Coordinated Assessments Partnership
Fish and Habitat Data Exchange

June 2, 2021

May 27, 2021 Data Display Workgroup

Meeting Summary

Resources

Find Data Display Workgroup Materials:

Learn more about the Data Display Task at: *Population Display and Data Availability overview.doc*
Data Display Workgroup Wiki: *Display of Populations and Superpopulations - Fish HLI (CAX) in Wiki*

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

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

Workshop Summary

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 Workshop slides here

The CAP Fish HLI Tool was initially developed to provide access to "population" scale data from data providers to inform regional needs for all salmon and steelhead populations. Unfortunately, not all populations are monitored and/or have data that can inform HLIs, the scale of data submitted to CAP is not limited to population scale as expected (e.g., multiple or superpopulation AND partial or subpopulations), and the scale of data needed for regional assessments and reporting also differs (e.g., MAFAC/NPCC FW Program groups, FPC SAR groupings, and NOAA MPG/DPS groupings).

CAP Fish HLI Tool needs to adapt to facilitate these specific issues: Data discovery and better understanding of what data exists/doesn't exist when not available through the tool. Access to superpopulation and other groupings and understanding of what these represent (which populations are included in the grouping). And clarify understanding of content displayed, e.g., subpopulation scale data or anything else discovered by the task group.

Definitions:

- HLI refers to high level indicators developed by CAP and displayed in the Fish HLI tool Includes NOSA, RperS, SAR, Juv Out, Presmolt, PNI
- Superpopulation refers to a HLI estimate representing multiple populations (e.g., monitored as a group)
- Subpopulation refers to a HLI estimate represent a partial or portion of a population (e.g., a subset of the population is monitored)
- Population or whole refers to HLI representing the entire population

- Related Data refers to individual data sets (e.g., fish counts over time)

Workshop Results

Meeting attendees were separated into two breakout work groups. The attendees accessed the CAP Fish HLI map query tool on their own computer while the group leader displayed the tool in the MSTeams environment. Participants were asked specific questions to answer using the tool similar to a scavenger hunt. Selected participants shared how they discovered the answer. The group leader used other examples to illustrate aspects that informed the discussion.

1) Understanding of data availability for populations without HLI/Related Trends data:

Currently, the tool includes populations that have no data available, and it is not clear why.
Several suggestions were made for addressing this problem.

- Display the status of monitoring availability: extirpated (no monitoring), no monitoring conducted, monitoring conducted but data not submitted to CAP
- Provide location of data if it exists, name entity that collects data and provide contact information; this could be as simple as stating that "monitoring exists" or "no monitoring exists" --- if monitoring exists, redirect to the organization that has it; this could be provided in a pop-up window
- Do not display the population if no data exists in the CAP tool or add a filter for user to hide populations without data

2) Access to Superpopulation HLI and improvement of what is displayed on the map Display and related polygons

Currently, it is not clear when superpopulation data is provided what other populations are contained in that superpopulation or what the geographic scope of that superpopulation is.
Several suggestions were made for addressing this problem.

- Don't present data for multiple biological scales at the same time. Keep superpopulations, or other large groupings, separate from the population and subpopulation scales
- Provide a menu choice at the top of the tool after choosing species and run for choosing either population, superpopulation, or subpopulation
- Change the labels in the CAP tool to align with the DES terminology (whole, partial, or multiple populations)
- When presenting one scale of data, include a note that explains that data exists at another scale for fish in that population
- Could sort or search for some terms like HLIs or NOSA or threatened so easier to locate the group of content desired
- The 'label' superpopulation is a geographic filter, show on the map all the superpopulations polygons (it was pointed out that this gets very messy due to significant overlap of superpopulations.
- Do SARs belong with the other superpopulations, perhaps handling these separately would reduce the messy display of superpopulation polygons.
- Like the interactive aspect of the map so not willing to sacrifice that function to get fancier image displays on the map.

Understanding of Subpopulation HLI

Currently, while there is an indication of where HLI data is calculated when it represents less than a whole population, it is not clear that the HLI represents a subpopulation.
Several suggestions were made to address this problem.

