



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

**WATER RESOURCE INFORMATION MANAGEMENT
LIMPOPO PROVINCE**

**STATUS ON MONITORING &
SURFACE WATER LEVEL TRENDS
Up to 31 March 2018**

GH4331



Tzaneen Dam: Photo courtesy of Willie and Mariette Botha

**D Viljoen
April 2018**

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1. EXECUTIVE SUMMARY

The information presented in this report is based on the status of all the major dams in the province up to the end of March 2018.

29% of the dams in Limpopo Province have more water than the corresponding period last year and 4 dams are below 40%. The average storage capacity for the province is 69.8% comparing to 78.2% the previous year.

The Middle Letaba Dam is below 40% and the level at the end of March was 16.4%.

The average storage volume of the dams in the Limpopo WMA is 411.2 million cubic meters (80.2%) and is 58.98 million cubic meters less than the corresponding period last year (91.7%).

The average storage volume of the dams in the Olifants River catchment is 653.1 million cubic meters (64.5%) and is 70.3 million cubic meters less than the corresponding period last year (71.5%).

The challenge in both WMAs is that there are smaller dams, which supply water to communities that still need to be monitored. Resources need to be put in place before monitoring of these dams can be considered. Water level monitoring infrastructure at these dams are non existing or totally dilapidated, very little design, as built and survey information exists. This need to be addressed before any form of water level monitoring can be considered. The Thapane and Sheshego Dams are examples of this.

Attached find the graph indicating the latest Provincial cumulative annual rainfall since 2013/2014, page 9. A summary of dam capacities in percentage and million cubic meters is attached, see pages 10, 11

The SAWS indicated the following:

Parts of the interior are predicted to receive above-normal rainfall during autumn and late autumn (Apr-May-Jun), however it should be noted that the total rainfall in these areas drastically decrease in these two seasons. Early winter (May-Jun-Jul) sees the rainfall pick up in the far south western parts of the country, and with this there is also an indication of above-normal rainfall for these parts. Caution is advised however that skill levels remain relatively low for the south-western parts of the country from the forecasting system, and it is advised that future forecasts be monitored to identify whether there is any consistency of above-normal forecasts.

2. MONITORING NETWORK

The hydrological monitoring network for the Limpopo Province consists of the following:

81 river flow gauging stations (excluding canals and pipelines)
22 dam gauging stations
16 evaporation stations

3. OVERVIEW

For information purposes a graph depicting annual provincial rainfall from 2013/2014 is attached, page 9. A summary of dam capacities in percentage and million cubic meters is attached, see pages 10, 11

The following river flow conditions need to be highlighted:

STATION NR	RIVER	PLACE	FLOWS AS ON 20/03/2018 (m³/s)	PEAK FLOWS FOR 2017/18 SEASON (m³/s)
A7H008	Limpopo	Beit Bridge	0.64	503
A9H012	Levuvhu	Mhinga	3.2	48
A9H013	Mutale	Mutale Bend	No reading available	75
A9H025	Mutshindudi	Tshidzini	5.9 (08/03/2018)	No information
B8H008	Great-Letaba	Letaba Ranch	4.4	535
B8H033	Great Letaba	Tabaan	0.2	32
B8H046	Politsi	Magoebaskloof Dam	0.5	18

4.4 A7 Drainage Area (Sand, Blood, Diep, Hout, Dwars and Brak Rivers)

There are no existing dam monitoring stations in the hydrological network for this drainage area! Hout River Dam is the only dam equipped with gauge plates. Data capturing and real-time equipment has been installed at Hout River Dam. The dam is currently on 51.9% (3.4 million m³)

4.5 A8 Drainage Area (Nwanedzi and Nzhelele Rivers)

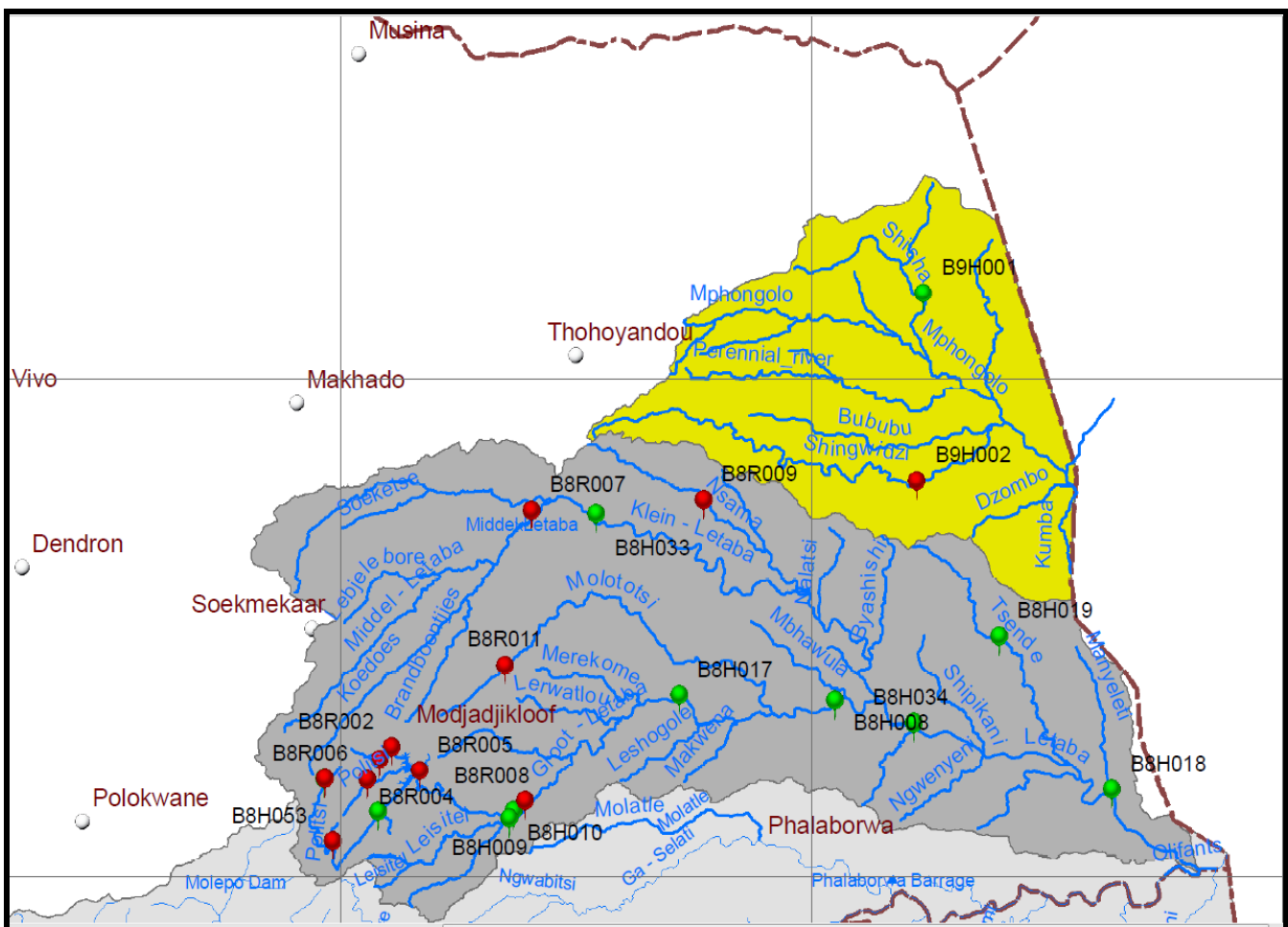
Graphs for the Nzhelele Dam (A8R001), Luphephe (A8R002), Nwanedzi (A8R003) and Mutshedzi (A8R004) Dams are attached.

4.6 A9 Drainage Area (Mutale, Luvuvhu Rivers)

Graphs for the Albasini Dam (A9R001), Vondo Dam (A9R002) and Nandoni (A9R004) Dams are attached.

5. OLIFANTS WATER MANAGEMENT AREA

The WMA consists of secondary drainage areas B1 to B9, monitoring sites in the B3 to B5 and B7 to B9 were also addressed.



5.1 B3 Drainage Area (Olifants, Elands, Bloed and Selons Rivers)

For information as well as operational matters a graph of Rust de Winter Dam (B3R001) has been included.

5.2 B4 Drainage Area (Steelpoort River)

For information as well as operational matters a graph of De Hoop Dam (B4R007) has been included.

5.3 B5 Drainage Area (Olifants River)

For information as well as operational matters the graph of Flag Boshielo Dam (B5R002) has been included in this report.

5.4 B7 Drainage Area (Klaserie and Olifants Rivers)

For information as well as operational matters the graphs of Klaserie Dam (B7R001) and Tours Dam (B7R003) have been included in this report.

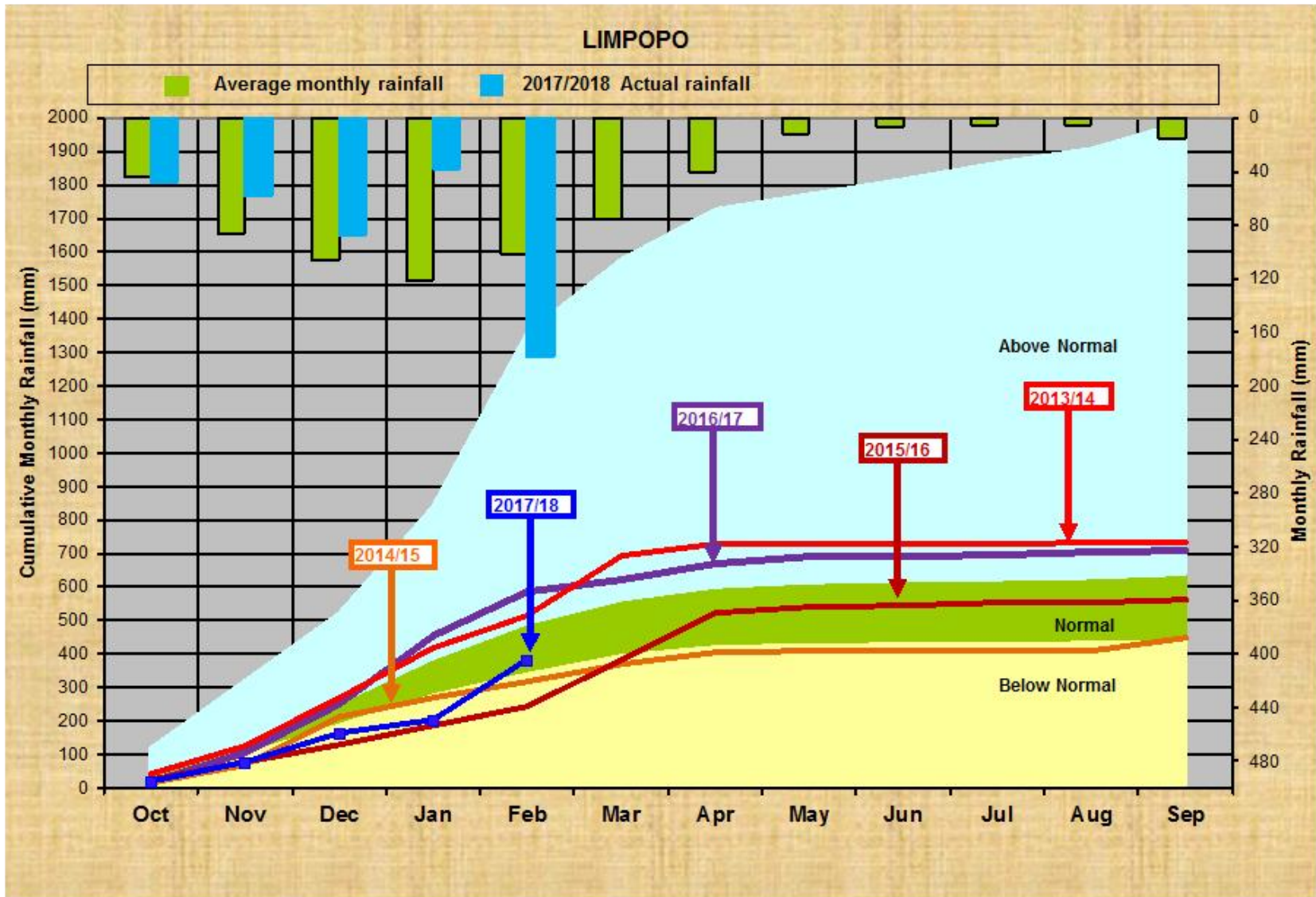
5.5 B8 Drainage Area (Groot, Middle and Klein Letaba Rivers)

Graphs for the Ebenezer Dam (B8R001), Magoebaskloof Dam (B8R003), Tzaneen Dam (B8R005), Middle-Letaba Dam (B8R007), Nsami Dam (B8R009) and Modjadji Dam (B8R011) are attached.

