

# HYDROLOGICAL SITUATION REPORT

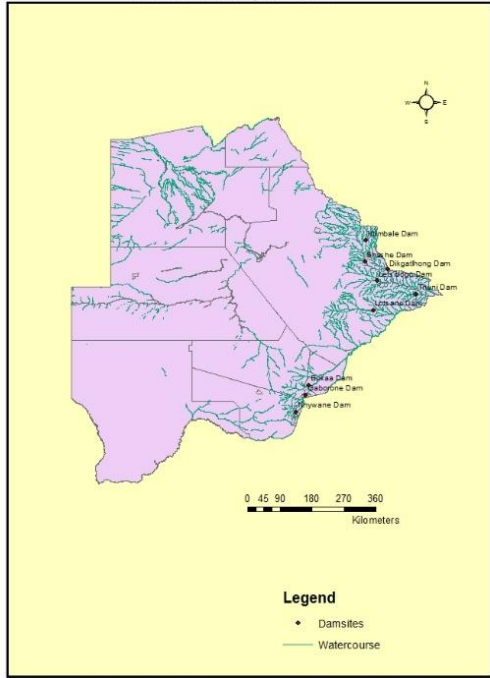
for major rivers and dams in Botswana

Week 48

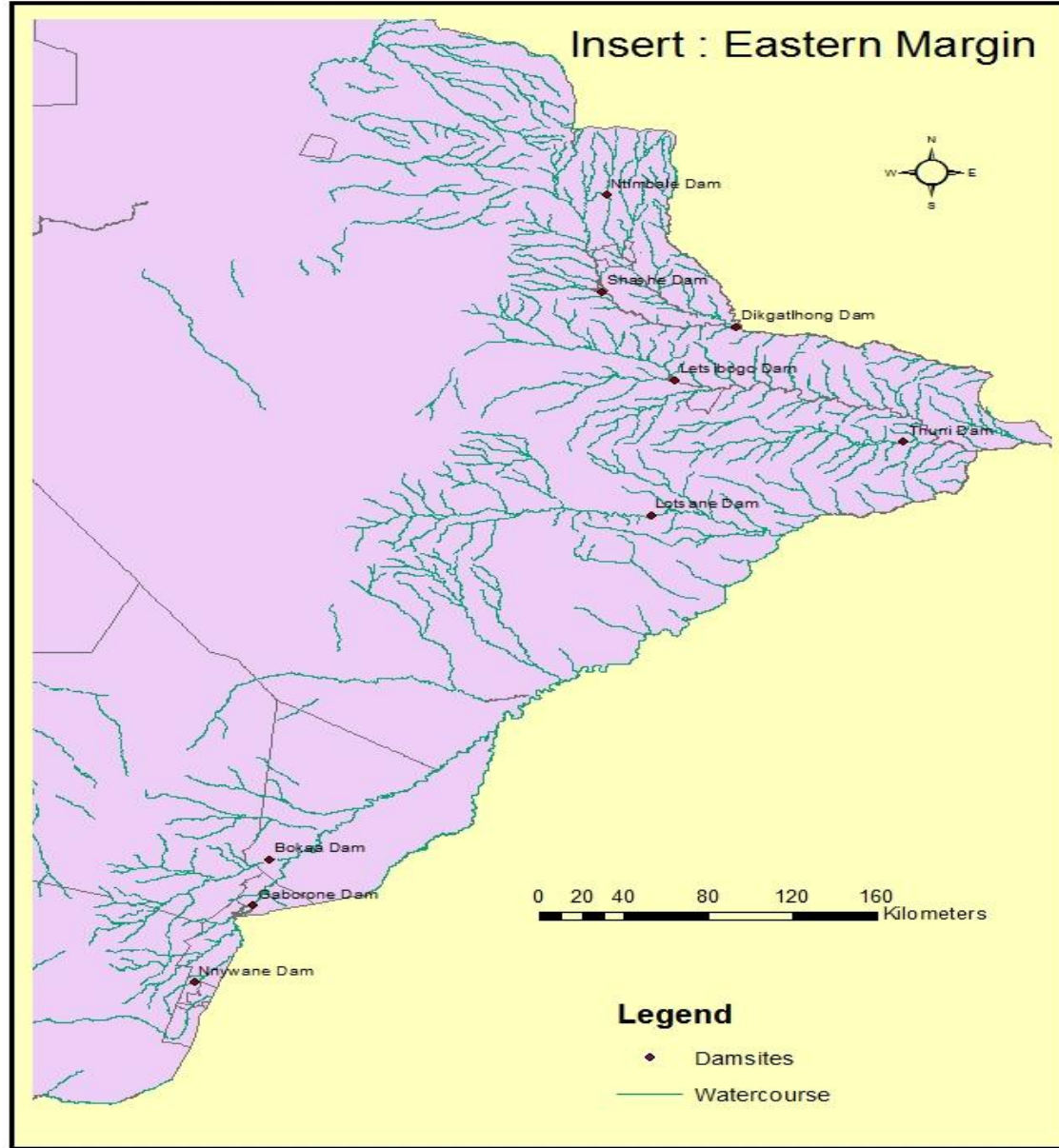


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### Botswana Major Dams



### Insert : Eastern Margin



**TABLE 1: DAMS FULL CAPACITY OR VOLUME**

Name of Dams	River Name	Capacity in Mm <sup>3</sup> (Million cubic meters)	Safe Yields in Mm <sup>3</sup> (Million cubic meters)
Gaborone	Notwane	144.150	9.4*
Shashe	Shashe	87.900	25.3*
Molatedi	Marico	200.786	
Letsibogo	Motloutse	104.00	24
Nnywane	Nnywane	2.280	0.6
Bokaa	Metsimothabe	18.500	4.9
Moshupa	Moshupa	0.690	
Ntimbale	Tati	26.370	3.6
Dikgathong	Tati/Shashe	400	62
Lotsane	Lotsane	42.5	6.6
Thune	Thune	90	10