- Do not mix the biological scale for data being presented in a query so that superpopulations on are included in the same query output as population and subpopulation. Can keep population and subpopulation scale together if the scale of the subpopulation is clearly articulated
- Have a polygon that shows the portion of the population represented, similar to the display of related data [concerns about feasibility of managing subpolygon shapes]
- Could change the population polygon from a solid color to a hatched overlay to indicate that it is not a whole population
- Want to visualize sub-populations on the map (polygons, hatch-mark, stream reach)
- Be more explicit that the data represents a subpopulation by adding a descriptive field
- Organize the partial populations so that they are grouped up together, perhaps after the populations, and add a filter under the indicator tabs level so you can search for subpopulations
- Provide a link or redirection to other geographic scales for data from same location POP > SUPERPOP or SUPERPOP > POP

Anything Else

Additional general comments were capture for improving the CAP HLI Tool.

- If multiple indicators are present for the same population, subpopulation or superpopulation, identify the best available data or best value
- How to deal with superpopulations when polygons overlap among superpopulations (e.g. a polygon appears in two or more superpopulations)
- 'Whole Population' is not being applied consistently so that needs to be addressed as part of the quality control of the data input into the system, e.g., NPT Lostine river
- Update term "Non-TRT" in population names (any suggestions what should be used?)
- Orange polygon shading changes from dark to pale issues when clicking/mousing over non-HLI pops
- Show all population polygons (extirpated, etc), provide a menu filter option to show populations with data
- Back button navigation improvement when navigating populations since currently the browser back button doesn't cause the map to refresh to the previous view
- Show where data are/are not being collected and who/why, indicate no data/never will be available.
- Need to clarify Number of Records reported next to HLIs and Related Data indicators (the gray circle with total number), because these is not equal to the number of years of data
- Should the tool use the same terminology as DES for partial and multiple populations (instead of super- and sub-population)?
- Is it possible to add the monitoring agency/tribe as a drop down selection option? Can we filter by agency/tribe?
- The related data shown are not limited to data used to calculate the HLIs so either limit to data trends used to calculate HLIs or clarify that trends are any other available data and not necessarily used to calculate the HLIs.
- Possible to have a filter to search by HLI category, e.g. NOSA filter?

Meeting Summary

Several issues and recommendations were identified by the Workgroup to address the problems identified at the start of the meeting. The Task Lead and steering group will develop a list of recommendations for the Workgroup to review prior to the next workshop. The Task Lead will provide some mock-ups for how to incorporate the recommendations into the CAP HLI Tool.

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 not data, B) that no monitoring currently exists for the population, or C) monitoring exists but the data is not available in the CA 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
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 is available for that species/run at other scales.
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 is included
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 is 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

Next Steps

June 2: Task lead (Tom) will write up notes and suggested improvements to inform draft recommendations. Email notification sent once this is available in Teams for review.

June 8: Task group participants Input on notes/ suggestions, due in the Teams document
FYI June 10: Task lead (Tom) will update CAP Core Team on task group progress.

June 16: Task lead (Tom) will put updated notes and draft recommendations in Teams. Participants notified by email that these are ready for their review

TBD Week June 21: A second meeting will be held to review draft recommendations and supporting work (Doodle poll will be sent by Meg)

June 30: Task lead (Tom) will put revised recommendations for review / approval

FYI July 15: Task Lead (Tom) 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: Tom provide the task group recommendations, along with any alternatives, to PSMFC StreamNet staff for review by steering committee and executive committee members.

Participants in Data Display Workgroup Workshop 1 May 27, 2021

Name	**Organization**
Russell Scranton	Bonneville Power Administration
Sheryn Olson	Columbia River Inter-Tribal Fish Commission
Evan Brown	Idaho Department of Fish and Game
Tom Iverson	Natural Resource Consulting
Kris Homel	Northwest Power and Conservation Council
Jake Chambers	Oregon Department of Fish & Wildlife
Kasey Bliesner	Oregon Department of Fish & Wildlife
Nadine Craft	Oregon Department of Fish & Wildlife
Greg Wilke	PSMFC/StreamNet
Mike Banach	PSMFC/StreamNet
Nancy Leonard	PSMFC/StreamNet
Doug Threloff	US Fish and Wildlife Service
Jen Bayer	US Geological Survey/PNAMP
Meg Dethloff	US Geological Survey/PNAMP
Ethan Crawford	Washington Department of Fish and Wildlife