5.6 B9 Drainage Area (Shingwedzi, Phugwane and Mphongolo Rivers)

Only a limited part of this drainage area falls outside the Kruger National Park!

There are no existing dam monitoring stations in the hydrological network for this drainage area!



Levels of dams in Limpopo falling in the Limpopo WMA 1 (26 March 2018)

Full Supply Capacity Average for Limpopo WMA (%)	Dam	Full Supply Capacity in Millions m ³	Current Capacity in Millions m ³	Capacity in % Previous Year	Capacity in % Previous Week	Current Capacity in %
80.23	Mokolo	145.77	115.80	100.50	77.30	79.40
	Doorndraai	43.76	17.15	66.90	39.20	39.20
	Glen Alpine	18.89	1.65	101.10	8.80	8.70
	Hout River	6.63	3.44	56.10	52.00	51.90
	Nzhelele	51.23	32.75	56.90	63.40	63.90
	Luphephe	13.98	10.16	90.50	73.40	72.70
	Nwanedzi	5.14	3.87	88.10	75.10	75.30
	Mutshedzi	2.34	2.36	92.60	101.10	101.10
	Albasini	28.20	24.22	83.90	85.80	85.90
	Vondo	30.45	30.71	101.10	100.90	100.90
	Nandoni	166.11	169.05	101.50	101.10	101.80

Levels of dams in Limpopo falling in Olifants WMA 2 (26 March 2018)

Full Supply Capacity Average for Olifants WMA (%)	Dam	Full Supply Capacity in Millions m ³	Current Capacity in Millions m ³	Capacity in % Previous Year	Capacity in % Previous Week	Current Capacity in %
64.52	Rust de Winter	28.19	26.74	76.90	75.80	94.90
	Tonteldoos	0.19	0.19	100.30	100.50	100.50
	Vlugkraal	0.44	0.44	100.40	97.30	98.90
	De Hoop	348.70	332.01	100.10	90.60	95.20
	Flag Boshielo	185.13	95.71	51.20	37.00	51.70
	Klaserie	5.60	5.65	100.80	100.40	100.80
	Tours	6.08	3.88	99.70	63.80	63.80
	Ebenezer	69.14	64.01	99.70	92.10	92.60
	Hans Merensky	1.23	1.25	102.40	101.50	101.90
	Magoebaskloof	4.84	4.87	100.80	100.50	100.50
	Vergelegen	0.25	0.26	102.00	101.30	101.30
	Tzaneen	156.53	70.85	60.10	44.70	45.30
	Dap Naude	1.94	1.98	102.00	104.40	102.20
	Middle-Letaba	171.93	28.24	26.30	16.80	16.40
	Thabina	3.09	2.46	99.57	79.63	79.47
	Nsami	21.87	12.48	96.00	56.40	57.00
	Modjadji	7.20	2.15	69.10	30.00	29.80

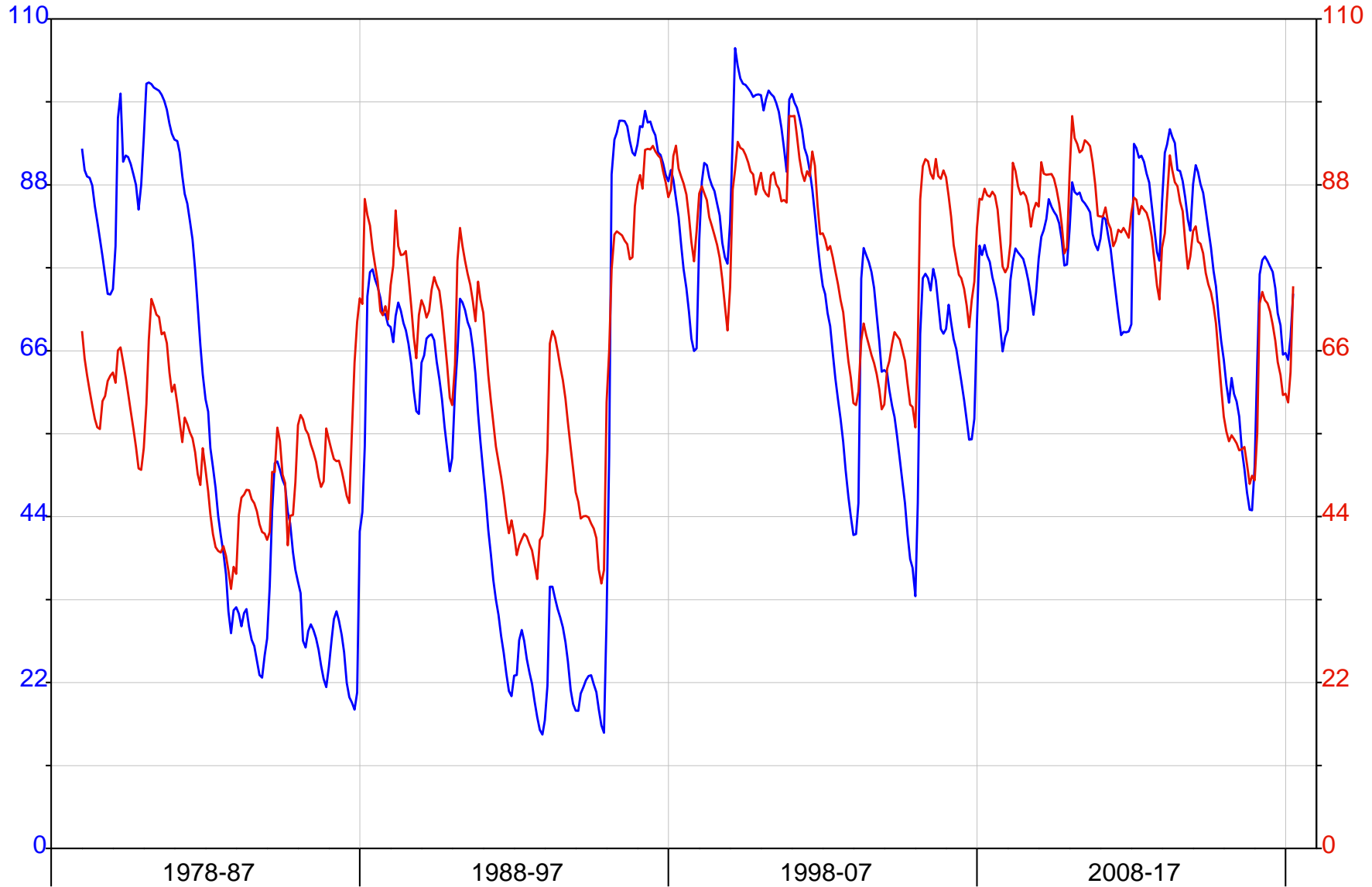
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HYPLOT V133 Output 19/04/2018

Period 41 Year 01/01/1978 to 01/01/2019

1978-2018

— LP Limpopo 275.00 Provincial % Full
— GRT Grand Total 275.00 Provincial % Full



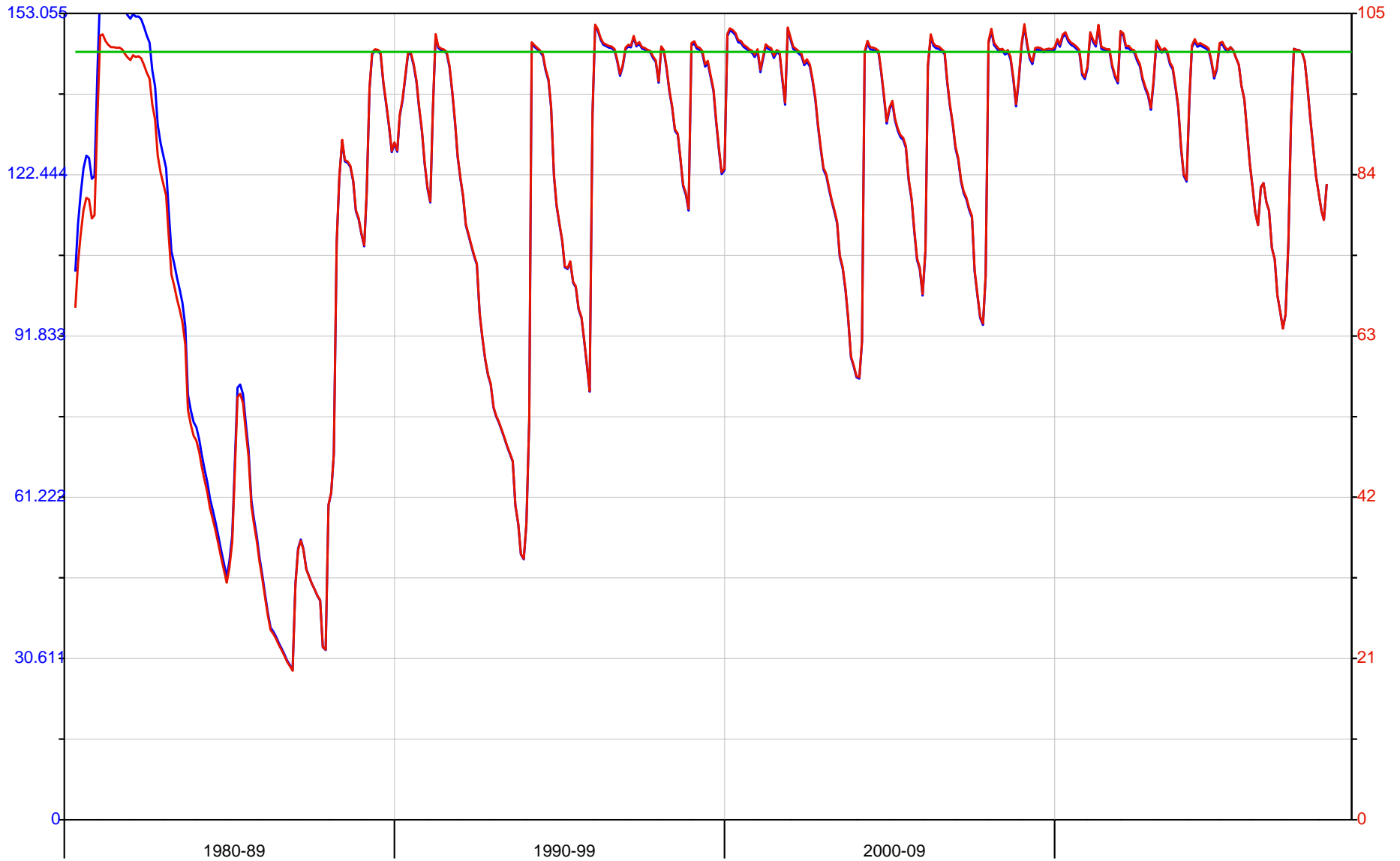
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HYPLOT V133 Output 19/04/2018

Period 39 Year 01/01/1980 to 01/01/2019

1980-2018

- A4R001 Mokolo Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A4R001 Mokolo Dam 210.00 % Full (nett) Combined Weekly/TS WC
- A4R001 Mokolo Dam 210.00 % Full (nett) TT