\* Based on pre-siltation volumes

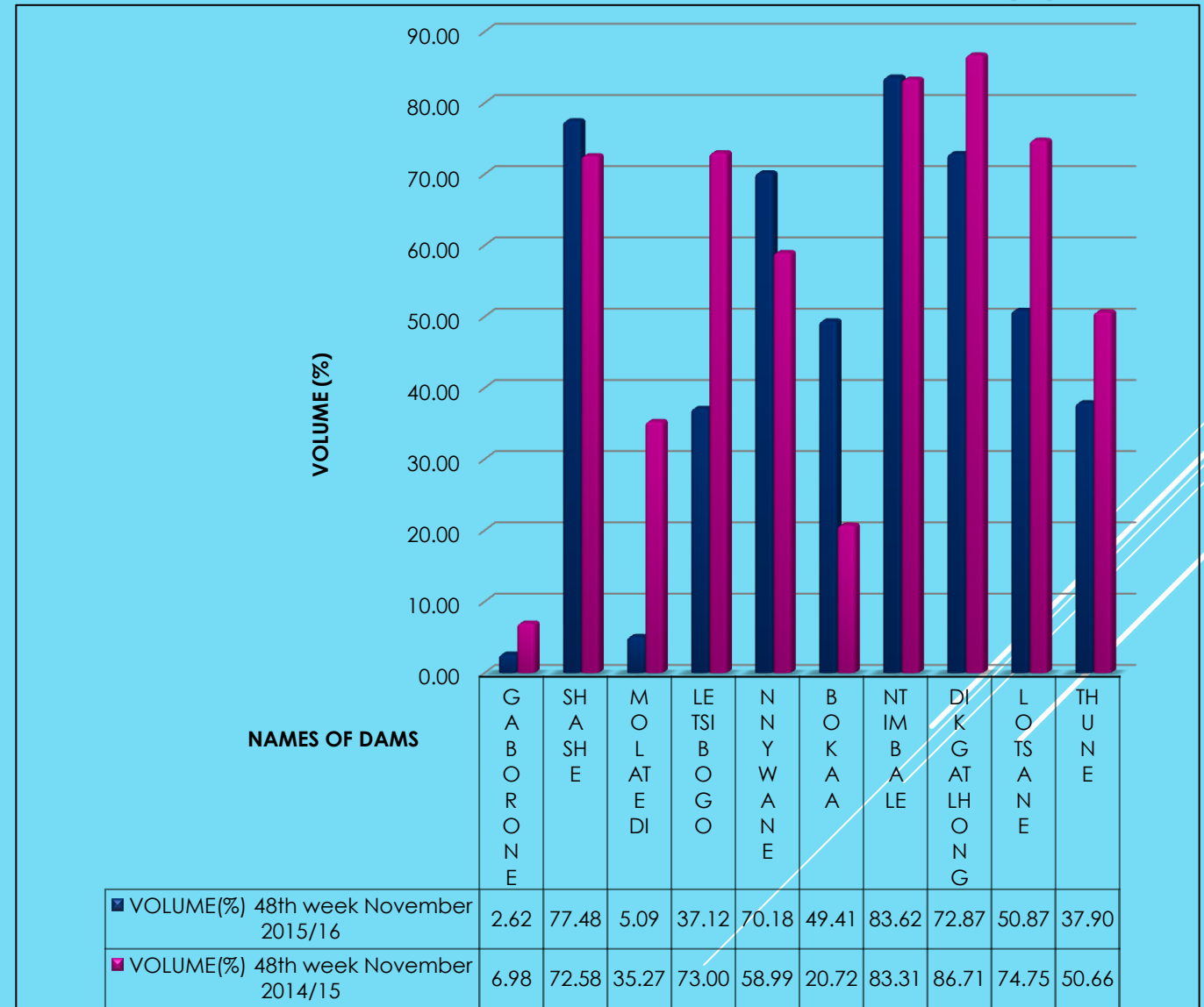
**TABLE 2: THE AMOUNT OF WATER IMPOUNDED IN EACH DAM ON THE SAME MONTH**

	NAME OF THE DAM	DATE	WEEKLY INFLOW (m <sup>3</sup> x 10 <sup>6</sup> )	CUMULATIVE INFLOW (m <sup>3</sup> x 10 <sup>6</sup> )	CURRENT YEAR 2015		PREVIOUS YEAR 2014		
					VOLUME (m <sup>3</sup> x 10 <sup>6</sup> )	VOLUME(%) 48th week November 2015	DATE	VOLUME (m <sup>3</sup> x 10 <sup>6</sup> )	VOLUME(%) 48th week by November 2014
1	GABORONE	25-Nov-15	0.608	1.081	3.698	2.62	25-Nov-14	9.850	6.98
2	SHASHE	24-Nov-15	0.000	0.000	68.104	77.48	25-Nov-14	63.800	72.58
3	MOLATEDI	23-Nov-15	0.320	0.501	10.214	5.09	11-Sep-14	70.826	35.27
4	LETSIBOGO	25-Nov-15	0.000	0.000	38.600	37.12	24-Nov-14	75.920	73.00
5	NNYWANE	25-Nov-15	0.573	0.573	1.600	70.18	25-Nov-14	1.345	58.99
6	BOKAA	25-Nov-15	2.090	8.762	9.140	49.41	25-Nov-14	3.833	20.72
7	NTIMBALE	24-Nov-15	0.671	0.671	22.050	83.62	24-Nov-14	21.970	83.31
8	DIKGATLHONG	24-Nov-15	0.000	0.000	291.49	72.87	25-Nov-14	346.85	86.71
9	LOTSANE	17-Nov-15	0.000	0.000	21.62	50.87	25-Nov-14	31.77	74.75
10	THUNE	24-Nov-15	0.000	0.000	34.106	37.90	25-Nov-14	45.593	50.66

Gaborone and Bokaa dams received very little increases in dam volumes this week, with Gaborone dam receiving  $0.608\text{m}^3 \cdot 10^6$  and Bokaa  $2.09\text{m}^3 \cdot 10^6$ . Molatedi dam in South Africa also continued to receive some inflows. The water shortage crisis experienced in the greater Gaborone area continue to persist despite the inflows. Therefore greater Gaborone is still reliant on the North South Carrier scheme supply from Dikgatlhong dam and Letsibogo dam which are in the northern part of the country where better rainfall amounts are experienced annually, and also the Masama well fields. Only the dams in the southern part experienced inflows or increase in volumes this week, whereas the dams in the northern region did not have any inflows.

