Research Paper Outline

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1 Intro

1.1 Thesis

Thesis: $(1/4) - (1/3)$ of paper The purpose of my research is to prove that humans' activities contribute to streamflow change and to quantify how human much contribute (i.e. man-made water structure, agriculture, and other yet to be stated).

1.2 Support

1. Describe the "human disturbance" index from Falcone 2016 and it's accuracy is dependent on GIS tricky implementation:
   (a) GIS implementation
   (b) The six variables from the reduced variable index: HUDEN, ROADDEN, PESTIC, URBCP_MAINS, DIST_CANAL_NEAR and DAMSTOR.
   (c) resulting accuracy of previously indexed watershed classification from USEPA (pg. 269)
2. Implementation of the "human disturbance" index from Falcone 2016 in the Rice 2016 study
   (a) State 70 annual scale streamflow dataset (1940 - 2009) and show the correlation amongst the eco-regions with figure 1
   (b) State the two variables that were considered important in hinting at a conclusive answer P_{mean} & DI_{mean}
   (c) Describe the decline in variability in mountainous regions and how atmospheric scale variables hint as being potential drivers.
3. Talk about the anthropogenic changes from Diffenbaugh 2017 article which describes the mega drought in California and include self-discovered data to model these changes.

2 Data Analysis: About 3 visuals

1. California Droughts
2. River construction/alterations
3. Something else

3 Lit. review: Maturity of topic

1. Describe about how relativity new this subject is because of how dependent this index relies on GIS resolution

4 Results: Goals? Findings?

1. Mention that there seems to be a relationship between variables from Falcone 2016 "human distrubance" index and increased streamflow variability from Rice 2016

5 Conclusion: (1/4) of paper. Summarize Conclusion

1. The "human disturbance" index from Rice is a viable deductive approach to quantitatively measuring human disturbance.
2. There is a relationship between climatology and "human disturbance" index how they affect streamflow variability
3. California constant threat of having droughts is reminder of streamflow's variability effect.

6 References

7 Notes

1. Thesis: Focus metrics from USGS on validity and strength of index
2. Data Analysis: (I) Do one self-reported data visual (ensure context on data)
3. Data sources: 2 broad, consumable sources (i.e. Sociology or need for observing streamflow variability)