Draft ACFHP Science and Data Needs

In Order According to Priority

S&D Need 1 *(formerly 8)***:** *Next Steps for the Species-Habitat Matrix (ongoing)*

Primary: Produce a journal article on the Species-Habitat Matrix, which will lead to peer review of individual species matrices, then release matrices.

Associated: Convene a Science and Data Working Group meeting to address other items with regard to improving and identifying applications for the Species-Habitat Matrix for the needs of the Partnership, for example: incorporating rarity, incorporating vulnerability, incorporating seasonality, tying the results back to the species (ie. which species scored high or very high for a certain habitat), and updating with new information, including information gathered from monitoring ACFHP restoration projects.

Associated: Create a searchable on-line database of the full reference list used to rank habitats, as well as the notes for each species describing the scores given.

> **SDWG NEXT STEPS**
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> J. Kritzer will take the lead in developing the manuscript with co-authors to be identified.

S&D Need 2: *Refine data so that the data can be used to achieve the goals and objectives laid out in the 5-Year Conservation Strategic Plan and to develop time-bound and quantitative conservation objectives in future Plans or revisions to the Strategic Conservation Plan.*

Primary: Gather regional existing spatial and tabular diadromous, estuarine, and coastal fish habitat data from relevant state and federal agencies, non-profits and academic institutions and collate into a seamless database of spatially referenced information in the context of the National effort. Fish habitat data includes: protected areas, human activities, regulatory jurisdictions, conservation actions, p*resence/absence data*, *threats data, and fish presence/absence data*.   Participants involved include: Steering Committee, Science and Data Working Group, contractor, *National Coastal Assessment team*.

Associated: Integrate this spatial data with existing ACFHP science tools (Species-Habitat Matrix, Assessment of Existing Habitat Information)

Associated: Develop a companion fish habitat knowledge management tool to effectively collect expert and stakeholder knowledge and decisions in support of fish habitat conservation activities

Associated: Develop a web-based, easily accessible GoogleEarth or MarineMap-like decision support system that enables managers to use this spatial and tabular data as well as expert knowledge information

> **SDWG NEXT STEPS**
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> AGREED: Starting with the Assessment of Existing Habitat Information, gather regional existing spatial and tabular diadromous, estuarine, and coastal fish habitat, fisheries, and hydrologic data.
>
> For the purpose of:
>
> (1) Refining the objectives and priorities in the Strategic Plan at a regional basis, specifically priority threats
>
> (2) Achieving the actions in the strategic plan

ACTION:

(1) Review the Strategic Plan in April and provide feedback on where data are lacking
(2) Start working with what we have (the Assessment of Existing Habitat Information and the National assessment, focusing on the estuarine component as a priority.
(3) Then add to it by identifying and gathering data from relevant state and federal agencies, non-profits and academic institutions and collate into a database of spatially referenced information in the context of the National effort.
(4) Create new kinds of data, where it is needed.

TASKS:

Identify a subgroup (Moe, Craig, Bob, Caroly) of people who will:

(1) Produce the S&D WG comments on the Final Draft of the Strategic Plan (April)

(2) Identify questions that we need to answer with regard to achieving our stated purposes

(3) Identify questions that we need to answer in the Assessment of Existing Habitat Information and the National assessment

(4) Pull spatial data from the Assessment of Existing Habitat Information and the National assessment in order to answer these questions

(5) Identify new kinds of data where it is needed

S&D Need 3 (formerly 4 and 7): Synthesis and Applications of the Assessment of Existing Habitat Information

Primary: *Further Analyze the Assessment of Existing Habitat Information (AEHI) so that the data is in a form that can be used to refine conservation priorities and to develop time-bound and quantitative conservation objectives in future Plans or revisions to the Strategic Conservation Plan. Then, identify new uses for the Assessment of Existing Habitat Information*

Primary: Entries in the bibliographic and assessment tables are recorded as reported and much of the information captured is text, not numeric data. However, subjective information can be categorized, quantified and analyzed. ACFHP should re-classify threats and actions to meet the needs of its planning process and should further analyze indicator, threats and conservation action to determine the degree of importance. It should develop a scheme for standardizing these values in order to compare at a coastwide level. ACFHP should refer back to the literature or consult with original authors and other experts on caveats and interpretation of results, where feasible.

Associated: ACFHP should explore data sets and portals (in both tabular and GIS form) identified in the bibliography.

Associated: ACFHP should fix the anomalies identified in the GIS base layers provided in the AEHI, review and revise the spatial framework, and explore avenues for making sure it is consistent with the National Assessment frameworks (coastal and inland), and other FHPs, where feasible.

Primary: The spatial bibliography can serve purposes not originally intended, for example as a literature review for planning scientific research in a particular location, or in Ecosystem Based Management (EBM), Integrated Ecosystem Assessments (IEAs), and Marine Spatial Planning (MSP).

Associated: Identify specific application.