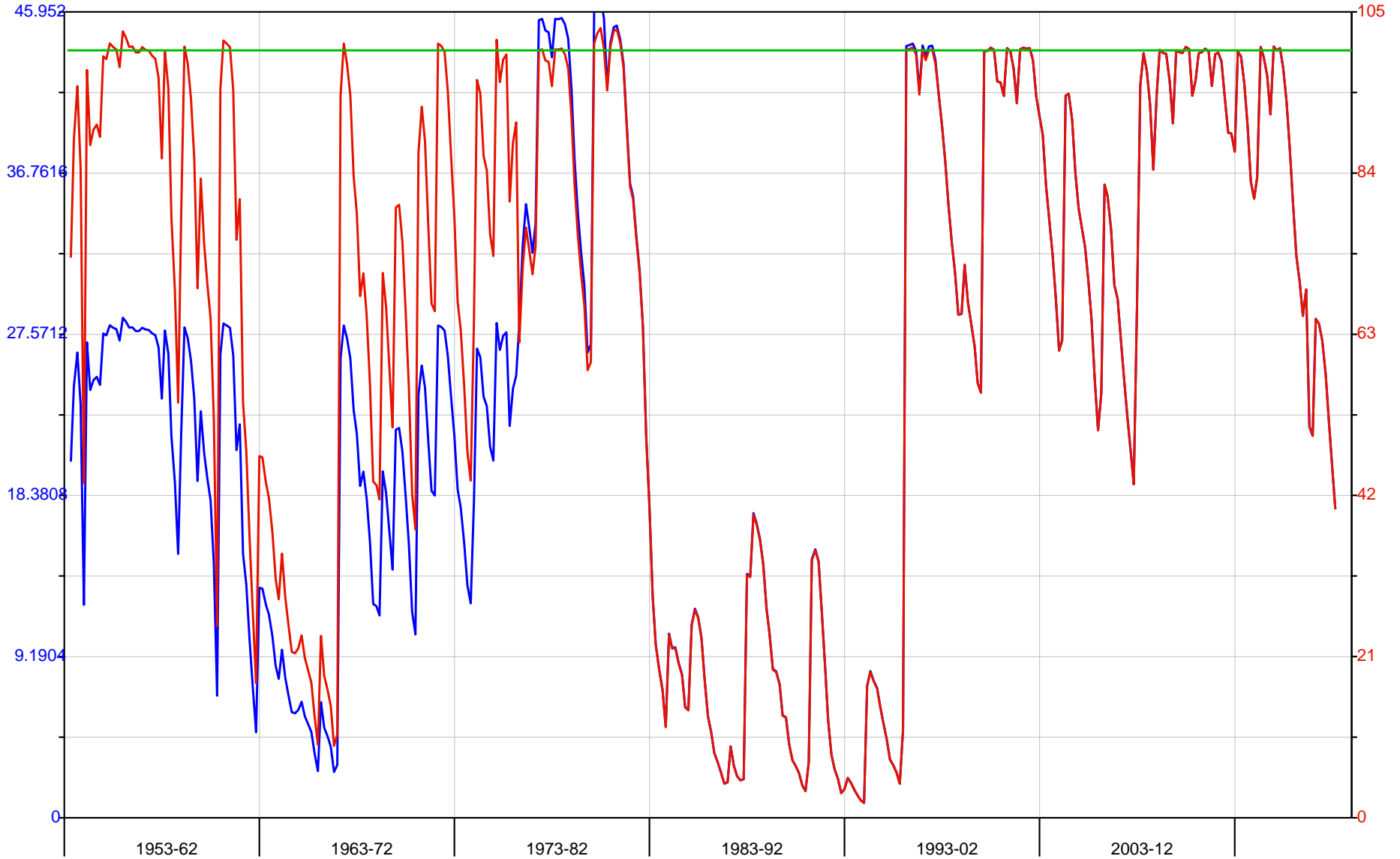
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HYPLOT V133 Output 19/04/2018

Period 66 Year 01/01/1953 to 01/01/2019

1953-2018

- A6R001 Doorndraai Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A6R001 Doorndraai Dam 210.00 % Full (nett) Combined Weekly/TS WC
- A6R001 Doorndraai Dam 210.00 % Full (nett) TT



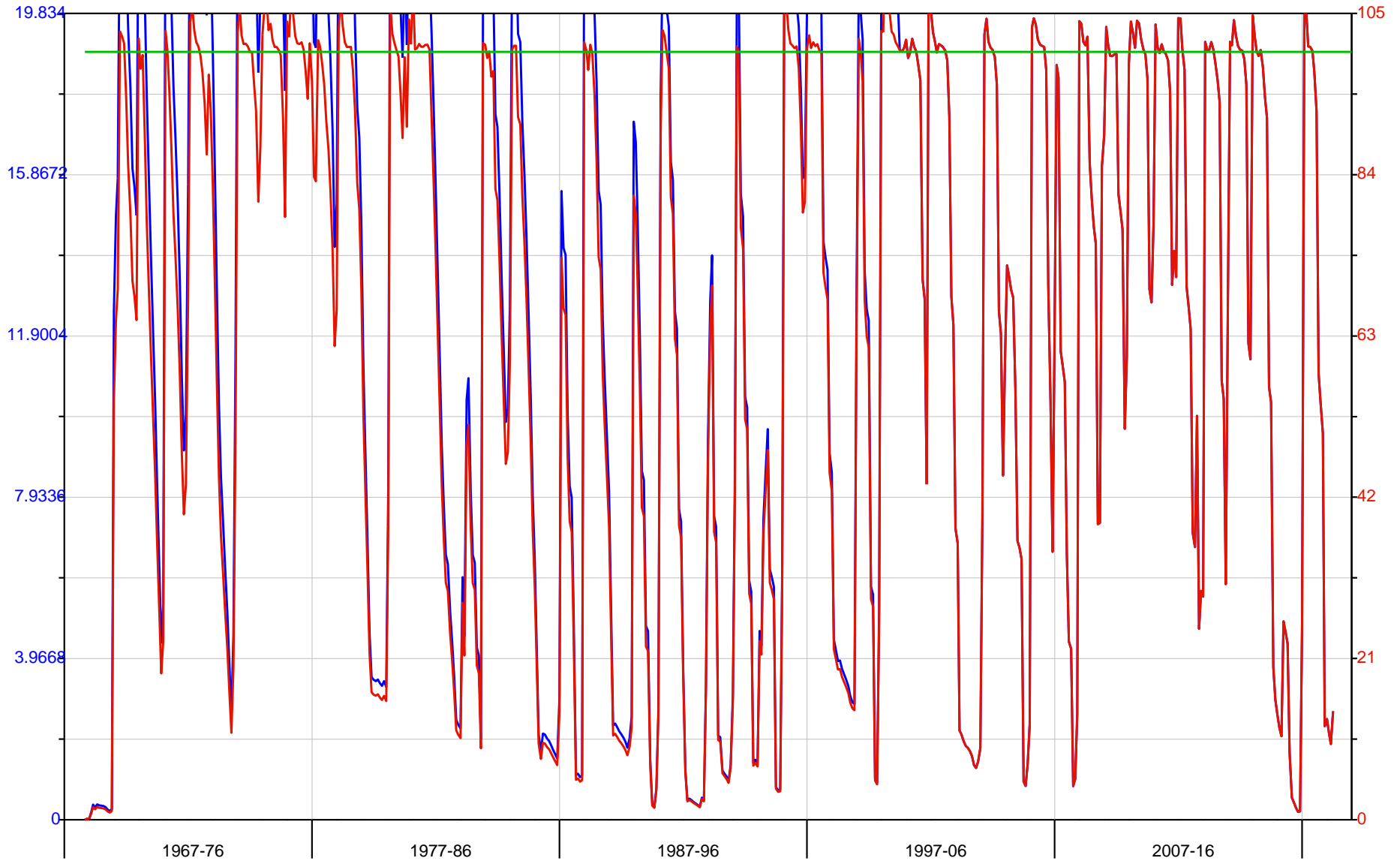
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HYPLOT V133 Output 19/04/2018

Period 52 Year 01/01/1967 to 01/01/2019

1967-2018

- A6R002 Glen Alpine Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A6R002 Glen Alpine Dam 210.00 % Full (nett) Combined Weekly/TS WC
- A6R002 Glen Alpine Dam 210.00 % Full (nett) TT



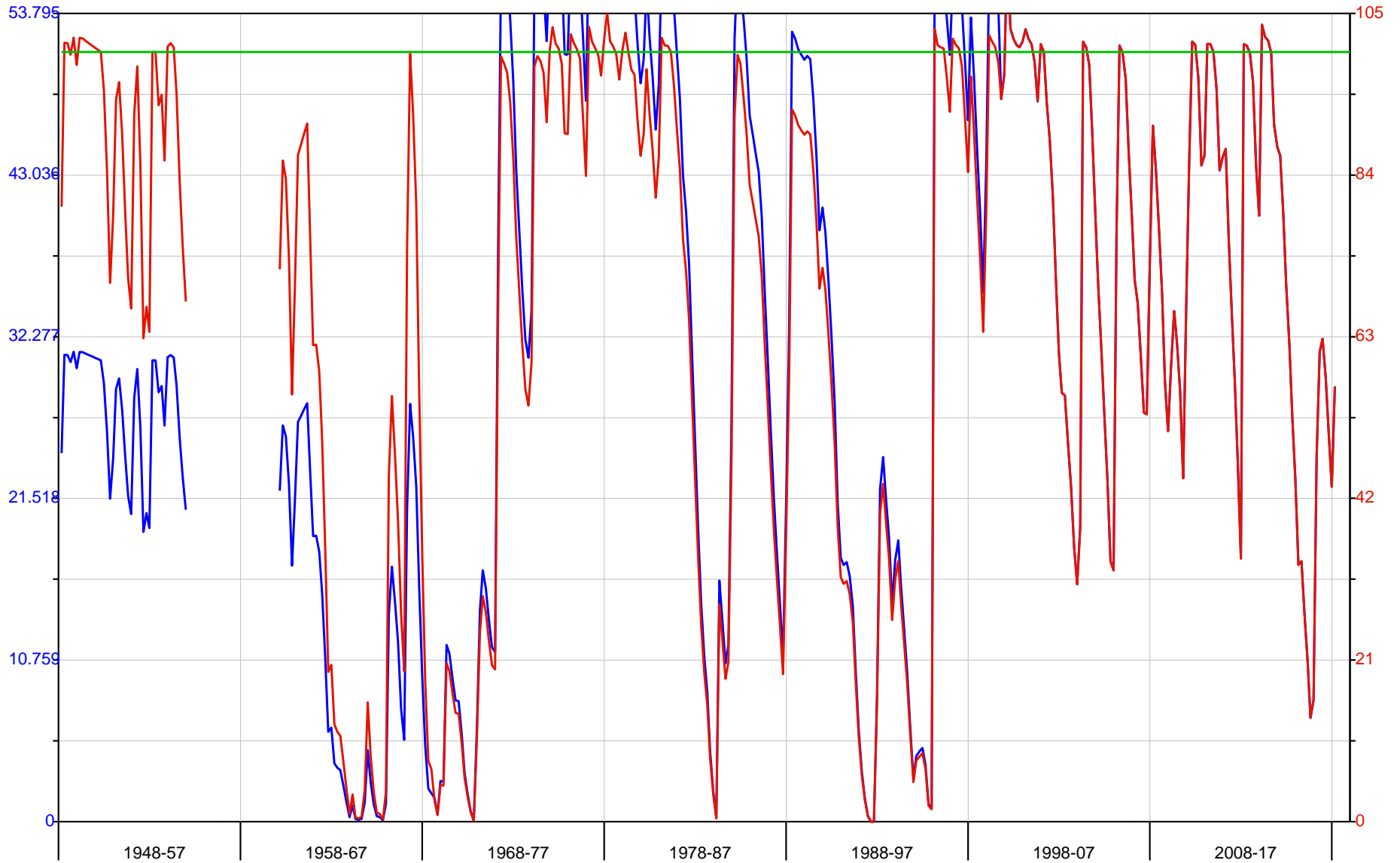
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HYPLOT V133 Output 19/04/2018

Period 71 Year 01/01/1948 to 01/01/2019

1948-2018

- A8R001 Nzhelele Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A8R001 Nzhelele Dam 210.00 % Full (nett) Combined Weekly/TS WC
- A8R001 Nzhelele Dam 210.00 % Full (nett) TT



