

Effects of the 2360 BP palaeoflood in the Yellow River on the design flood of the Xiaolangdi Project

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Abstract Based on the widely used P-III distribution in design flood evaluation and the Monte-Carlo method, two kinds of incomplete discharge series at the Xiaolangdi Project on the Yellow River, with and without the 2360 BP palaeoflood, are calculated with the random error considered. The results show that with the palaeoflood sampling error is much less than without. That means, for important water resources projects, palaeoflood data should be employed as far as possible, if they exist, in order to strengthen the reliability of the design flood.

Key words flood design; Monte-Carlo method; palaeoflood; random error; the Xiaolangdi Project