S&D Need 4 (formerly 5): Fill in the gaps identified in the Assessment of Existing Habitat Information

Primary: The information on indicators, threats, and actions included in the AEHI is not an exhaustive or a random sample of what is potentially available from the existing literature. Also, the literature search deliberately sought

synoptic regional and national-scale sources, therefore the literature base is not comprehensive. For example, because many are site specific, peer-reviewed scientific articles are underrepresented. ACFHP should expand the bibliographic table with sources missed in the current version, including entries from existing bibliographies, and updated systematic searches of peer-reviewed literature and library holdings.

Associated: The bibliography and assessment database reveals data gaps, for example some regions are well-studied, and others are less so. Additionally, synoptic national or regional assessments have been completed for some parameters (eg. water and sediment quality), but not for other dimensions of fish habitat such as the status of SAV, oyster reef and mussel bed habitats. ACFHP should assist Partners in filling these gaps, through funding opportunities or through coordination.

> **SDWG NEXT STEPS**
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> The synthesis portion of S&D 3 and S&D Need 4 will be addressed by the subgroup created for S&D Need 2.
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> A subgroup (Jake, Jeff and Michele) will address identifying other applications of the Assessment of Existing Information noted in S&D Need 3.

S&D Need 5 *(formerly 6): Keep the Assessment of Existing Habitat Information functional and up-to-date.*

Primary: New relevant information is being continually published, which should be periodically reviewed and entered into the bibliographic and assessment tables, if the AEHI is to be useful as a source of up-to-date assessment information.

Associated: ACFHP should keep track of related efforts and engage with groups such as NFHAP and other regional Fish Habitat Partnerships to extend results and survey user needs, give-and-take feedback, provide value-added, and avoid duplication of efforts.

Associated: Gather feedback from users of the ACFHP database and web tools on the strengths and limitations, and develop a plan to periodically improve the content and function.

Associated: The online web query tools do not provide the original source documents as pdfs, but point the user towards them with a "click here" link where possible. Web links to sources cited can become broken, generating "file not found" errors when running the web query tools, thus web links to documents must be checked and fixed as needed.

Associated: Revisit and revise specific anomalies in the Bibliographic and Assessment tables, such as cases where multiple habitat threats or conservation recommendations are reported together.

Associated: Explore the feasibility of migrating the relational database (ie. its functionality and underlying data tables) into a new interactive ACFHP website.

> **SDWG NEXT STEPS**
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> This is a need but will not be addressing immediately.

S&D Need 6 *(formerly 3): Development of Fish Habitat Occupancy Models and the information needed to support them.*

Occupancy models that identify and delineate current habitats of priority fish species and can project habitat occupancy needs in the future are a useful tool for targeting conservation actions. Such models utilize scenarios of climate change, land use alteration, fish harvest and other potential impacts to identify habitat types of greatest importance for conservation planning. A fundamental information need to create accurate occupancy models is more detailed classification and mapping of aquatic habitats. Gaps in geographic coverage of aquatic habitat maps at appropriate scales need to be identified. We will identify potential pilot area(s) based on the potential threats to priority fish species and their habitats priorities. Consultation with our partners (LCCs; other Fish Habitat Partnerships; State and Federal Agencies; NGOs).

SDWG NEXT STEPS

Develop a one pager and share with Partners which includes:

  (1) What a fish habitat occupancy model is
  (2) How a fish habitat occupancy model can be used
  (3) A short list of species to be modeled, based on the results of a priority worksheet/table that the SDWG members will fill out -- Rachel will put this together

S&D Need 7 (formerly 1): *Project tracking and evaluation capabilities for the purpose of capturing, assessing, and reporting conservation results to stakeholders.*

Primary: Ensure that an ACFHP project has a monitoring plan in place if it is not already required by the funding agency. Develop a project tracking database to measure funded project outcomes based on that monitoring protocol.

Associated: Develop and implement habitat monitoring and evaluation criteria for individual conservation projects, by which the Partnership can assess the benefits of funded or endorsed work. **Additionally,** develop a protocol for consistent reporting of data from partners and a database for comprehensive collection of project results. Create spatially referenced information for collected data.

Associated: Develop a framework for the creation of Partnership progress reports and timeline for regular distribution to partners, NFHAP, funders, and others.

SDWG NEXT STEPS

A subgroup will discuss and provide recommendations on:

(1) the development of a project tracking database to capture funded project output (ie. 'took the dam out') and any additional monitoring towards an outcome (ie. acres restored) and translate to the Board.

(2) the development of specific questions we would ask of project applicants and ranking criteria.

(3) the potential of having members of the S&D Group evaluate project proposals or portions of project proposals (ie. their monitoring protocol).

(4) Evaluate existing monitoring protocols, workshop summary, and NFHAP requirements

Subgroup: Jaclyn Daly, Bill Lellis, Michelle Dionne, Mari-Beth DeLucia, Julie Devers