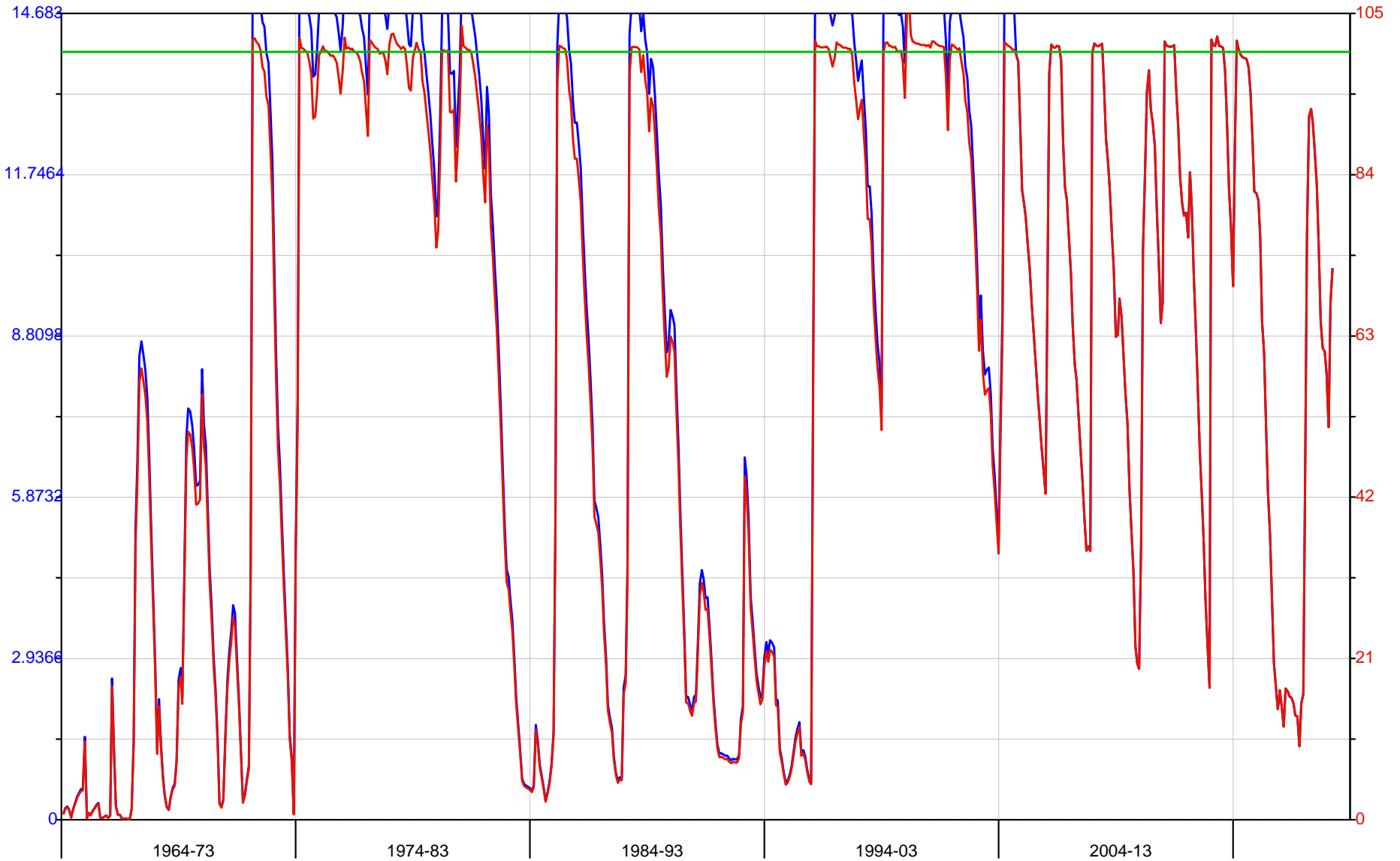
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HYPLOT V133 Output 19/04/2018

Period 55 Year 01/01/1964 to 01/01/2019

1964-2018

- A8R002 Luphephe Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A8R002 Luphephe Dam 210.00% Full (nett) Combined Weekly/TS WC
- A8R002 Luphephe Dam 210.00% Full (nett) TT



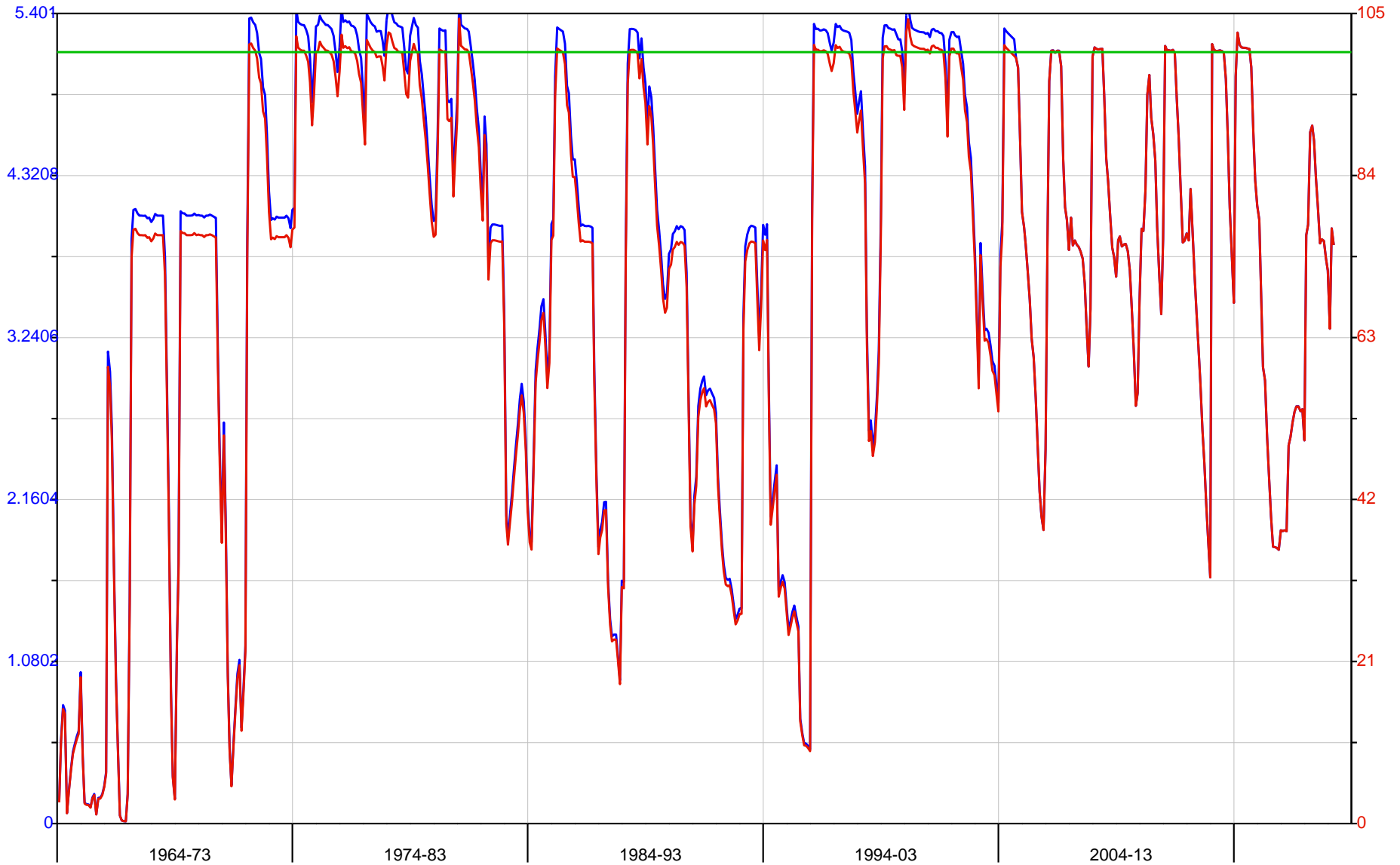
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HYPLOT V133 Output 19/04/2018

Period 55 Year 01/01/1964 to 01/01/2019

1964-2018

- A8R003 Nwanedzi Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A8R003 Nwanedzi Dam 210.00 % Full (nett) Combined Weekly/TS WC
- A8R003 Nwanedzi Dam 210.00 % Full (nett) TT



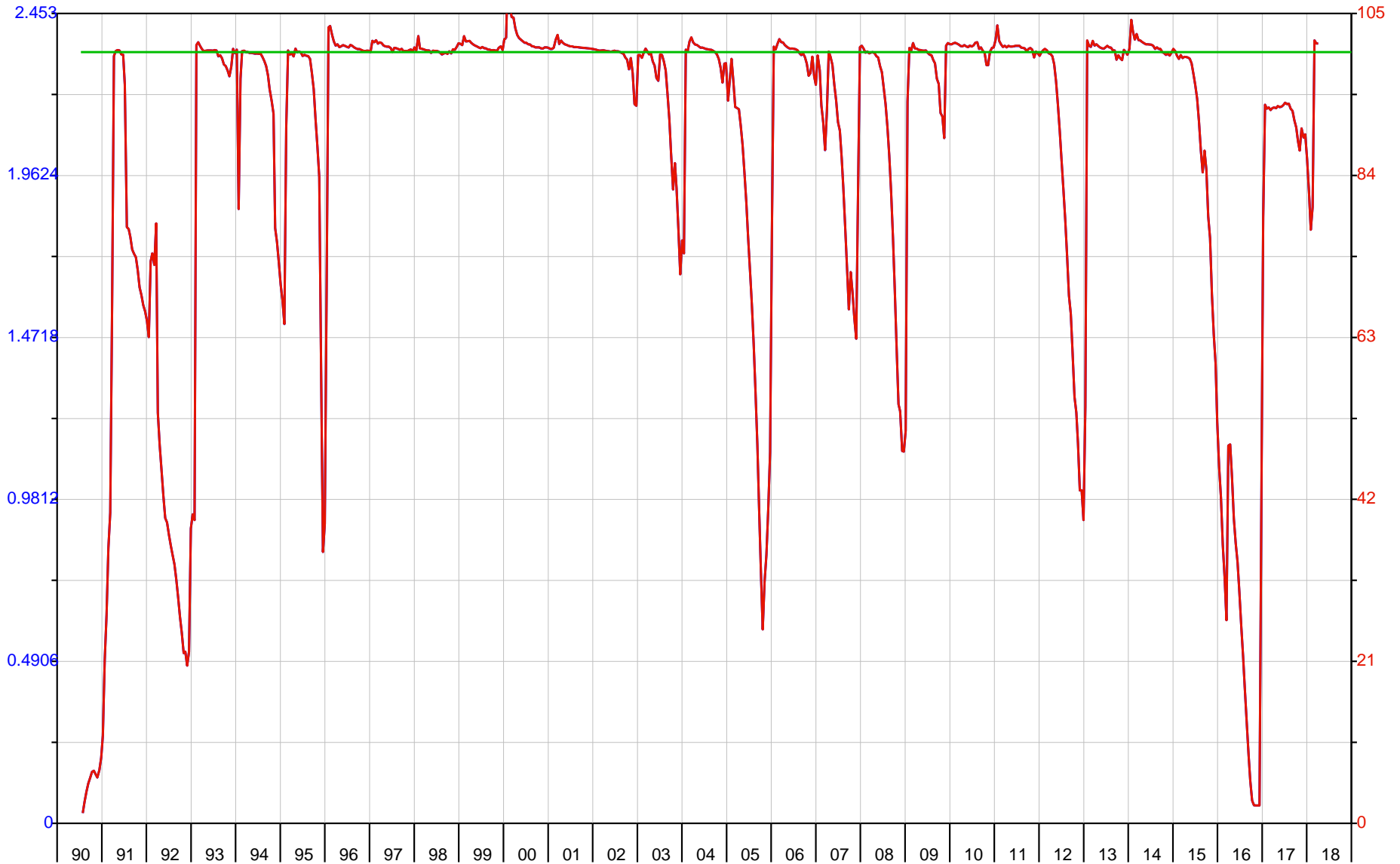
Department of Water and Sanitation

HYPLOT V133 Output 19/04/2018

Period 29 Year 01/01/1990 to 01/01/2019

1990-2018

- A8R004 Mutshedzi Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A8R004 Mutshedzi Dam 210.00% Full (nett) Combined Weekly/TS WC
- A8R004 Mutshedzi Dam 210.00% Full (nett) TT



