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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Complex networks, streamflow, and hydrometric monitoring system design" *by* M. Halverson and S. Fleming

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Overall it is a well written article on complex network applications for streamflow gages located in the Coast Mountains of British Columbia and Yukon, Canada. I believe this article will be a good contribution in advancing hydrometric network design for surface water monitoring. The manuscript can be accepted after minor revision.

1. The motivation for the study needs to be improved. I will encourage authors to discuss very briefly on streamflow network design and how complex network analysis will supplement the existing network design. Reference: Developments in hydrometric network design: A review

There are several papers published on Canadian streamflow gages using information

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theory approach to classify the gages in to different groups based on their mutual information. These articles will compliment the current literature review.

For examples, Hydrometric network evaluation for Canadian watersheds

Variability in Canadian Seasonal Streamflow Information and its Implication for Hydrometric Network Design

2. Author's did not considered whole watershed/river basin in their study. I believe the downstream gage information are influenced by the variation in upstream streamflow behavior. Is there any reason to consider part of the river basin?

3. What advantages will CN analysis provides in comparison to the existing clustering methods or entropy based methods in classifying the gages in to different groups.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 13663, 2014.