Coordinated Assessments Partnership
Fish and Habitat Data Exchange

June 23, 2021

PNAMP FMWG Data Display Task Team Meeting Summary

Resources

Find FMWG Data Display Task Team Materials:

Learn more about the Data Display Task at: *Population Display and Data Availability overview.doc*

FMWG Data Display Task Team Wiki: *Microsoft teams link*

CA Data Query: https://cax.streamnet.org/

Contact FMWG Data Display Task Team Task Leader: Tom Iverson (t.k.iverson@comcast.net)

Objective: Develop draft recommendations for improving data consumers' understanding of data availability and access in the CAP Fish HLI Map Query Tool to be considered by StreamNet Steering Committee and Executive Committee.

See Meeting slides here

Meeting Summary

Draft recommendations based on outcomes from Workshop 1 were sent out prior to the meeting for review. Tom Iverson (Task Lead) went through the draft recommendations to further discuss them and identify potential issues or conflicts. Following the review of recommendations, Greg W. demonstrated an improved beta CAP Fish HLI Tabular Query Tool that incorporates many of the draft recommendations. See notes below.

DRAFT RECOMMENDATIONS

1. **Populations without data**
   a. **For populations without data, either add a pop-up window or a message next to the population name or over its polygon that states A) that the population is extirpated so there is no data, B) that no monitoring currently exists for the population, or C) monitoring exists but the data are not available in the CAX database, contact *agency/tribe name* for more information**
   b. **In the initial query, add a filter check box to exclude populations that do not contain data**

Notes:

- *SN should track information about the availability of data for populations without HLI/metric data in the CAP Fish HLI in a manner that does not require modifying the existing CA DES. It makes sense not to modify the DES since the text in the pop up about why no HLI in the CAX (no data, data elsewhere, etc) would be less dynamic.*
- *Need to clarify the process to obtain the content for the status of the populations with no data in the CAP Fish HLI, such as PSMFC coordinates with the data providers to populate/update the content.*
- *For recommendation 1b, check box provided for user to choose to display populations that do not contain data – change from original recommendation.*

2. **Superpopulations**
    a. **In the initial query, allow the user to select population, superpopulation, or subpopulation data display**
    b. **If a superpopulation is displayed, include a list of populations included in that superpopulation; map the superpopulation polygon with the population polygons included**
    c. **If a population is displayed, include a reference and link to its superpopulation(s) and subpopulation(s) so the user is aware that data are available for that species/run at other scales.**

Notes:

- *There is a difference between what is currently referred to as superpopulations (where monitoring and analysis occurs at a scale larger than a population, i.e., FPC SAR stocks, management units/stocks, etc.) and other groupings (where data are organized or analyzed by grouping populations, i.e., MAFAC stocks, etc.). Considering that different groupings exist for different purposes, should we clarify the term used to convey these groupings?*
- *Could add more categories to sort by purpose of the population groupings: FPC groupings, genetic based groupings, etc. before displaying the data, may help avoid overlap of the polygons on the map.*
- *Could select an indicator instead as a way to split the superpopulations. Then allow selecting different superpop groupings or some other option to help reduce overlap of polygons.*
- *DES currently only captures the ID pop/super pop number, so if we want to create more refined groupings of the superpop to filter by the DES would need to be modified.*
- *Lots of overlap among the "multiple/superpop" polygons in our current system so displaying these on the map at the same time would be a mess. Group agreed that you probably wouldn't show more than one superpop on a map at a time, leaving the map blank until a superpop is selected.*
- *Superpop concept is currently based on monitoring reporting unit such as FPC groupings, or multiple pop monitored at a weir/dam, need to adjust the superpop concept to address the new demands of NPCC with MAFAC groupings.*
- *Groupings would need to be split apart first perhaps by ESU/ MPG stratum then you get the groupings. The groupings of populations would need to be defined and added into the DES if we want more than the current superpops based on reporting unit and the MAFAC groupings.*
- *The superpopulation level polygon should be treated as one object, so even if the pop polygon outlines are displayed within the superpop polygon, pop outlines do not make the pop polygon individually clickable. We don't want to have the user think that any population scale data are rolled up to inform the superpopulation estimates.*

3. **Subpopulation HLIs**
    a. **Include subpopulations when displaying populations, but clearly articulate the geographic scale of the subpopulation; add a subpopulation label and description**
    b. **When displaying subpopulation data, include the river reach data in the population polygon or hatch the population polygon to indicate subpopulation scale data are included**

Notes:

- *There are several populations in Oregon where some years they have whole population estimates and some years they have partial population estimates, depending on how the sampling was conducted that year (funding, weather, staff, etc.). How would this be handled on*

the map if data consists of 20 years whole versus 1 year partial? How do you display that combination on the map?

- *Would need an ID to help group the estimates that belong together. So can tell which 'partial' estimates contribute to a long time series. This issue is being discussed by Mike, Kasey and Jake and they will develop recommendations to SN for resolving this problem.*
- *For populations that are simple, where a population always has a partial estimate then easy to display as a hatch polygon; if always a whole estimate then easy to display; but when the scale of estimate is variable then perhaps can't easily be displayed on the map or need a different hatch/color for this situation.*
- *QC of methods column, method 1 or method 2, is not consistently used across the agencies/tribes so that may not be a good way to identify estimates that go together for a given population.*
- *Yes, sort separately on the left side data list the Partial and Whole population HLIs.*
- *For the map, explore how to display the polygons:*
    - *High level summary map displaying the population polygons just show blue or gray polygons to indicate whether there is some data or no data.*
    - *Once click the HLI and view the data rows then explore having polygon hatching to indicate if the scale of the data represents sub/partial or whole population estimates etc.*
    - *The idea of having unique subpopulation polygons being mapped would require more GIS work within the data providers and PSMFC so not an easy ask (maybe the comment box textual description of the portion of the population represented by the subpopulation is more realistic). If the group wants this level of detail need to change the DES and get agreement of all providers that they can invest the time.*
    - *An alternative to the custom polygons for sub populations is that we could leverage the approach used in the Fish Monitoring Data (SN Trends) to capture river reach segments for the Subpopulations and display that new information instead. But again, this is a new ask so would need to be developed and agreed upon by the data providers.*

