

## WATER AT KIRSTENBOSCH

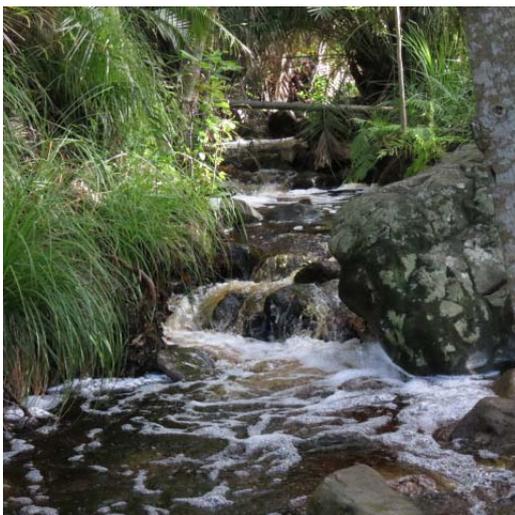
Cherise Viljoen, Senior Horticulturist at Kirstenbosch National Botanic Gardens writes, “In the 1960's our garden's then leaders, curator Jack Marais and director Professor Brian Rycroft, had the foresight to build a dam using non-potable water so that we would be able to irrigate in times of drought - which for us is an annual event and not an unusual one as it happens every summer - so we have been using our own limited water supply sustainably for years. We are a great example of what proper planning for the future looks like. Recently, at great expense, we replaced the lining of our 110 million litre dam to ensure we could reduce any loss of water, and currently, the current Curator, Philip le Roux, is investigating a number of possible surface coverings (solar panels being one option) to reduce evaporative water losses. It is interesting to note that our entire dam capacity is only 1/5 of the city's daily water consumption.

“The Horticulturists have regular debates about allowing our lawns to go brown, and while to our local visitors brown lawns would be seemly appropriate under the current unusually dry and drinking water crises in CT, to our more than 500 000 overseas visitors they would be hugely disappointed to find a garden of our international reputation not looking as attractive as expected- we decided not to risk it and instead are educating all our visitors about how to use water wisely- as we practice this on a daily basis.

“We have an irrigation dam filled every winter by nursery and window streams which supply our non-Cape flora, lawns and summer rainfall annuals with enough water to keep them going. This has had to be stopped in some drought-stricken years, when we were not able to stretch our dam water supply for long enough. Currently our dam supplying non-potable irrigation water is 85% full, which is about 15% more than at the same time last year, due us self-rationing our water usage.



“We have a recharge aquifer under Kirstenbosch and the ‘recharge’ springs linked to this water source do appear above ground here and there (in a small way in the Colonel Bird Bath in the dell area of the garden, and in a much larger manner in Palmboom Road and Springs Way in Newlands further down the mountain). We allow this water in the dell to flow freely as it is a natural feature in the garden and as it does much to support river life all along the riverbanks and downstream.



“As for the rest of the Garden, it is all local Fynbos which is accustomed to the absence of water during summer as also to the usual years of drought, so naturally at this time of year it does what comes naturally and looks the same as it does every year at this time, shades of brown and grey- but alive till the rains come. Let the visitors see and recognise the beauty and intelligence of our Cape Fynbos, and advise them to forget their exotic shrubs, roses and perennials which naturally curl up in horror under the present circumstances.

“We also have 4 boreholes which supply water to all the restaurants and buildings in the Garden so no municipal water is used at all. We have also recently replaced our potable water ozone treatment systems on our boreholes at a great expense (R180 000) as their 5-year lifespan required us to do so in order to ensure that Kirstenbosch continues to have its own supply of clean

drinking water. Our water is not 'free' and we treat it with all the restraint and care this precious resource merits.

“As this drought has all Capetonians examining what more they could do to be water efficient, we have now also installed meters our boreholes' main water lines, so the estate teams have been actively checking for, sourcing and resolving any pipeline leaks that are in our systems. We only

irrigate with our dam water at night and not at all for a week if we receive 25mm or more of rain (which happens occasionally during summer at Kirstenbosch considering our geographical position behind Table Mountain). Note how green the mountain above us is- we often get what little rain Cape Town is receiving and that is also responsible for keeping the garden green. The garden is positioned in such a way that we are also mostly spared from the prevailing South Easterly wind and its dehydrating effect on soil and plants.

“The garden’s curator, Philip le Roux, has led the way for many years already - well before it was 'fashionable' or as now 'necessary', with numerous water saving strategies. All our garden buildings are equipped with 'low-flow' showerheads, and our toilets have 'hold-flush' mechanisms, and we have had 'waterless urinals' for over 20 years.

“Our core job is to look after specialised collections of plants which are invaluable, and also our biodiversity. We could not possibly risk losing our rare, threatened botanical collections by not watering and we provide a haven for birds, insects and small mammals that are suffering and struggling to find shelter, food and water in the dry conditions.

“We are proud of our water management at Kirstenbosch and have taken steps well in advance to ensure that our garden can look as beautiful as it always has. (We have also implemented electricity saving across the garden in every way we can- but that’s another conversation entirely).

“We have posters explaining our water usage and saving measures at every entry gate and all garden- users are encouraged to take note of the information.”