is an ongoing issue. Undoubtedly, it would be very difficult for residents at times when the midges are particularly unbearable.

The member is correct in everything that she has said. The number of midges at Lake Goollelal has been linked to low water levels, as well as nutrient concentrations and water temperature. To provide some background for what I am about to talk about, Lake Goollelal is part of the Gngangara groundwater system, which is the largest source of good quality fresh water in the Perth region. It is a crucial part of our public water supply, as well as supplying water for public open spaces, an extensive part of the local agricultural precinct, and our gardens. Lake Goollelal is a groundwater-dependent ecosystem. Its water levels are reliant on the groundwater levels in the superficial aquifer—that is, the aquifer that is closest to the surface. The water levels in shallow aquifers depend on the amount of recharge we receive from rainfall, which, the member would understand, has been declining in recent years. It is also influenced by groundwater abstraction, which the member mentioned, and the land use in the area.

The Department of Water manages the abstraction of water from the Gngangara groundwater system—it is one of the better understood systems in Western Australia—to ensure sustainable productive water use, and to minimise the environmental impacts on systems and lakes such as Lake Goollelal. We understand that there is an impact on not only the residents, who enjoy the amenity of the lake, but also the environment. It needs to be managed; it is very sensitive area. The management of groundwater abstraction and groundwater allocation for Gngangara are also subject to conditions and procedures set by the Minister for Environment. The member is exactly right; most of the information that has been provided to this house previously has been provided by the Minister for Environment. We work closely together. The Minister for Environment sets water level criteria for 30 sites in the Gngangara groundwater system, and Lake Goollelal is one of those. The level has to be monitored and measured as one of those 30 sites. Those water level criteria are set to ensure that groundwater-dependent ecosystems are protected. The Department of Water monitors the water levels and reports these annually to the Office of the Environmental Protection Authority. There is quite a degree of oversight by a number of organisations working together.

The water level criteria at Lake Goollelal are set at an absolute minimum water level and a preferred minimum water level, which is 20 centimetres higher than the absolute minimum. Since these criteria were set, water levels at Lake Goollelal have not fallen below either the absolute or the preferred minimum. The Department of Water has advised me that the minimum water level in March this year—the member referred to the fact that there was quite a different level of interaction from her residents at that time—was 63 centimetres higher than the absolute minimum and 43 centimetres higher than the preferred minimum. The lowest water levels seen in that system were recorded back in 2011, and that was off the back of a very low rainfall year in 2010, which we refer to as one of our worst. In that year inflow into dams was only about 13 gigalitres.

The member would have seen this anecdotally through reports from her constituents, but we have seen a gradual increase in minimum water levels at Lake Goollelal, and the minimum level in March this year was the highest in five years. We have done that by reducing the abstraction around the lake, and there has also been a marginal improvement in rainfall since 2010. The groundwater levels to the east of the lake have also improved in recent years, and the Department of Water is licensing groundwater from the superficial aquifer for the City of Wanneroo for the irrigation of the grounds the member mentioned—the Kingsway sporting complex, which is a really important recreation hub for the community. This sports ground is always within the city's limit and licence entitlement. As well as reduced abstraction of groundwater, the removal of the pine trees nearby that the member mentioned, and land development in Wangara, are likely to contribute to improved water levels, because the pine trees have been restricting the recharge of the superficial aquifer. As the member mentioned, I am advised that we should see further improvement in years to come that will further benefit the lake.

The Department of Water has been managing the Gngangara system in accordance with what we call an allocation plan. The member will be aware of the Gngangara groundwater allocation plan, which was done in 2009. That has resulted in less water being taken and improvement in the water efficiency and compliance of local governments and private users with the licences allocated within the allocation plan area. We have also built the desalination plant, and the groundwater replenishment scheme has come on board, and all this is assisting us to reduce our take from that system, which will improve water levels in the lakes that are dependent on the aquifer. The Gngangara system, as the member would be aware, is under significant pressure. We live in a drying climate, and we are investing quite heavily, through the Department of Water and the state government, to improve our understanding of the system to make it even better and produce better outcomes in that space. The department

has invested \$7 million in the Perth region confined aquifer capacity project, which will also help us understand the impact of taking water from specific areas so we can better manage the Water Corporation's take and the licensed take, and over time we will see a cumulative impact and improvements.

We will continue to work with the community. There are some very active community groups in that area. I understand that we work closely with the Yellagonga catchment working group on the management of Lake Goollelal, and it is a key stakeholder in the development of the Yellagonga integrated catchment management plan. I understand that that was endorsed by the City of Joondalup and the City of Wanneroo on 31 March 2015. We will work with the catchment group in partnering on two specific projects. The first is a water conservation project to minimise nutrient enrichment, and the second is a stormwater management project to manage the quality and quantity of stormwater. I acknowledge the local government contribution, and that of the Department of Parks and Wildlife. A number of constructions are going on to manage the problem, and I am happy to discuss those further with the member.