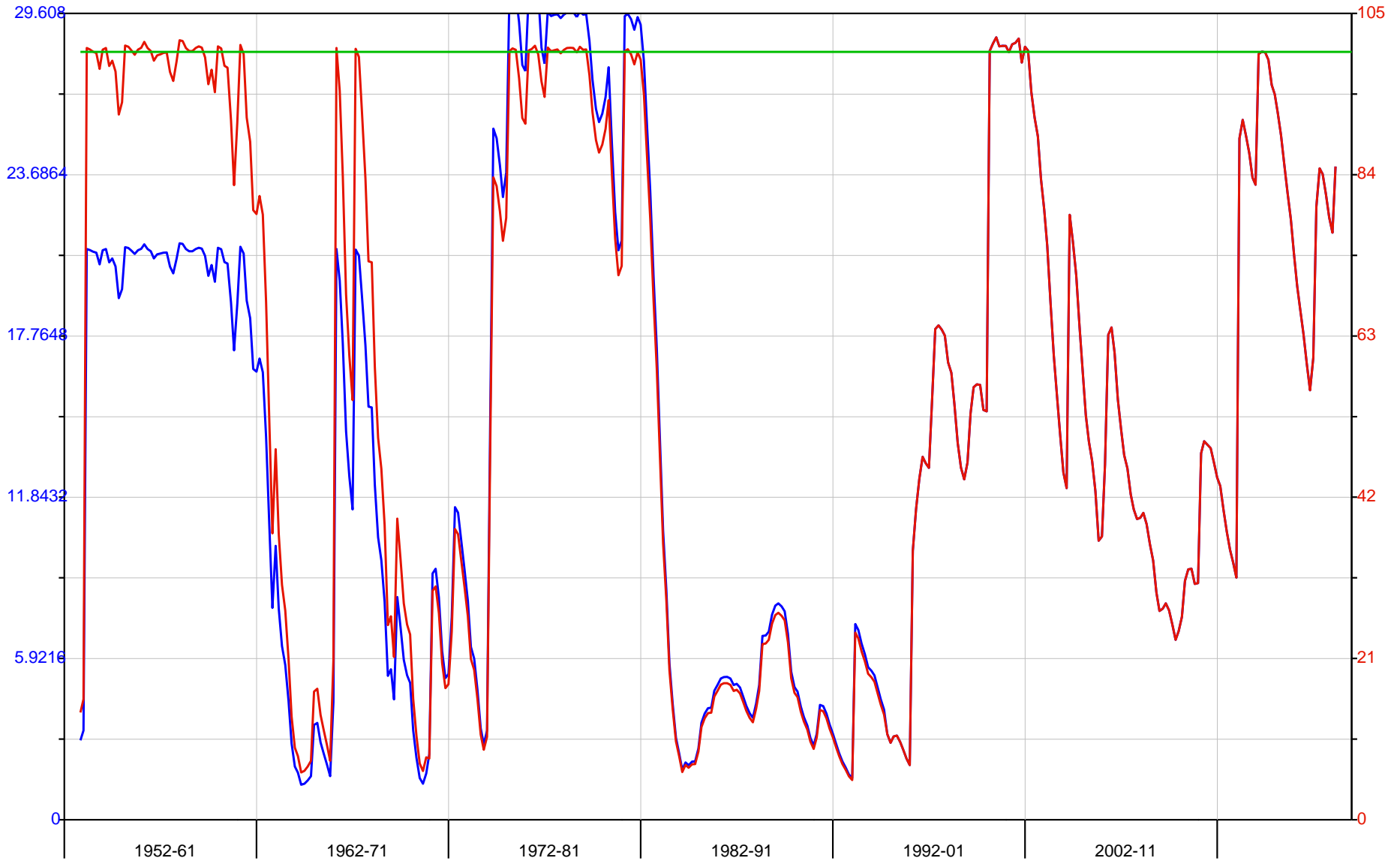
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HYPLOT V133 Output 19/04/2018

Period 67 Year 01/01/1952 to 01/01/2019

1952-2018

- A9R001 Albasini Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A9R001 Albasini Dam 210.00% Full (nett) Combined Weekly/TS WC
- A9R001 Albasini Dam 210.00% Full (nett) TT



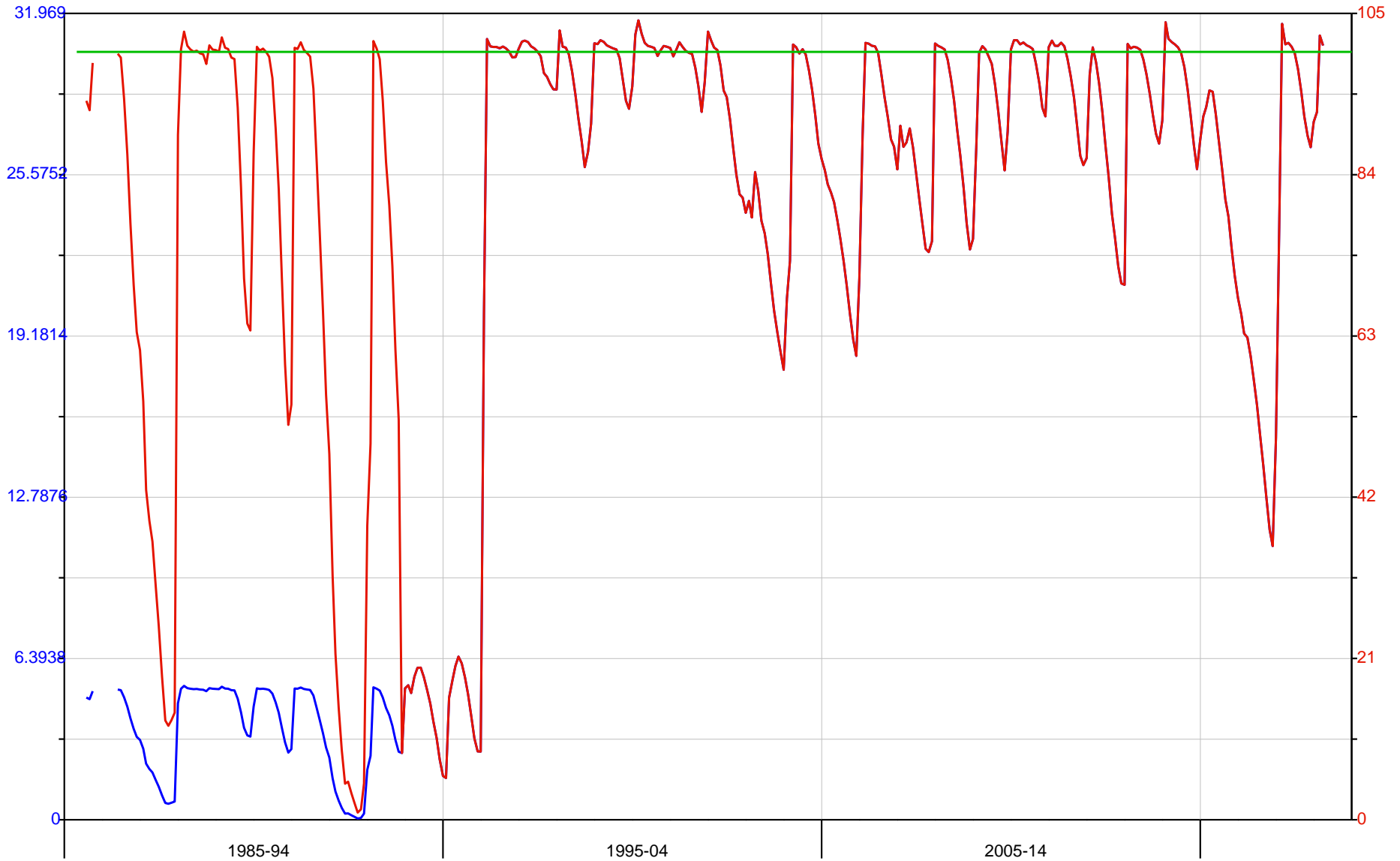
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HYPLOT V133 Output 19/04/2018

Period 34 Year 01/01/1985 to 01/01/2019

1985-2018

- A9R002 Vondo Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A9R002 Vondo Dam 210.00% Full (nett) Combined Weekly/TS WC
- A9R002 Vondo Dam 210.00% Full (nett) TT



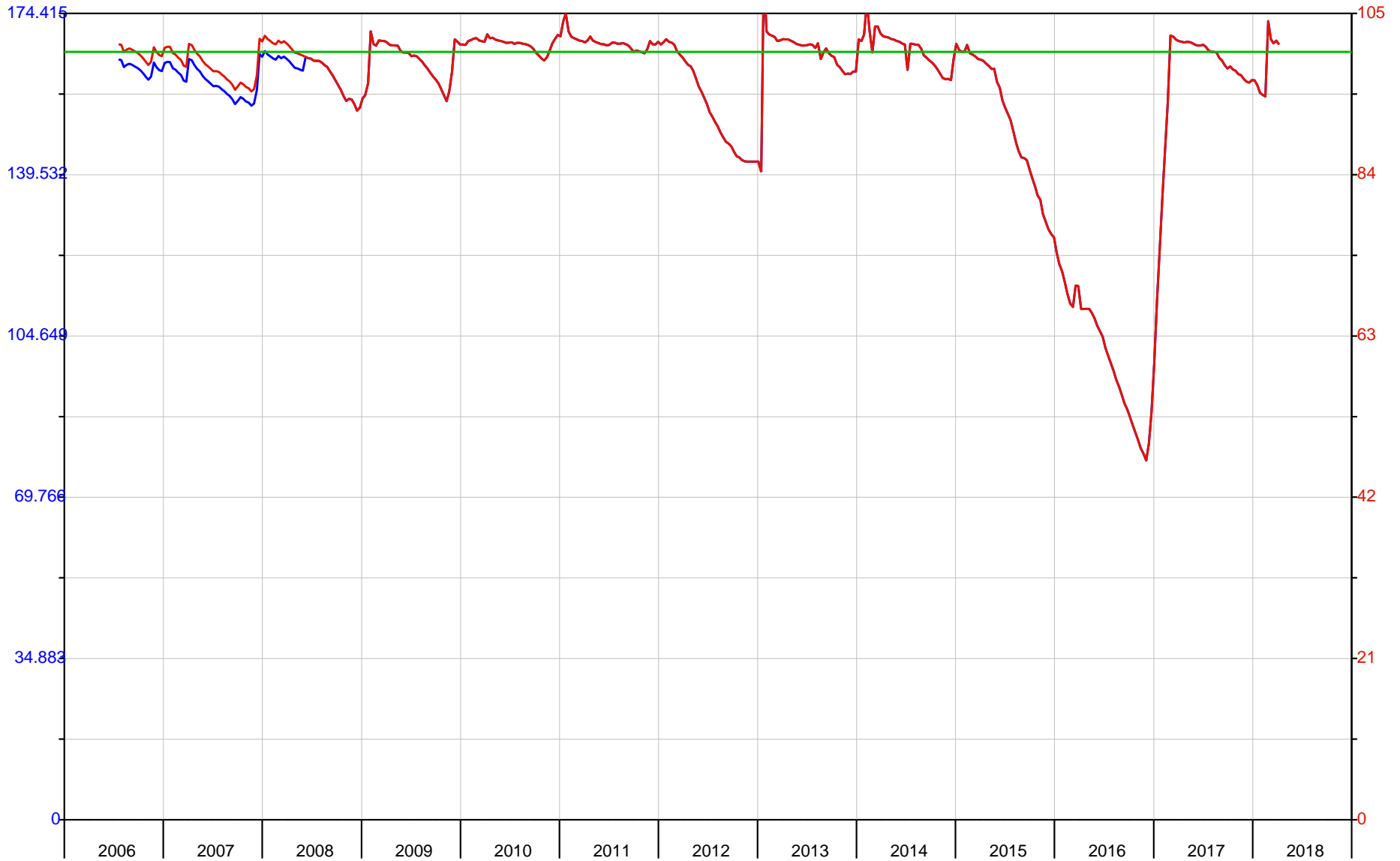
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HYPLOT V133 Output 19/04/2018

Period 13 Year 01/01/2006 to 01/01/2019

2006-18

- A9R004 Nandoni Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- A9R004 Nandoni Dam 210.00% Full (nett) Combined Weekly/TS WC
- A9R004 Nandoni Dam 210.00% Full (nett) TT



