

# ***Interactive comment on “Applying SWAT to predict orthophosphate loads and trophic status in four reservoirs in the upper Olifants catchment, South Africa” by J. M. Dabrowski***

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Author Response to Reviewer 2:

Specific Comments:

Page 13638, Line 23: The Arnold et al. 2008 reference has been inserted as recommended by the reviewer.

Page 1368, Line 26: The Gassman et al., 2007 reference has been included.

Page 13641, Line 2-3: Given the large area of the catchment it was not possible to get

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detailed information of fertilizer application rates. There is also no central repository or database where this type of information can be retrieved. We therefore used the FAO data to estimate fertilizer application rates. It is important to note that the FAO data is not a recommended application rate, but is rather an estimate of actual fertilizer use based on a national survey of crops produced in the country.

Page 13641, Line 23-25: A reference for this data source has been included (DWA, 2011b)

Page 13646, Line 24-28: The map has been revised to indicate mean annual OP loads generated per sub-catchment (as opposed to accumulated loads from upstream to downstream). This has the effect of clearly identifying which sub-catchments are responsible for generating high OP loads.

Page 13647, Line 25: The reference for the source of this data has now been included in the Methodology under the 'Model Application' section. Measured data was obtained from Department of Water Affairs monitoring data.

Page 13649, Line 3-4: This sentence has been updated to improve clarity: "STWs in the catchment area of the Bronkhorstspruit reservoir are therefore responsible for significant loading of OP in this reservoir."

Page 13649, Line 6-21: Reference to this figure has now been included in the text.

Table 2: This asterisk has been removed.

Technical Corrections:

All technical corrections have been made according to the recommendations of the reviewer.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 13635, 2013.

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