

**N. DE HOOP VLEI GORGE**

**Desk Note N8d1. Hydrology – De Hoop Vlei - 2007 and 2014 ‘floods’**



**De Hoop Vlei.**

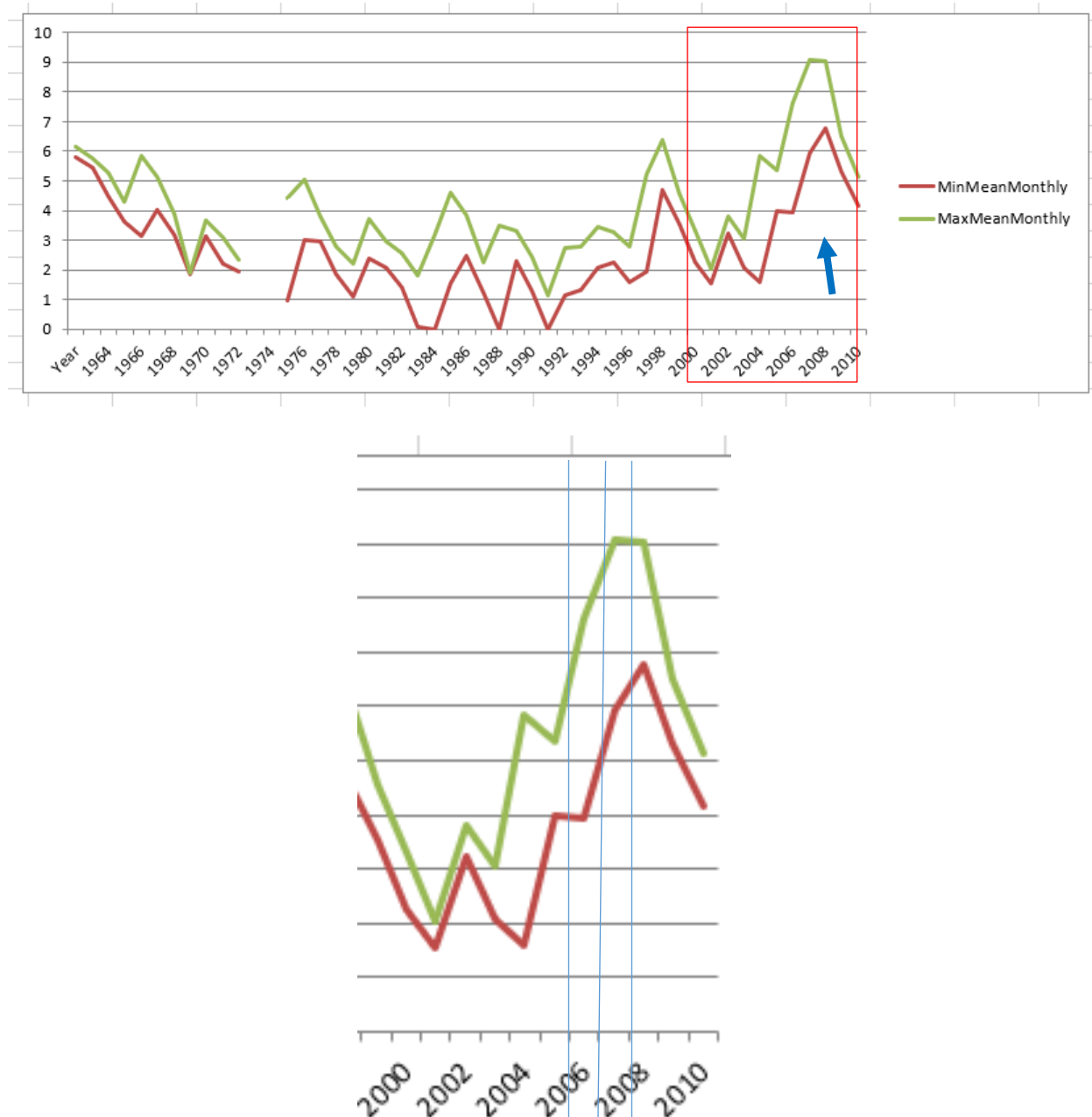
## N. DE HOOP VLEI GORGE

### Desk Note N8d1. Hydrology – De Hoop Vlei - 2007 and 2014 ‘floods’

The De Hoop Vlei water level oscillates with time. Two extraordinary high water levels of the same magnitude occurred in 2007 and 2014 - the highest levels between 1960 and 2020.

