

# Methods for design flood estimation in South Africa

**JC Smithers\***

*School of Engineering, University of KwaZulu-Natal, South Africa*

## **Abstract**

The estimation of design floods is necessary for the design of hydraulic structures and to quantify the risk of failure of the structures. Most of the methods used for design flood estimation in South Africa were developed in the late 1960s and early 1970s and are in need of updating with more than 40 years of additional data currently available and with new approaches used internationally. This paper reviews methods used for design flood estimation in South Africa and internationally and highlights research needs in order to update the methods used for design flood estimation in South Africa.

**Keywords:** Design flood estimation, South Africa, research needs