SCIENCE AND RESEARCH COMMITTEE

Chair: Russ Mason, (MI)
Vice Chair: Jason Sumners (MO)
Tuesday March 9, 2021
1:00 pm to 3:00 pm (Central Time)
86th North American Wildlife and Natural Resources Conference

1:00-1:15. Welcome and introductions; review of the agenda.

1:15-1:30 Establishment of a national wildlife disease network; coordinated surveillance (Larry Clark, Metis, Ltd.)

1:30-1:45 Nested hexagon framework; a national standardized database of wildlife locations, habitat, infrastructure and energy development, and climactic drivers (Michael Houts, Kansas Biological Survey)

1:45-2:00 Update on State Wildlife Action Plan & Landscape Conservation Working Group (Norman Murray, Missouri Department of Conservation)

2:00-2:15 Diversity and inclusiveness across geographic and political boundaries (All)

2:15-3:00 **Presentations and committee discussions relevant to Objective 1 of the President's Task Force on Shared Science and Landscape Conservation Priorities Final Report, September 2020: *"The AFWA Science and Research Committee shall solicit information on a periodic basis regarding current and future anticipated science and research priorities from state fish and wildlife agency directors; other AFWA committees with science and research interests; regional AFWAs; regional conservation partnerships (e.g., MLI, SECAS, Nature's Network) and national science partners (e.g., FWS, USGS, USFS, NOAA, EPA, NPS, USDA, University Departments of Fish and Wildlife)".***

Addressing the task force report is central to the 2021 work plan for the Science and Research Committee (appended) and a plan was submitted to (and approved by) the AFWA Executive Committee on December 14, 2020 (appended). To date, regional association executive secretaries have been contacted. They have agreed to collect responses to 5 questions based on the 5 priority areas identified in the 2019 AFWA

Science Needs Survey (appended). Concurrently, Drs. Lisette Waits (University of Idaho) and Chad Bishop (University of Montana) are compiling a list of relevant research projects at universities from among members of the National Association of University Fisheries and Wildlife Programs. Dr. Jonathan Mawdsley is compiling a national inventory of ongoing Cooperative Research Program projects.

2:15-2:30 Overview of potential contributions from the National Association of University Fisheries and Wildlife Programs (Lisette Waits, University of Idaho, and Chad Bishop, University of Montana)

2:30-2:45 National overview of USGS Cooperative Research Unit on-going research and identified thematic priorities (Jonathan Mawdsley, USGS)

2:45-3:00 General Discussion; Next Steps:

a. Outreach to other AFWA Committees with science and research interests.
b. Identification of federal science-based management priorities.
c. Mechanisms to involve all members of the science and research committee in the development of the report to the AFWA Executive Committee at the September 2021 meeting.
d. Development of the 2022 science needs survey and other outreach mechanisms.

AFWA Committee Work Plan

Worksheet

Guidelines: Each AFWA Committee, Subcommittee, Workgroup and Task Force should review their charge and develop a work plan at the AFWA Annual Meeting and submit to John Lord, jlord@fishwildlife.org by October 15. The purpose of the work plan is to improve communication and effectiveness of committee work and enable committee chairs and the Executive Committee to evaluate their status annually.

Committee Work Plan		
Date: December 14, 2012		
Committee Name: Science and Research Committee		
Chair: Russ Mason	**Vice Chair:** Jason Sumner	**Staff:** Mark Humpert

Committee Charge: The Science and Research Committee is responsible for keeping the Association informed of the ecological research and information needs of the States and managing a process for addressing those needs through a variety of mechanisms, including enhanced Federal-State partnerships.

The Committee meets this charge by:

- Collecting research and information needs
- Evaluating and prioritizing needs
- Facilitating the transfer of existing information to address specific needs
- Prioritizing needs that must be addressed through new research projects
- Coordinating action plans with research organizations (Federal, State, and others)
- Evaluating the progress/findings of the research efforts and facilitating the effective dissemination/translation of research findings into management implications

Changes to the Charge: None.

List Activities and Objectives that Will be Accomplished in the Coming Year: The Committee will focus on addressing the AFWA President's Task Force on Shared Science and Landscape Conservation Priorities recommendation that: "The AFWA Science and Research Committee (develop and implement a process) to solicit information on a periodic basis regarding current and future anticipated science and research priorities from state fish and wildlife agency directors; other AFWA committees with science and research interests; regional AFWAs; regional conservation partnerships, and national science partners".