*Latest update, 27<sup>th</sup> -November-15.*

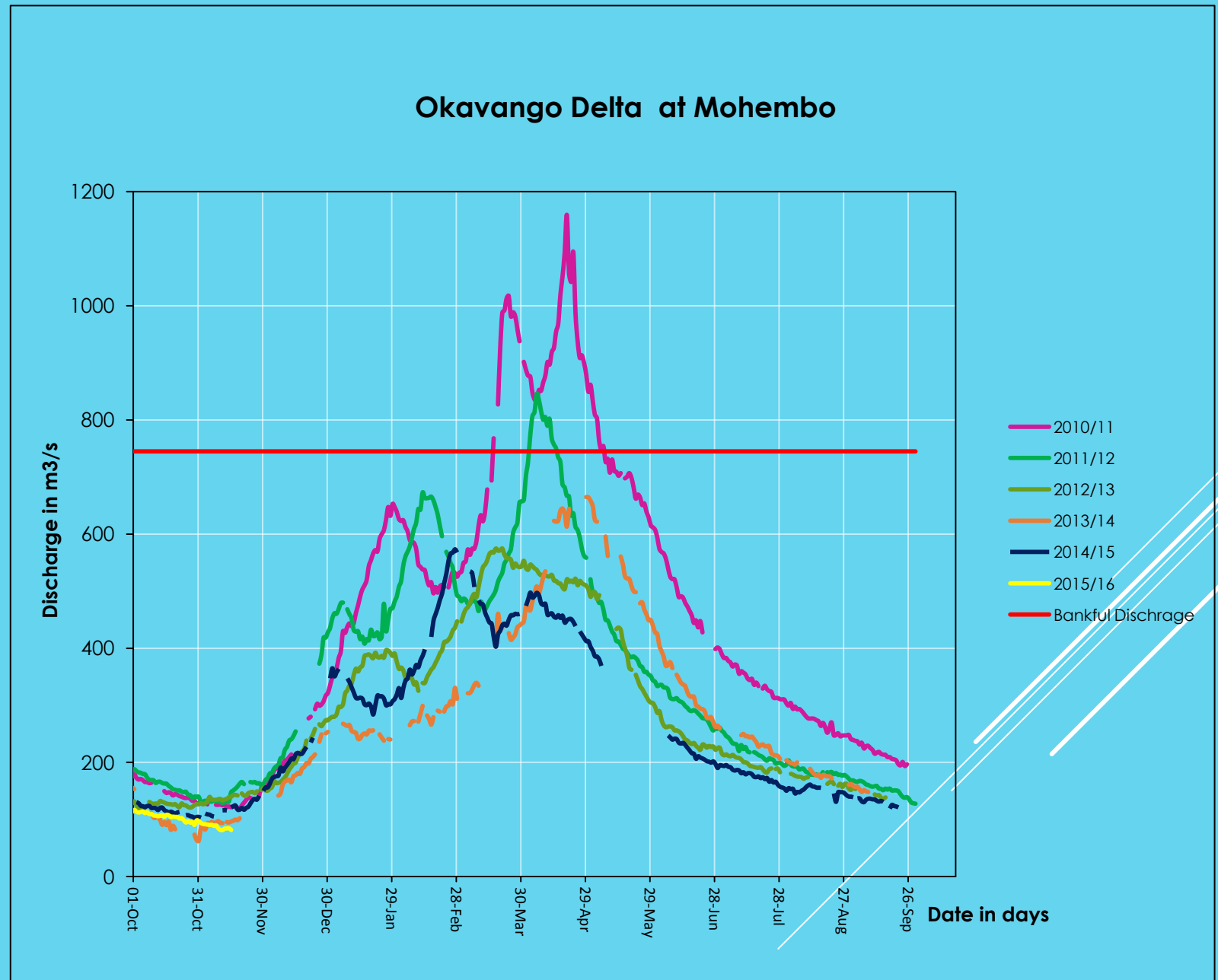
**THE WEEKLY OBSERVATION OF AMOUNT OF WATER IN PERCENTAGES  
IN EACH DAM:  
A COMPARISON OF THE 2014/15 & 2015/16 VOLUMES (%)**



## MAJOR RIVER, Figure 1

The 2015/16 hydrological year has started with the lowest flows as compared to previous years since 2010/11 hydrological year. Looking at the graph and the trend since 2010/11, there has been gradual drop in flows in every successive year which suggests that we may have a drop in flows this hydrological year unless we experience a 5 year return period flood to have something that looks similar to 2010/11 hydrological year. The 2015/16 hydrological year flows continue to drop further even at a point where it is expected to start rising, looking at the flow trends from previous years' flows.

