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渭河渭南段高漫滩沉积记录的洪水研究 [点此下载全文](#)

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摘要:

本文根据渭河渭南段两个典型高漫滩沉积剖面中和2005年洪水沉积中376个样品的粒度分析,并结合历史文献资料研究了高漫滩沉积层代表的洪水变化。结果表明,渭河高漫滩洪水沉积以粉砂和极细砂为主,分层明显,分辨率高,能够指示洪水频次、洪水位高度和洪水动力。两个剖面厚度为约5.3m,均可分为19个层位,指示至少发生了19次较大规模的洪水。粒度分析确定的19个洪水阶段与历史文献记录的大洪水阶段基本一致。粒度参数Md、Mz、 σ 、Sk、Kg在剖面各层差异明显,也指示了各阶段洪水的差异。其中WN1剖面中第15、14、10、3、12、4、13、6、8、2阶段洪水发生时高漫滩上的洪水深度大于2005年渭南渭河高漫滩上1.6m的洪水深度,当时河床之上的洪水深度大于8.1m,其余洪水阶段发生时河床之上的洪水深度接近或略小于8.1m,是当时发生了大洪水或中等规模洪水的显示。根据渭河流域近代大洪水发生年的降水条件确定,WN1、WN2剖面多数阶段洪水的发生是当年降水量的显著增加造成的。

关键词: [渭河洪水](#) [河漫滩沉积](#) [粒度成分](#) [陕西渭南](#)

A Study on Great Floods Recorded by Sediments on the High Alluvial Flat of Weihe River in Weinan, Shaanxi [Download Fulltext](#)

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Abstract:

Based on the granularity analyses of 376 samples from two typical profiles on high alluvial flat and 2005's flood sediment of the Weihe River in Weinan, Shaanxi, combining historical literature information, the flood recorded on sediment layers of high alluvial flat were researched. The results indicate that flood sediment on high alluvial flat of the Weihe River is mainly silt and very fine sand, stratified obviously and differentiated clearly, which can indicate the flood frequency, the flood level and the flood power. The two profiles, with the depth of about 5.3 m, are divided into 19 layers, which indicates that there were 19 floods of larger scale at least. The 19 floods determined by granularity analyses are basically consistent with that recorded on historical literatures. The granularity parameters such as Md, Mz, σ , Sk, Kg differentiate obviously, which indicates the differences of each flood. The flood depth on the high alluvial flat is higher than 1.6m of 2005, when the 15th, 14th, 10th, 3rd, 12th, 4th, 13th, 6th, 8th, 2nd flood occurred. The depth of these floods above the riverbed are larger than 8.1m, and others are near to or less than 8.1m, which indicates there occurred large or medium scale floods at that time. Based on the yearly precipitation when the modern flood occurred in the Weihe valley, it is determined that the most floods of WN1 and WN2 profiles are caused by the obvious increase of precipitation at that time.

Keywords: [Flood of Weihe River](#) [Sediment on alluvial flat](#) [Grain size composition](#) [Weinan in Shaanxi](#)

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