4. **Other suggestions**
    a. **If multiple indicators are present for the same population, subpopulation or superpopulation, identify the best available data or best value**
    b. **Improve quality control for "whole populations"; so data are consistent across agencies/tribes**
    c. **Update term "Non-TRT" in population names to "Not ESA Listed"(?)**
    d. **Fix polygon shading and back button issues**
    e. **Provide a filter for HLIs following the species/run and population scale check boxes**

Notes:

- *Suggest delete the best estimate issue since that is decided by the managers.*
- *Suggest the 'whole' popfit issue of not being applied consistently be deferred to the SN CAP QC task through a different venue.*
- *The 'Non-TRT' issue; we can delete this part of the name. The DES was refined to address this in the past where now we have the ESA column populated when applicable and leave blank when the pop is non-ESA. So, we can delete the Non-TRT portion from the name. This approach can also apply for hatchery pop since we have specific NOAA-ESA listed hatchery. So, the decision is yes recommend removing the Non TRT from the name.*
- *Back button etc issue: can drop as a recommendation.*

- *HLI filter etc issue: may be address in the draft tabular query.*

Draft CAP Fish HLI Tabular Query Demo – Greg Wilke

- *Send input to Greg to inform the new tabular query*
- *Add a filter for population grouping such as MAFAC or other grouping that users would want to view as a group, i.e. has a tailored demand*
- *Good that the population name filter allows multiple selections by clicking*
- *Can the population name filter allow you to type to search instead of scrolling? Currently typing scrolls to first letter but this can be improved*
- *Possible to add the PopID to the tabular like the Trend ID in the other query? This would be helpful for the SN users ---- Greg will support searching by pop ID within the population name filter text box but will not show the pop IDs*
- *Greg is considering all suggested improvements and incorporating them as feasible*

DRAFT REVISED RECOMMENDATIONS BASED ON JUNE MEETING

1. Populations without data
   a. For populations without data, either add a pop-up window or a message next to the population name or over its polygon that conveys the status of data availability for that population such as A) that the population is extirpated so there are no data, B) that no monitoring currently exists for the population, C) monitoring exists but these data are not available in the CAX database and provide information about where these data can be accessed, or D) status of data availability unknown.
   b. In the CAP Fish HLI map query, default to showing populations with data. Provide a check box for the user to choose to have the populations with no data visible in the list of populations.
   c. PSMFC StreamNet staff should work with the data providers to determine what information to provide in the pop-up windows for populations that have no data in the CAP Fish HLI map query, i.e., see 1a above.
   d. The fairly static nature of the pop-up box information does not require incorporating these fields into the DES.
2. Superpopulations
   a. Separate out the HLI estimates for 'superpopulations' or other groupings from the population/subpopulation estimates by having the user select this option in the map query. Further work is needed to clarify the various groupings that are larger than an individual population so that the user clearly understands what these estimates represent. The different groupings should be separated out by their different purposes (e.g. a 'superpopulation' represents fish from multiple populations that are monitored as one group; whereas the groupings created by MAFAC represent summation of multiple HLI estimates. PSMFC StreamNet staff needs to explore how best to convey the different grouping purposes currently included in the CAX and consider additional improvements to handle future groupings identified by the data providers.
   b. If a superpopulation HLI estimate is displayed, or if HLIs for another type of grouping are displayed, include a list of populations included in that superpopulation; map the superpopulation polygon with the population polygons (wholly or partially) included, but do not make the population polygons interactive/clickable.
   c. For the existing superpopulation names, include these (as a reference or hyperlink) when viewing the population scale data so the user is aware that data are available for that species/run at other scales.

3. Subpopulation HLIs data
    a. Include as part of the population-scale view/select option and not as a separate view/selection option. For any population that has both population scale and subpopulation scale, sort so that the population scale estimates appear first in the list. For the subpopulations clearly articulate the geographic scale represented by the partial subset of the population in a textual manner; and add a label to indicate these are at the subpopulation, a partial subset of a population scale.
    b. As funding and data availability allows, when clicking on a partial population data row display the river reach data in the population polygon or hatch the population polygon to indicate subpopulation scale data are included.
4. Other suggestions
    a. Remove term "Non-TRT" in population names.
    b. Provide a filter for HLIs following the species/run and population scale check boxes for the tabular query
    c. Sort features by items other than alphabetical reach names. (HLIs available or not)

Next Steps

June 24: Meeting notes will be distributed with draft revised Recommendations, comments due back to Tom Iverson by July 2.

July 15: Nancy will update FMWG Core Team and CAP Core Team on progress.

July 21: Task group participants final approval/input on revised recommendations due

August 6, 2021: Nancy will provide the task group recommendations, along with any alternatives, to PSMFC StreamNet staff for review by steering committee and executive committee members.

Participants in FMWG Data Display Task Team Meeting June 23, 2021

Name	Organization
Russell Scranton	Bonneville Power Administration
Sheryn Olson	Columbia River Inter-Tribal Fish Commission
Tom Iverson	Natural Resource Consulting
Mari Williams	NOAA Fisheries, PSMFC contractor
Jake Chambers	Oregon Department of Fish & Wildlife
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