*Latest update, 27<sup>th</sup> November-15.*

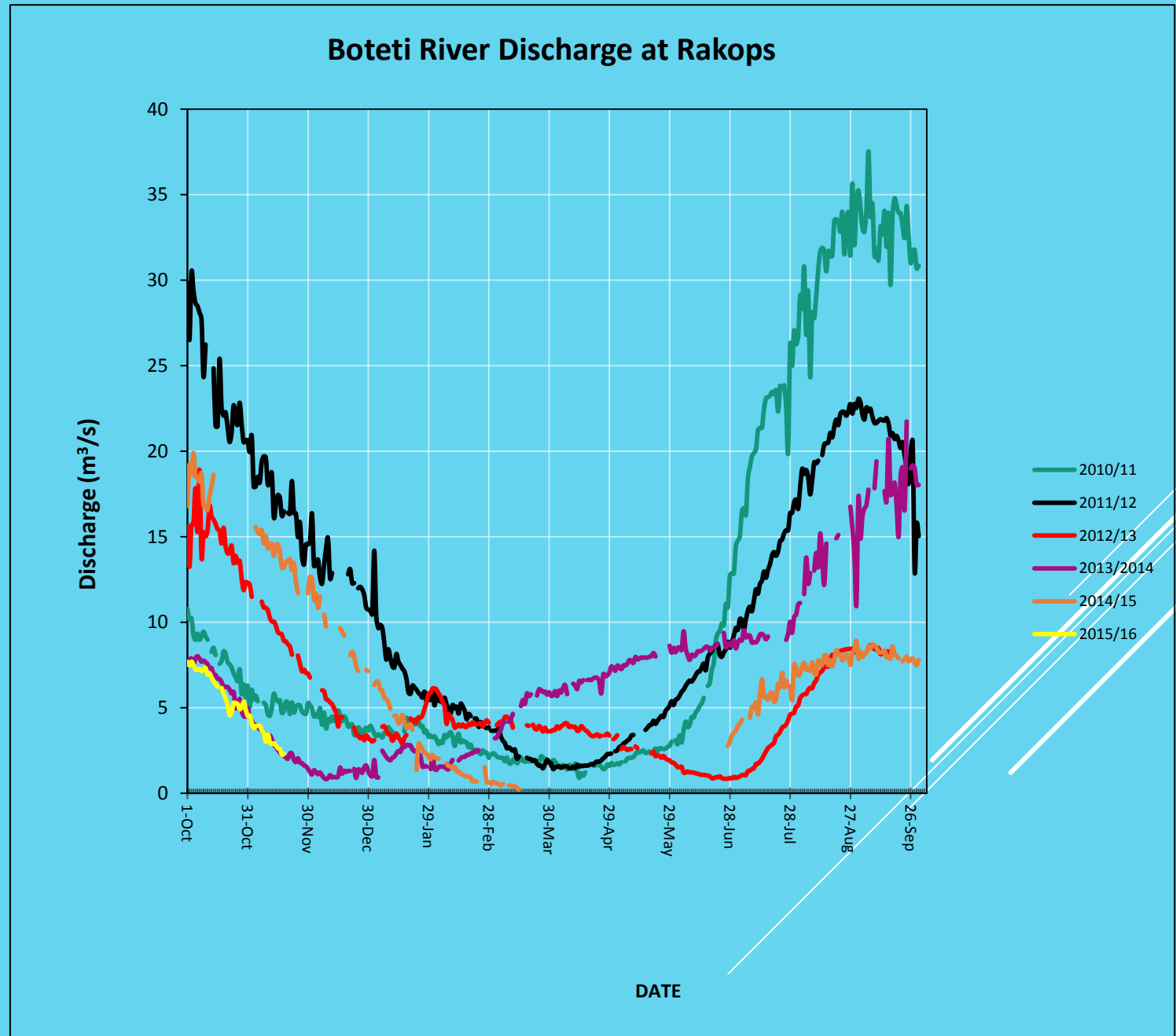




## MAJOR RIVER, Figure 2

The 2015/16 hydrological year has flows slightly similar to that of 2013/14 hydrological year, they are currently the lowest flows experienced in the river ever since 2010/11. The flow is not expected to rise anytime soon as we proceed with the new hydrological year, because looking at the trend from past years, when the hydrological year starts the flows tend to drop until May and eventually start to rise again around April-May. The Boteti river has been experiencing low flows in the just ended hydrological year to an extent that it dried up half way through the hydrological year around March, April to mid May. Unlike other major rivers in the country, the Boteti river has a different pattern of flow which starts to rise in (May-June) when other rivers start to drop.