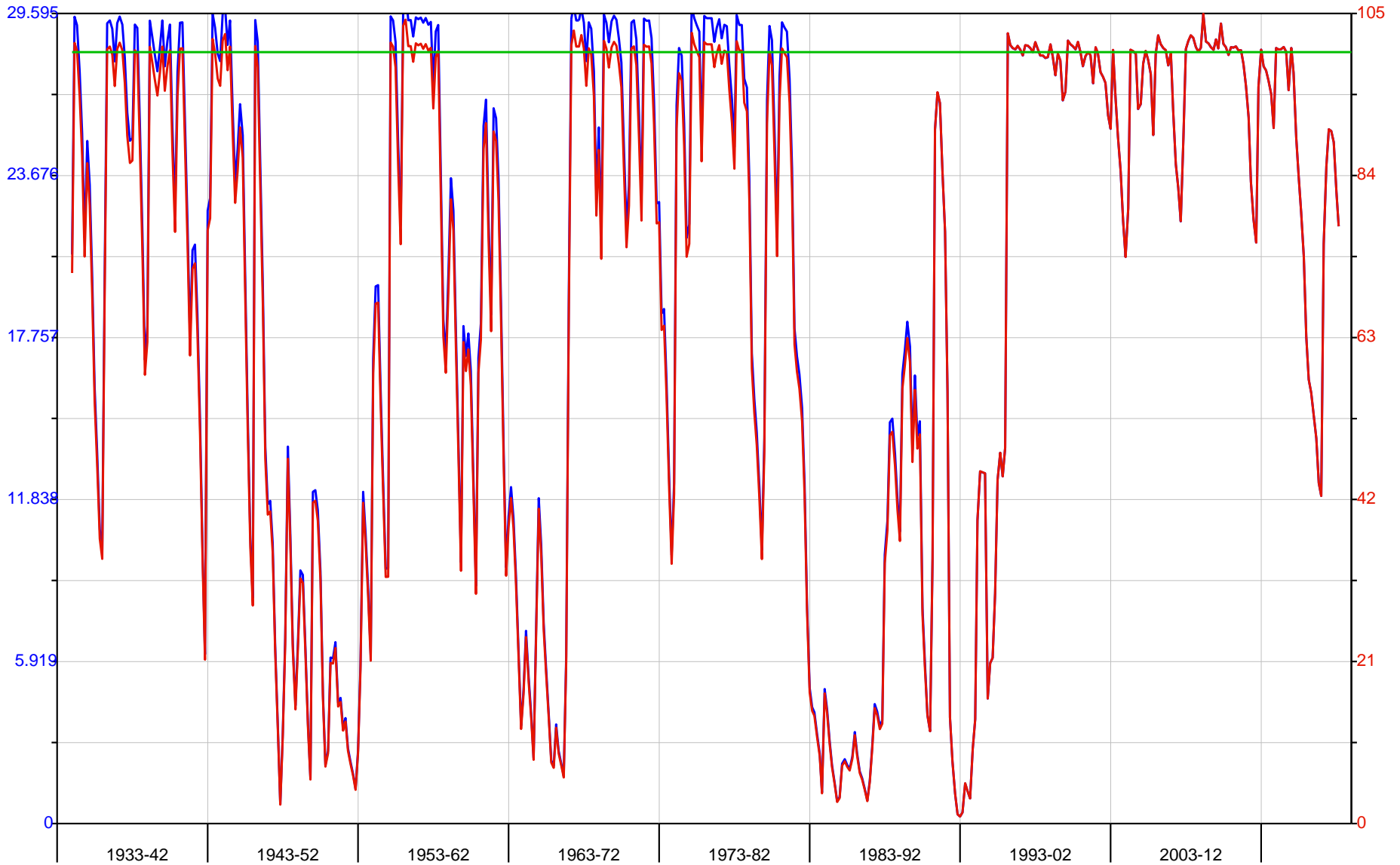
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HYPLOT V133 Output 19/04/2018

Period 86 Year 01/01/1933 to 01/01/2019

1933-2018

- B3R001 Rust De Winter Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B3R001 Rust De Winter Dam 210.00 % Full (nett) Combined Weekly/TS WC
- B3R001 Rust De Winter Dam 210.00 % Full (nett) TT

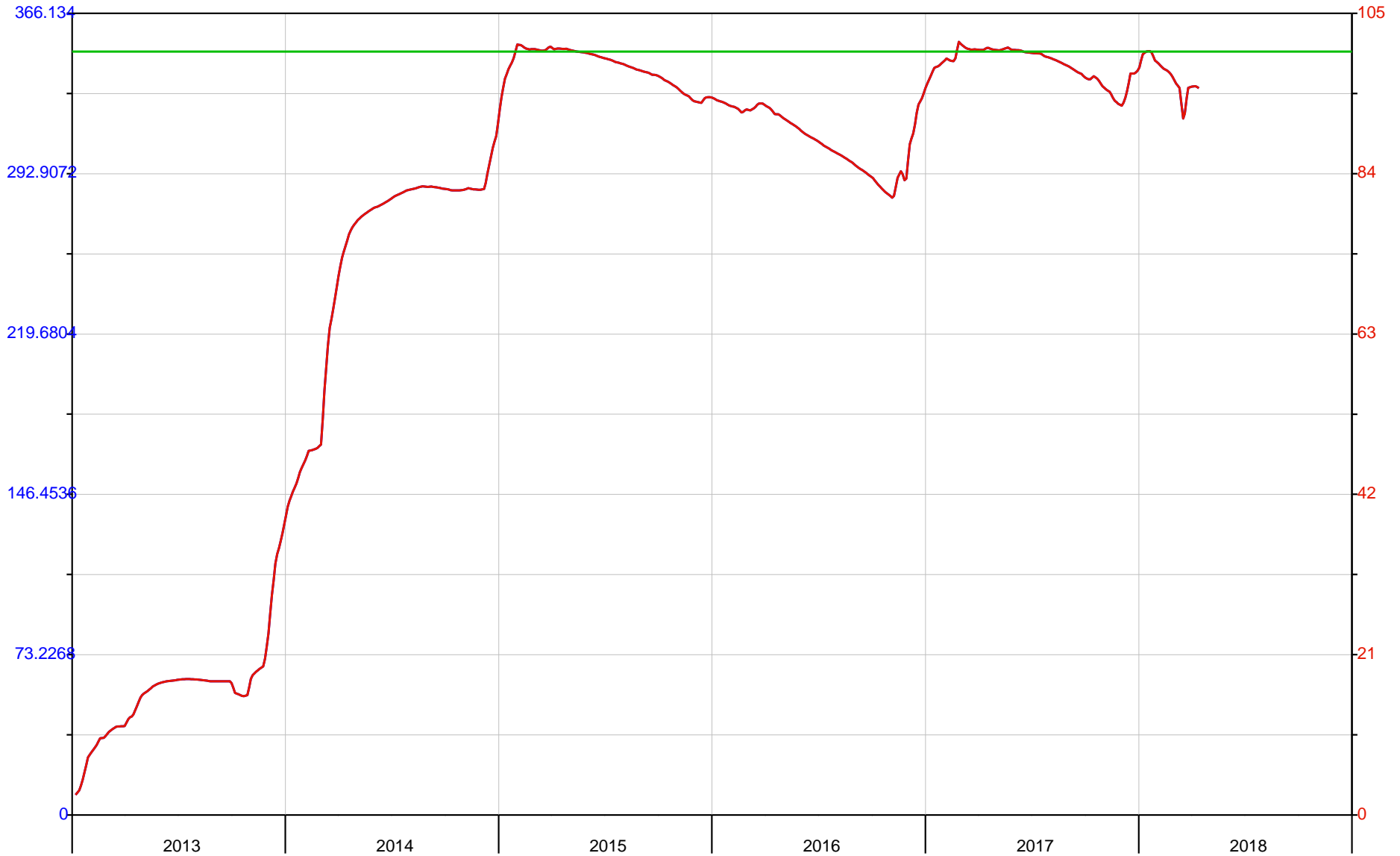


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Period 6 Year 01/01/2013 to 01/01/2019

2013-18

- B4R007 De Hoop Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B4R007 De Hoop Dam 210.00% Full (nett) Combined Weekly/TS WC
- B4R007 De Hoop Dam 210.00% Full (nett) TT



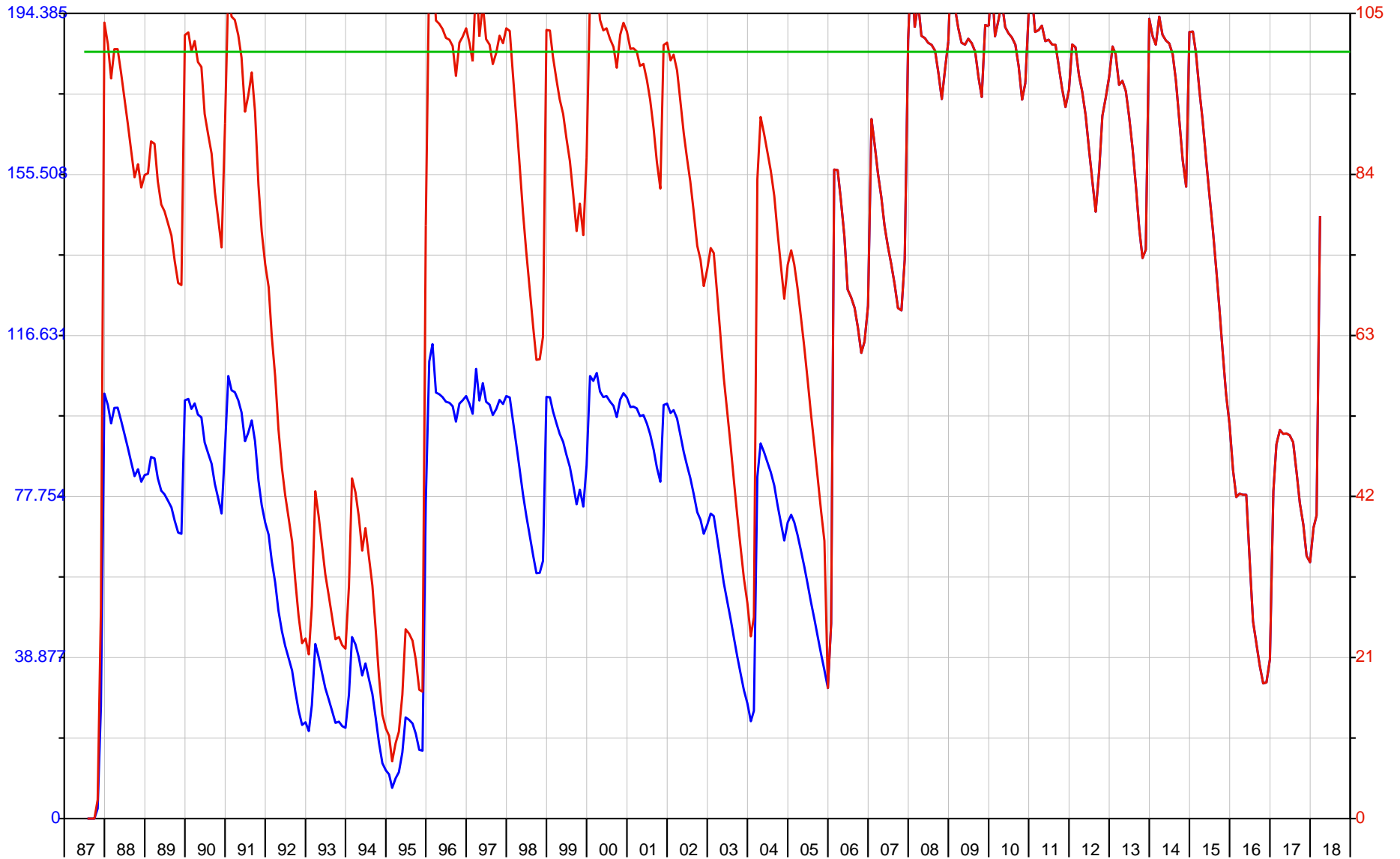
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HYPLOT V133 Output 19/04/2018

Period 32 Year 01/01/1987 to 01/01/2019

1987-2018

- B5R002 Flag Boshielo Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B5R002 Flag Boshielo Dam 210.00% Full (nett) Combined Weekly/TS WC
- B5R002 Flag Boshielo Dam 210.00% Full (nett) TT



