

Interactive comment on “Development of streamflow drought severity- and magnitude-duration-frequency curves using the threshold level method” by J. H. Sung et al.

Anonymous Referee #2

Received and published: 23 January 2014

General comments:

The paper developed streamflow drought severity- and magnitude-duration-frequency curves using four threshold level methods, for The Seomjin River basin which is located in southwestern Korea. Globally, the paper is well written and structured. However, in my opinion, in terms of water supply and water use, the concept of daily drought is embarrassing. The daily deficit concept is better than daily drought. In addition, the results confirm this point of view ““That is, the drought identification techniques based on real precipitation and natural streamflows did not reflect the drought concept in terms of water supply and water use””.

C7379

Specific comments:

A relevant article “A review of Twentieth Century Drought indices Used in the United States” of Richard R. Heim Jr. (2002) should be cited in this paper. Many concepts and definitions are given and clarified. P14682 §25: Could you define the drought’s threshold of “River Survey Report (K-water, 1992)”. Table 3: “drought order” refers to which characteristic: duration, magnitude and severity? Or is it another characteristic? If we consider the duration, 102 days has the order 146 and not 50. If we consider severity 148 052 571 has the order 146 and not 50. In consequence, you should explain your ordering.

Technical corrections

P14684 §5: from 28 September to 7 January 1989, instead of October. Table 2&3: you should add units in some columns Figures 8 & 9 are not cited in the text. It seems that a table is missing : table “6” about severity

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 14675, 2013.

C7380