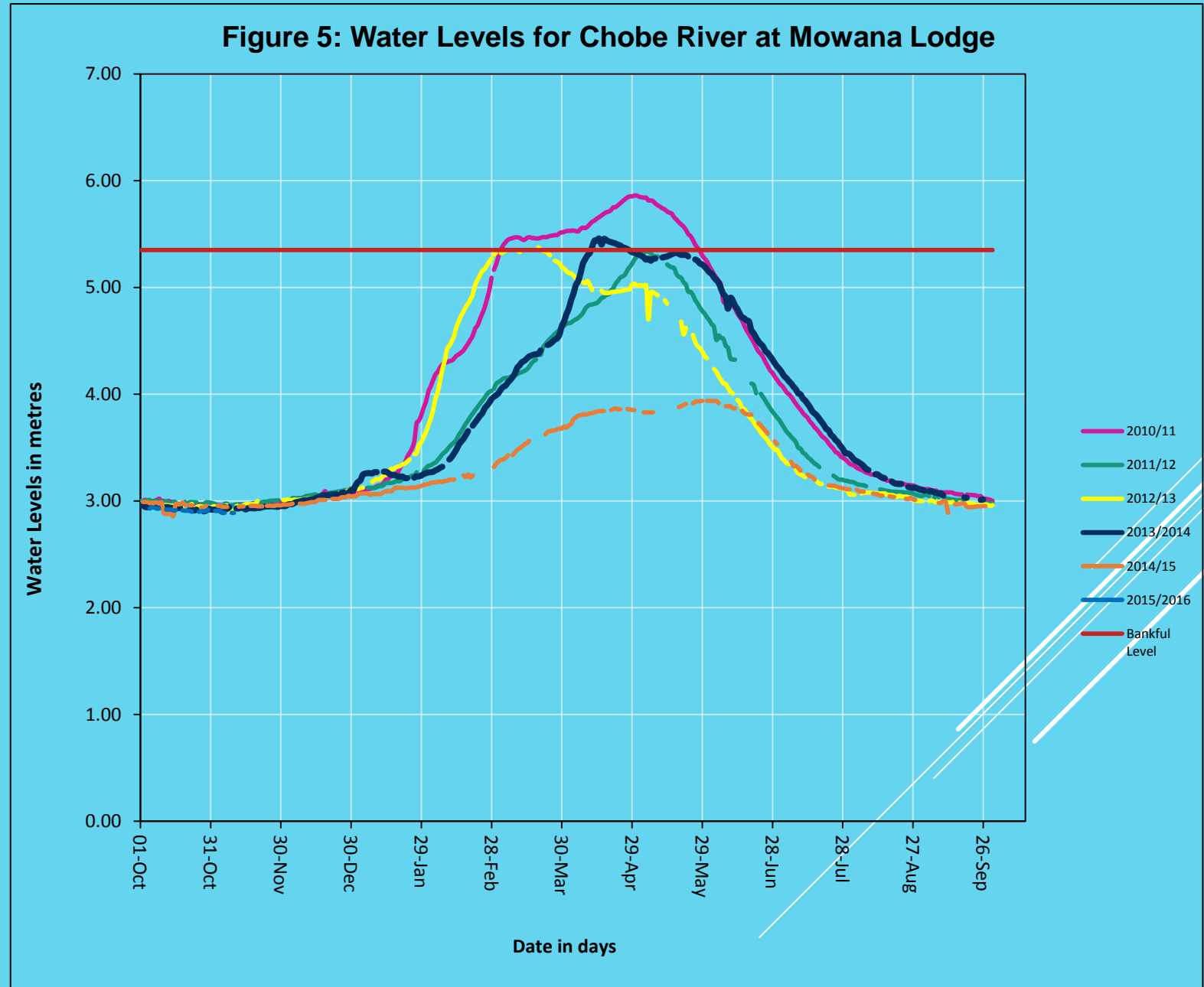
*Latest update, 27<sup>th</sup> November-15.*



### MAJOR RIVER, Figure 3

The 2015/16 hydrological year has started, a normal to just below normal levels are experienced at the moment. The water levels are expected to gradually rise until the end of December, and beyond this point, significant increase in levels are expected until the end of May, and this will be as a result of inflow and rainfall water into Chobe river. The 2014/15 hydrological year had experienced low levels in general as compared to the other past hydrological years, the levels never reached 4m which is way far below the threshold (5.30m) where flood conditions start to develop and become a threat to human life.

*Latest update, 27<sup>th</sup>-November-15.*







**This report was prepared by the  
Department of Water Affairs, Botswana  
(Hydrology Division)**

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**Website: <http://www.water.gov>**

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# CORRUPTION