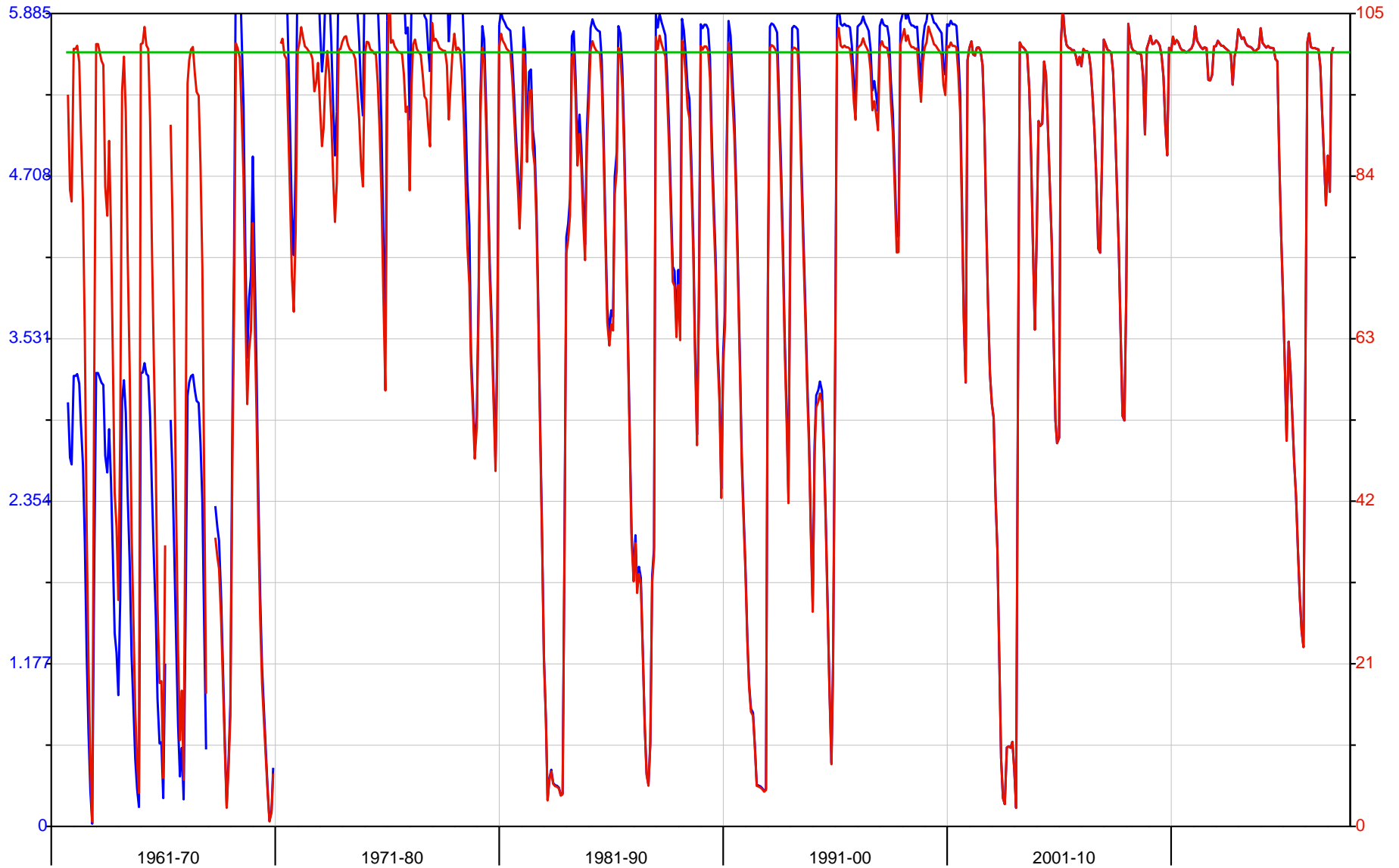
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HYPLOT V133 Output 19/04/2018

Period 58 Year 01/01/1961 to 01/01/2019

1961-2018

- B7R001 Klaserie Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B7R001 Klaserie Dam 210.00 % Full (nett) Combined Weekly/TS WC
- B7R001 Klaserie Dam 210.00 % Full (nett) TT



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HYPLOT V133 Output 19/04/2018

Period 27 Year 01/01/1992 to 01/01/2019

1992-2018

- B7R003 Tours Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B7R003 Tours Dam 210.00% Full (nett) Combined Weekly/TS WC
- B7R003 Tours Dam 210.00% Full (nett) TT



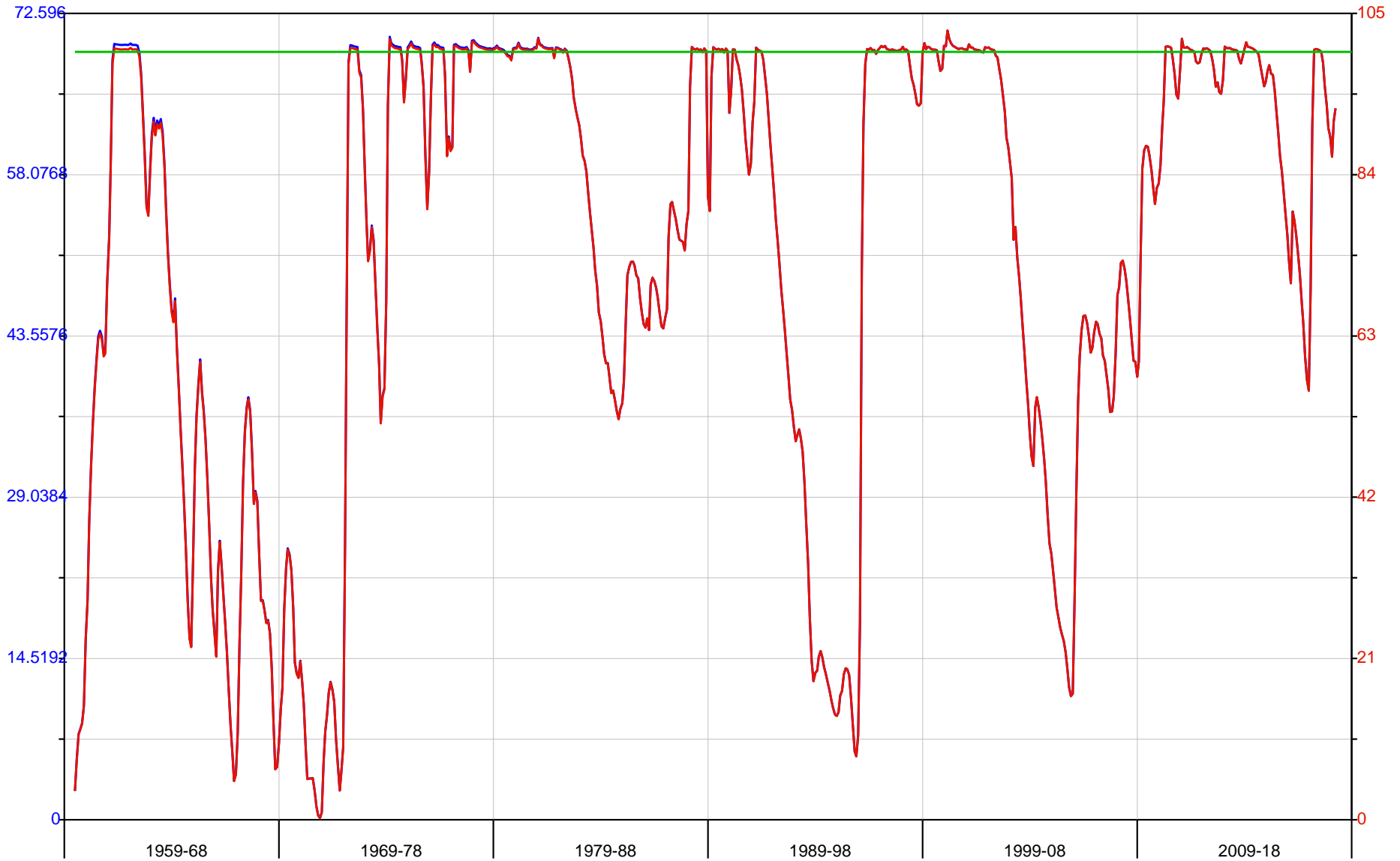
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HYPLOT V133 Output 19/04/2018

Period 60 Year 01/01/1959 to 01/01/2019

1959-2018

- B8R001 Ebenezer Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B8R001 Ebenezer Dam 210.00 % Full (nett) Combined Weekly/TS WC
- B8R001 Ebenezer Dam 210.00 % Full (nett) TT



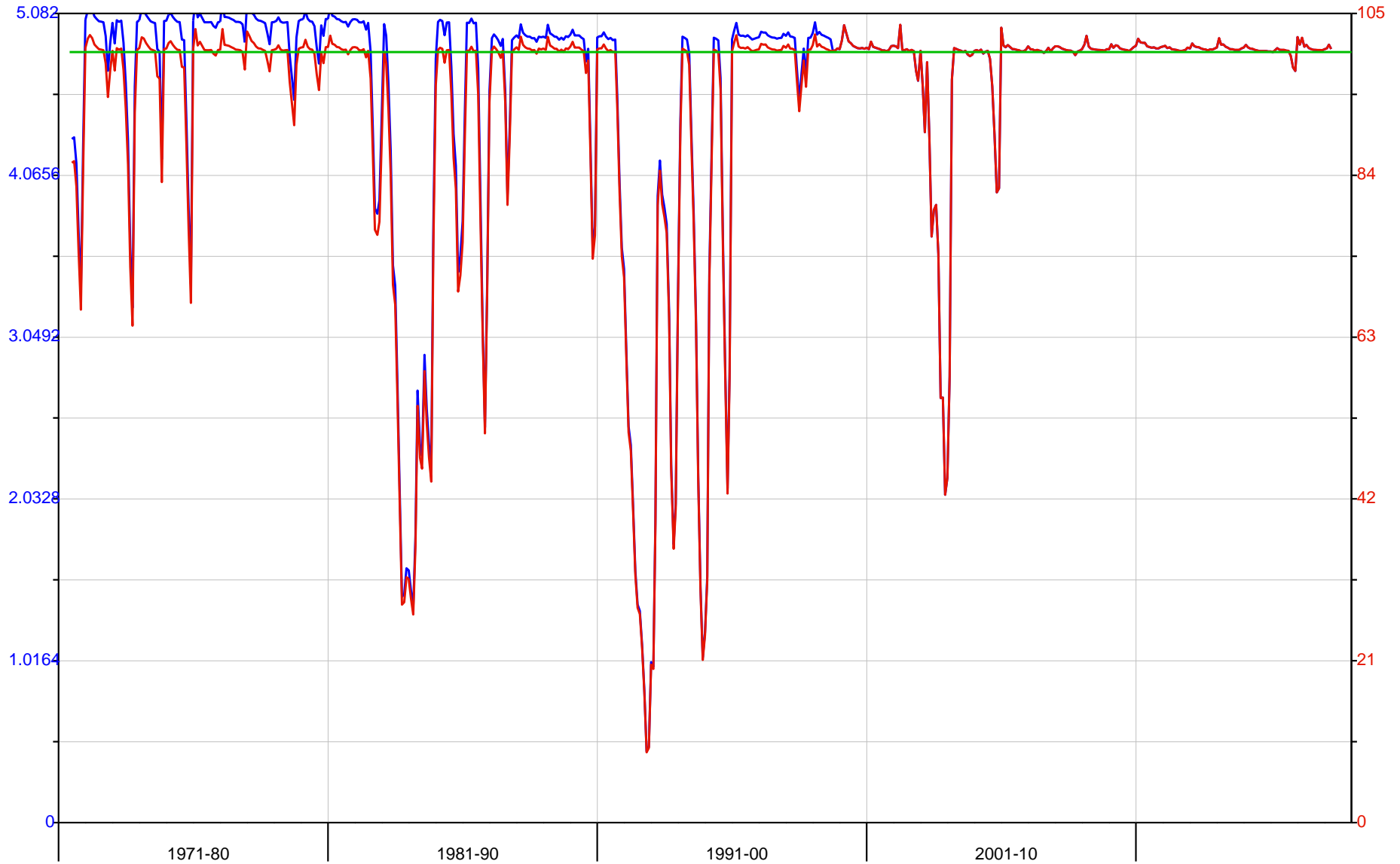
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HYPLOT V133 Output 19/04/2018

Period 48 Year 01/01/1971 to 01/01/2019

1971-2018

- B8R003 Magoebaskloof Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B8R003 Magoebaskloof Dam 210.00% Full (nett) Combined Weekly/TS WC
- B8R003 Magoebaskloof Dam 210.00% Full (nett) TT