#### ‘Flood’ of 2007

This high-water level may not ‘deserve’ the term *flood*. The water level rose gradually during 2006, was the highest during 2007 and was maintained during the first half of 2008 (Figure 1).



**Figure 1. De Hoop Vlei water levels 1960 to 2010 (red box enlarged at the bottom) showing the 2007 high-water level (arrow).**

Courtesy Department of Water Affairs and Sanitation, Hydrometry, Heatlievale, Worcester, 6849.

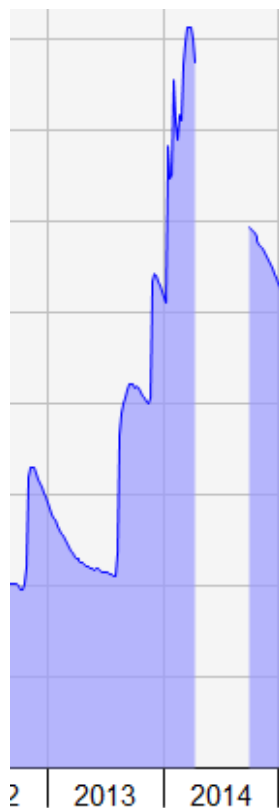
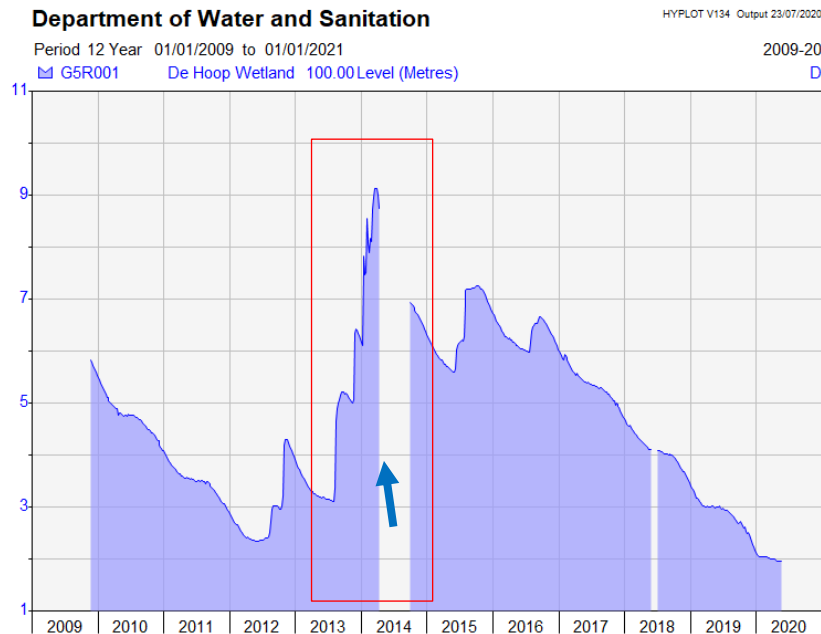
The author has no written account, or ground photographs of the 2007 'flood', and there are no satellite images of the vlei from 2007 and 2008. Nevertheless, satellite images from 2009 show that the water level was very high (Figure 2).



