

Intro

In this research paper, I will be describing how to measure "human disturbance" in regard to streamflow variability, the validity of the "human disturbance" index, and current cases of variability having an affect in the Southwest region of the United States. The "human disturbance" index is measurement tool used by the United States Environmental Protection Agency (USEPA) to measure the amount of disturbance present in watershed regions across the nation (Falcone, Carlisle, & Weber, 2010). The reason for needing the index is to use this measurement, along with other variables, to track the behavior of these hydrological systems. Changes in hydrological systems in the Continental United States (CONUS) have caused some negative outcomes where one being an increase in floods in some regions (Rice, Emanuel, & Vose, 2016). A regional example of a negative outcome from increased streamflow variability is the increasing size of floods in California (Tucker, 2020). The scale of variability is still being studied since previous methods used datasets that contained redundancies, which decreased accuracy but Falcone et al. (2010) described the best approach. There is a relationship between streamflow variability and both water resource availability and management (Rice et al., 2016). For the studies in relation to hydrological systems, understanding the previously mentioned relationship, it is crucial to measure human activity and the impact of the side effects from such activity in order to positively manage water resources here in the CONUS.

Data Analysis

Relevance

Results

Conclusion

References

- Falcone, J., Carlisle, D., & Weber, L. (2010). Quantifying human disturbance in watersheds: Variable selection and performance of a GIS-based disturbance index for predicting the biological condition of perennial streams. *Ecological Indicators*, 10(2), 264–273.
- Rice, J., Emanuel, R., & Vose, J. (2016). The influence of watershed characteristics on spatial patterns of trends in annual scale streamflow variability in the continental u.s. *Journal of Hydrology*, 540, 250–860.
- Tucker, D. (2020, January 27). More rain and less snow means increased flood risk, stanford study reveals. Retrieved May 20, 2020, from <https://news.stanford.edu/2020/01/27/rain-less-snow-increases-flooding/>