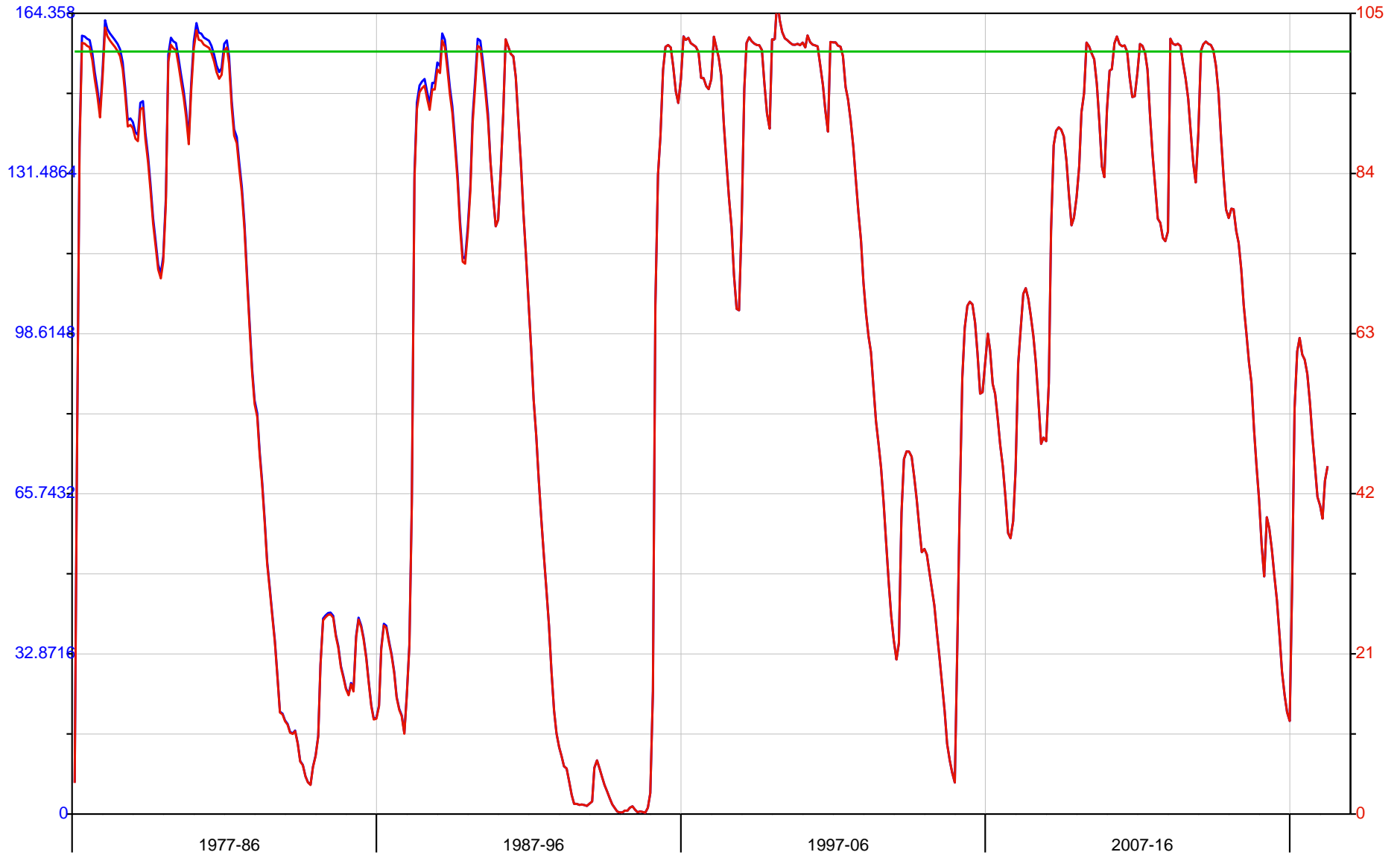
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HYPLOT V133 Output 19/04/2018

Period 42 Year 01/01/1977 to 01/01/2019

1977-2018

- B8R005 Tzaneen Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B8R005 Tzaneen Dam 210.00% Full (nett) Combined Weekly/TS WC
- B8R005 Tzaneen Dam 210.00% Full (nett) TT



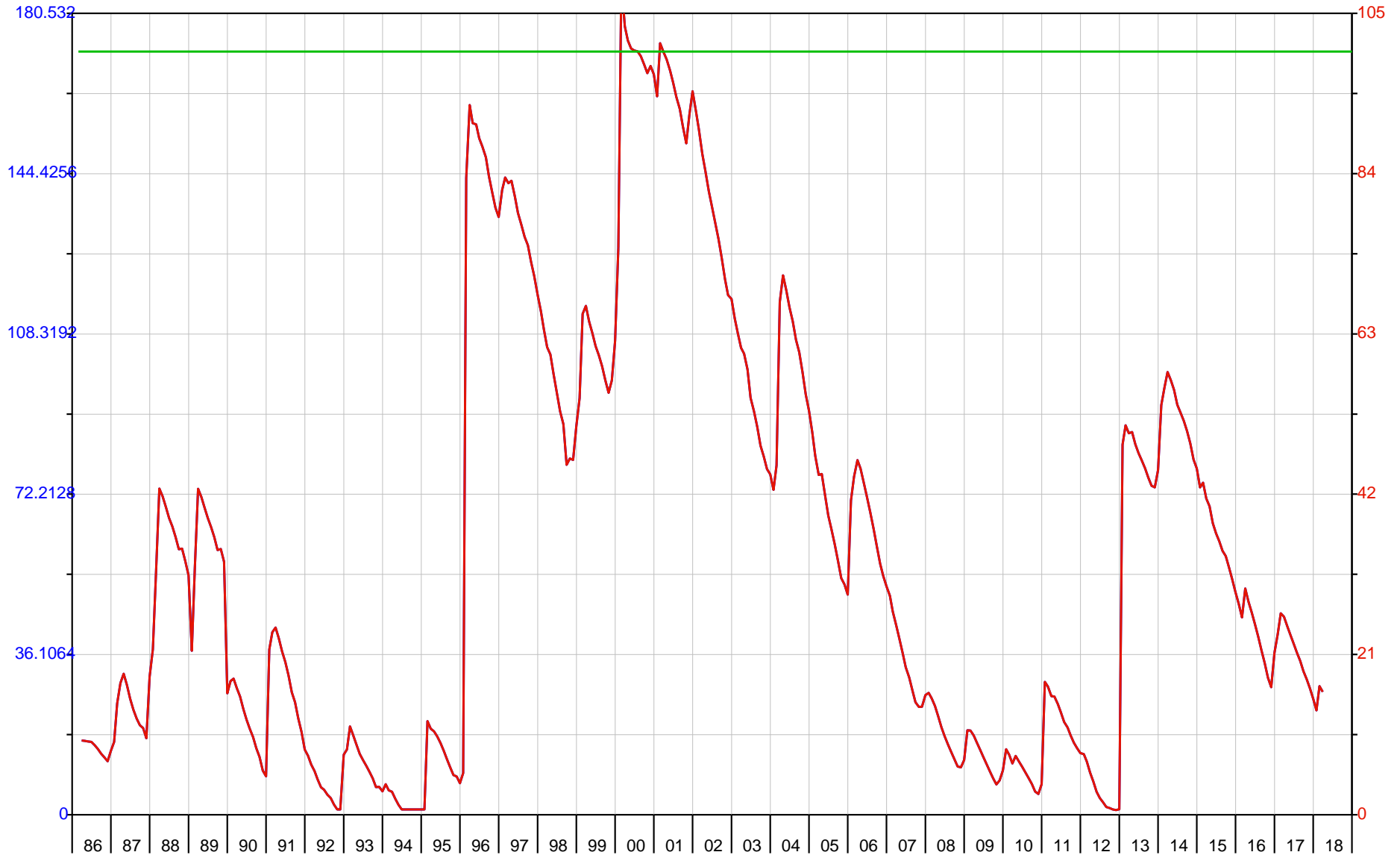
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HYPLOT V133 Output 19/04/2018

Period 33 Year 01/01/1986 to 01/01/2019

1986-2018

- B8R007 Middel-Letaba Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B8R007 Middel-Letaba Dam 210.00% Full (nett) Combined Weekly/TS WC
- B8R007 Middel-Letaba Dam 210.00% Full (nett) TT



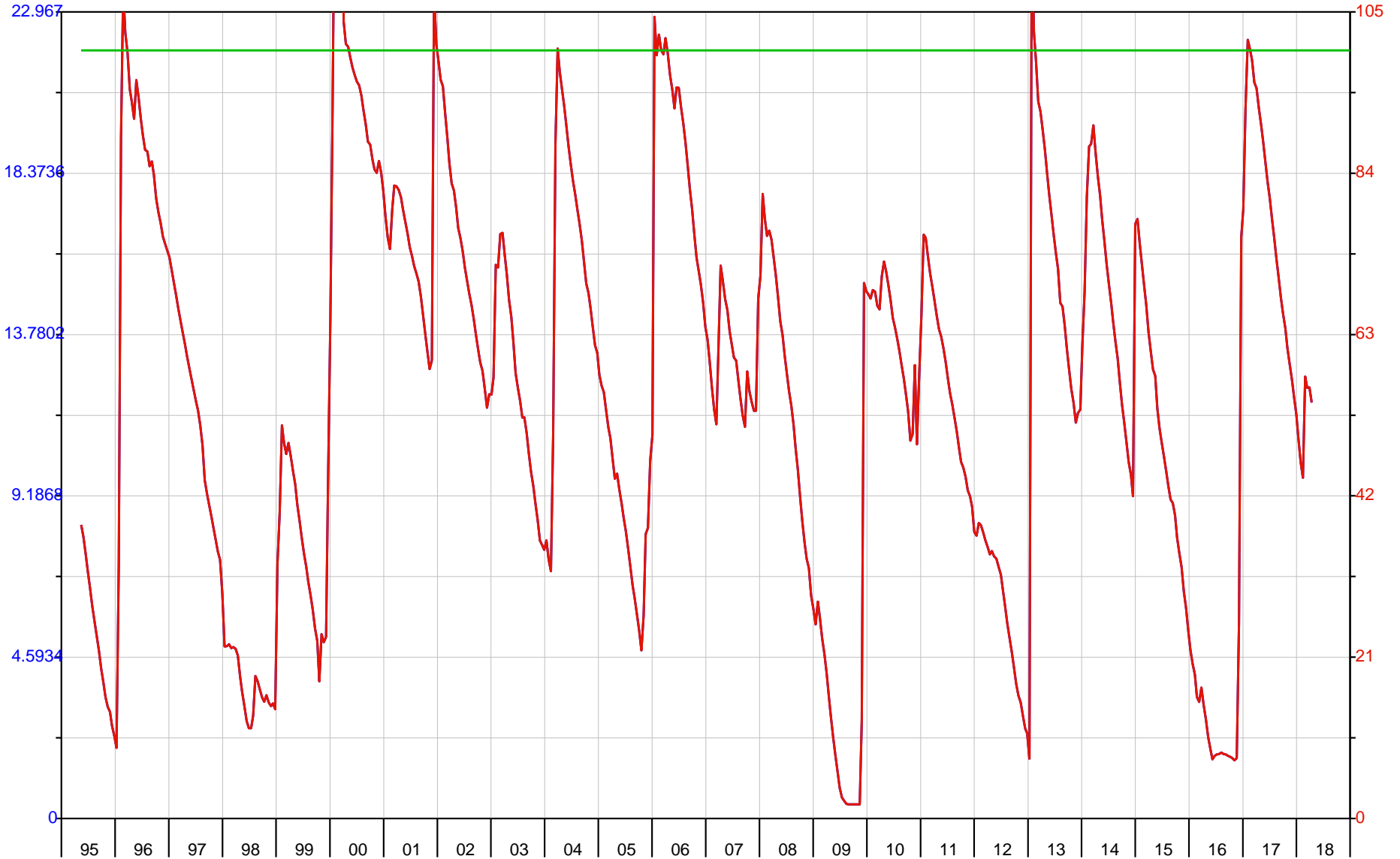
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HYPLOT V133 Output 19/04/2018

Period 24 Year 01/01/1995 to 01/01/2019

1995-2018

- B8R009 Nsami Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B8R009 Nsami Dam 210.00 % Full (nett) Combined Weekly/TS WC
- B8R009 Nsami Dam 210.00 % Full (nett) TT



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HYPLOT V133 Output 19/04/2018

Period 22 Year 01/01/1997 to 01/01/2019

1997-2018

- B8R011 Modjadji Dam 198.00 Res Nett Cap (MCM) Combined Weekly/TS WC
- B8R011 Modjadji Dam 210.00% Full (nett) Combined Weekly/TS WC
- B8R011 Modjadji Dam 210.00% Full (nett) TT