**Figure 2. Satellite images of the Salt River Gorge (top) and the middle section of the De Hoop Vlei Gorge (bottom) from August 2009, showing the extent of the flooded areas two years after the water level rise.**

### 'Flood' of 2014

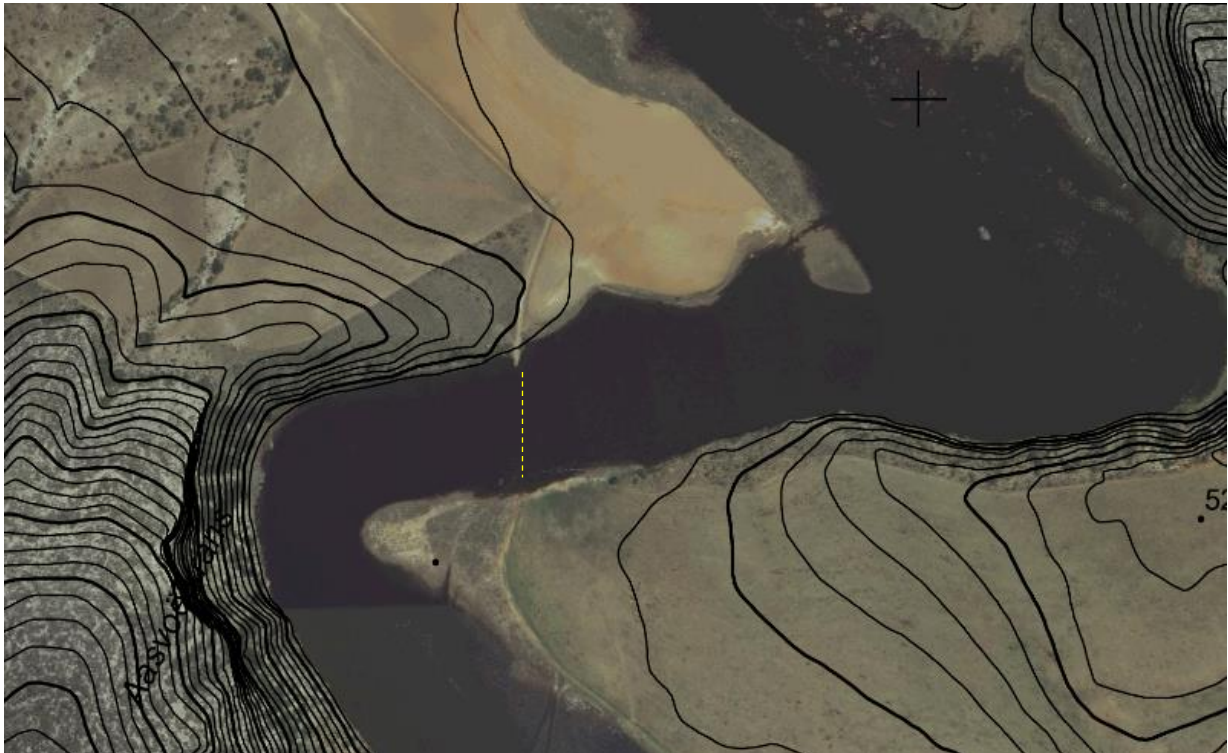
As with the 2007 high level, this high-water level may not 'deserve' the term *flood*. The water level rose gradually during 2013 and the first half of 2014 (Figure 3).



**Figure 3. De Hoop Vlei water levels from 2010 to 2020 (red box in the top graph is enlarged at the bottom) showing the 2014 high-water level (arrow). There is no record of the water level from April to September of that year.**

Courtesy Department of Water Affairs and Sanitation, Hydrometry, Heatlievale, Worcester, 6849.

The author has no written account, or ground photographs of the 2014 'flood'. Nevertheless, satellite images and topography maps from 2014 show that the water level was very high (Figures 4, 5 and 6).



**Figure 4. Topography maps from 2014 of sections of the Salt River Gorge. Top: the concrete causeway (location is indicated by the dashed line) is submerged. Bottom: The Island (arrow) is surrounded by water.**



**Figure 5. Satellite image (top) and topography map (bottom) from 2014 of Die Mond, showing the extent of the flooded areas. The satellite image upon which the map was compiled (bottom) was obtained after the one at the top, as the dyke (arrow) is exposed.**



**Figure 6. Satellite images of the area SW of Die Mond, showing the extent of the 2014 high-water level (top) and the dolines, which still contained water in 2016 (bottom). Large spans of this area were inundated by the 1957 flash flood.**