

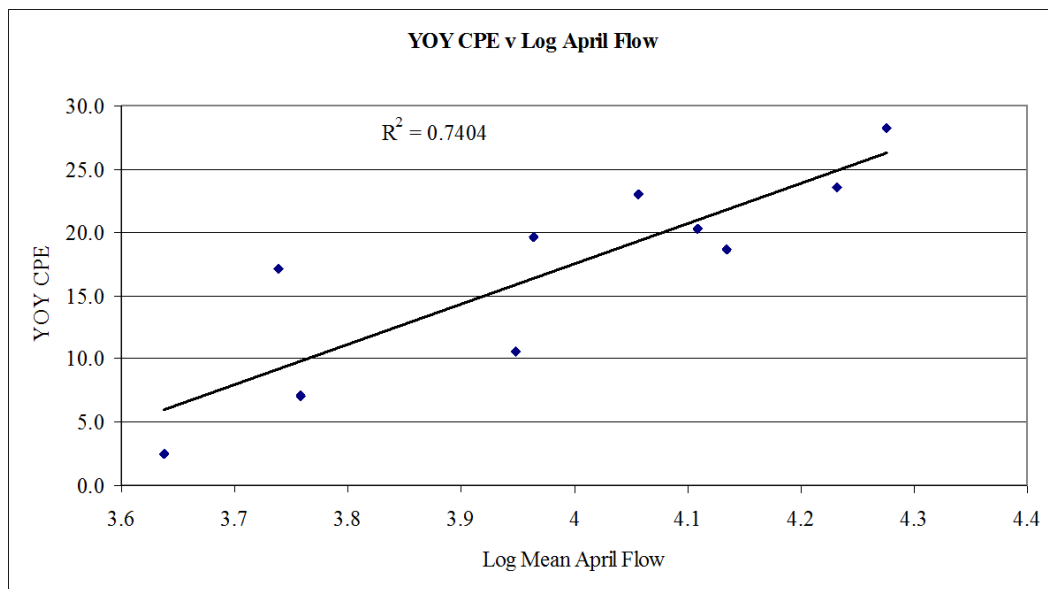
Call For Flow-ecology/Flow Alteration Relationship Data

The Southern Instream Flow Network (SIFN), a program of SARP, is teaming with John Kaufman, retired biologist from Va. Dept. of Game and Inland Fisheries, Don Orth and Ryan McManamay of Virginia Tech to conduct a literature review to establish the relationship between biological, biochemical, morphological and functional response to flow alteration. We are searching the published literature, but what is extremely valuable is the great information (gray literature) that has been unpublished, but exists in your files and memories. **This is where you can play a valuable role.** The information desired follows three types of formats: species responses to flow, ecological guild responses to flows and finally changes in species or communities as a result of changing flow releases. We plan to use it in the ecological limits of hydrologic alteration process (Eloha). **Data is needed by September 1, 2011.** Funding for this project is provided by the South Atlantic LCC. If you have files or data to share please contact Ryan McManamay at Rmcmamay@vt.edu, 540-808-8695. If you are unsure of the data's usefulness send it to Ryan and we can decide if it can be incorporated into our final document. Please forward this request to others that may be able to assist. Thank you!

Click [here](#) for more detailed information about the request for flow-ecology, flow alteration relationship data.

Detailed descriptions of flow-ecology/flow alteration relationship data follow:

Species responses to flows are probably the most commonly available data. Below is a relationship developed by Bob Greenlee in Virginia documenting the largemouth bass young of the year summer catch rate as determined by spring flows during spawning. This is in a tidal system and you can see that very wet springs are extremely important to largemouth bass reproductive success.



Similar flow –reproductive success curves have been developed for other species such as smallmouth bass and American shad. From curves such as these operating rules are frequently developed as they influence select components of the ecosystem.

Ecological guild response curves are less frequent, but are best illustrated by Dr. Mary Freeman’s study of water withdrawals and their influence on fluvial specialists.

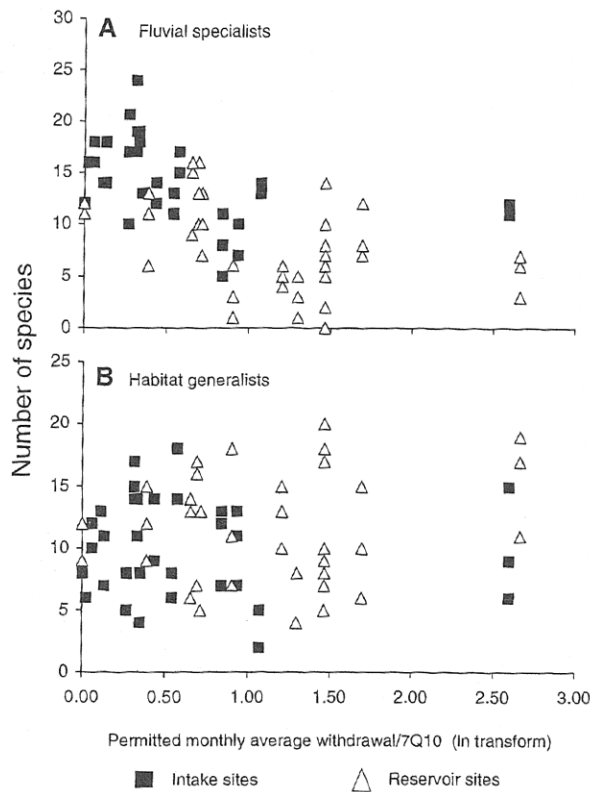


Figure 5. Richness estimates for fluvial specialist (A) and habitat generalist (B) fishes plotted in relation to withdrawal index at intake and reservoir sites, data for all years.

Project rule changes are the final category. Since many impoundment projects were first developed the downstream release rules have changed. If you have data about species or community changes that have resulted from hopefully improved flow releases please share that with us. If flows improved, but no response was observed that is equally useful.