Creel analysis discussion – September 16, 2022

Attendees: Thomas, Dan, Evan, Kale, and Tyler Garber

Topics

1. Data import & wrangling

* Needs/Suggestions
* Need to align BSS & PE .Rmds
* Thomas brought up desired to functionalize wrangling (currently have to transfer every incremental change to all subsequent files)
* Kale suggested merging the two (currently) independent creel analysis repos (if the majority of the data wrangling is the same between the two analyses)
* Currently still using the three fishery specific LUTs “framework” to generate estimates with the PE analysis
* Questions:
* Combine (or keep separate) BSS and PE repos (if combined – which profile do we use: wdfw-fp or Thomas’)
* Approach for converting current .Rmd to one that is functionalize
* Approach for adapting “user calls” (that rely on three fishery specific LUTs) to (new) fishery field and creating a master closure LUT
* Remote (AWS) analysis currently not working – how to fix this problem?
* Need output summaries added back to both analysis (but will require different scripts/functions for the two creel analyses).
* Next steps
* Need to get Danny Warren to add fishery to the “catch” data.wa.gov creel view to be able to fully incorporate “fishery” input (KALE; TODAY)
* Incorporate “fishery” call into .Rmd for PE and master Closure file (DAN; MAYBE NEXT THURSDAY, Aug. 22nd)
  + - Be cognizant of user inputs (e.g., merging sections beyond how they are defined in database)
    - Are there any issues we need to work through with having a single closures file that everyone uses (e.g., do we anticipate merge conflicts with .csv files)?
    - Aside - need to have process for updating fishery LUTs.
* Cross-walk BSS and PE repos with goal of merging wrangling code down to analysis (KALE & EVAN; start next week, Aug. 20th & 21st)
  + - At the end of the meeting, Evan mentioned that the data wrangling code for the BSS isn’t correct;
    - Need to sit down and run through code (line by line, chunk by chunk) to compare with PE wrangling code
* Create branch on existing PE repo, redo file structure, and functionalize script (NOT SURE WHO YET; DAN? TIMELINE FOR THIS??)
  + - Create a function that fetches data from data.wa.gov (would work for both BSS and PE analysis)
    - Create a function that wrangles the data for BSS and PE to feed into “analysis”
    - Temporary solution – create “functions” folder that is loaded/sources at beginning of .Rmd (longer term: turn repo into formalized package)
* Still unclear to me how/when we are going to fold in BSS with PE repo and have a single “CreelAnalysis” repo for both analysis.
  + - Thomas has concerns of placing BSS creel repo (and the merger of the BSS and BS repos) inside “wdfw-fp” due to chain-of-command and lack of admin privileges
    - Need to figure out admin roles with “wdfw-fp” account to address Thomas’ concerns
    - Dan is going to facilitate an initial meeting to address concerns (but near the end of meeting Thomas said this wasn’t a near term priority).
    - So not sure what the short term plan – maintain two repos or merge into one. If the later option, what is this going to look like?

1. Dan’s draft email (“Do you have time to review a note to Jim?”) on the topic of applying these new creel monitoring “systems” to decisions especially when data are limited (early season)
   * Questions
     1. Deciding what the “science is” – currently roles are unclear
        1. Right now, we are generating three estimates (BSS, PE – duration, PE – weekly); which one to use in-season should be a Science decision; how we use those estimates (shut down the fishery or not) should be a policy decision
        2. Before season, Jim and Mark agreed that Science Leads (Kale, Thomas) would make the call
     2. When do you shut down a fishery (see above about roles)?
        1. *lots of data, good estimates* - easy to make decision based on estimates, total quote, and remaining days of the fishery
        2. *little data, high uncertainly* – more difficult and will be often the case with non-target species that have low overall case (and thus observations in the creel) AND will limit fisheries staying open
     3. Need to develop a more formalized SOP
        1. For instance, incorporating (exceedance) probabilities of exceeding a specific quota (better communicating/understand how we can balance risks; e.g., 5% chance we’ve gone over quote but 80% chance we’ve only used 20% of the quota)
2. Analysis quirks
   * Being able to use a single index site in multiple sections (existing GitHub issue that will need to be addressed soonish)
3. Evaluation of models with simulated data
   * Thomas said (loud and clear) he is going to (finally) do this after next week’s commission
   * He said if didn’t he would pay each of us **$500** (each week he doesn’t have this complete)