

2022 Hydrologic Frequency Analysis Homework-1

1. Annual maximum hourly flow of the Xinshi station (Yansui River) is given in the EXCEL file Xin_Shi_Annual Max Flow.csv.
 - (1). Test the trend existence using the Mann-Kendall test, Kendall tau test, and Spearman rank correlation test.
 - (2). Conduct the Mann-Whitney-Pettitt (MWP) test for change detection.

2. Instantaneous daily peak flows at the DLK station (Houlong River) are given in the DLK_Qp.rds file. Use the data to determine flood flows of 25, 50, and 100-year return periods.