Comments: A working group has been formed and is developing draft policies and procedures for presentation to the full membership of the Science and Research Committee at the 2021 Fall Meeting of the AFWA.

Subcommittee / Workgroup / Task Force Work Plan

Fill out for each SB / WG / TF

Date: December 14, 2020

Workgroup Name: Shared Science Priorities

Chair: Russ Mason	**Co- Chair:** Jason Sumners	**Staff:** None

Workgroup Charge:

A working group of state, federal, and university wildlife and fisheries professional will construct a draft process to address recommendations provided by the AFWA President's Task Force on Shared Science and Landscape Priorities, in particular: The AFWA Science and Research Committee (develop and implement a process) to solicit information on a periodic basis regarding current and future anticipated science and research priorities from state fish and wildlife agency directors; other AFWA committees with science and research interests; regional AFWAs; regional conservation partnerships, and national science partners".

Changes to the Charge:

None

List Major Activities and Objectives Accomplished During the Last Year:

To date, the working group has been assembled and a draft process and procedure has been assembled. These were presented to the AFWA Executive Committee on December 14, 2020. As well, Secretaries for the Regional AFWA Associations have been contacted and have agreed to collect and assemble regional science-based management priorities to the Science and Research Committee.

List Activities and Objectives that will be Accomplished in the Coming Year:

The working group aims to complete a draft document for presentation to the Science and Research Committee at the 2021 AFWA meeting. Once the draft document is approved, the working group will disband.

Describe any Changes you Anticipate to the Work Group: None.

List Workgroup Members:

(in alphabetical order)

Chad Bishop (University of Montana), Brian Canaday (MO), Bill Fisher (EPA ORD), Cory Gray (AR), Jim Heffelfinger (AZ), Scott Hull (WI), Paul Johansen (WV), Jonathan Mawdsley (USGS CRU), Kelley Myers (USFWS and Midwest Landscape Initiative), Mark Porath (NE), Melanie Steincamp (USGS Science Centers), Jason Suckow (USDA, APHIS, WS NWRC), Lisette Waits (University of Idaho). Other contributors to the effort have included

Bill Moritz (WMI), Doug Austin (AFS), Deb Rocque (USFWS), Alan Thornhill (EPA ORD), and Ann Kinsinger (USGS).	
Date Workgroup Formed: September 2020	**Expected Termination Date:** September 2021
Comments None	

Plan to Address Task Force Objective #1 (approved 12-14-2020)

Background: The AFWA President's Task Force on Shared Science and Landscape Conservation Priorities: Final Report, September 2020 recommended that:

> *"The AFWA Science and Research Committee solicit information on a periodic basis regarding current and future anticipated science and research priorities from state fish and wildlife agency directors; other AFWA committees with science and research interests; regional AFWAs; regional conservation partnerships (e.g., MLI, SECAS, Nature's Network, WNTI); and national science partners (e.g., FWS, USGS, USFS, NOAA, NPS, APHIS, EPA, University Departments of Fisheries and Wildlife)."*

Participation: A working group and state, federal, and university wildlife professionals was formed to construct a process to address the recommendation. Members of that working group were (in alphabetical order*):

Chad Bishop (University of Montana)
Brian Canaday (MO)
Bill Fisher (EPA ORD)
Cory Gray (Arkansas)
Jim Heffelfinger (Arizona)
Scott Hull (Wisconsin)
Paul Johansen (WV)
Jonathan Mawdsley (USGS CRU)
Kelley Myers (FWS; Midwest Landscape Initiative)
Mark Porath (NE)
Melanie Steincamp (USGS Science Centers)
Jason Suckow (USDA APHIS WS NWRC)
Lisette Waits (University of Idaho)

**Other contributors to the effort included: Bill Moritz (WMI), Doug Austin (AFS), Deb Rocque (FWS), Alan Thornhill (EPA), and Ann Kinsinger (USGS).*

Basic Assumption: AFWA can be viewed as an organization of science consumers and science providers; though not clear-cut, the distinction is heuristically useful. We propose a several step process whereby (a) science-based management needs are identified, (b) these needs are translated into answerable scientific questions, and (c) answers to these questions are effectively communicated back to inform the management enterprise.

Recommendations Pertaining to Science Consumers:

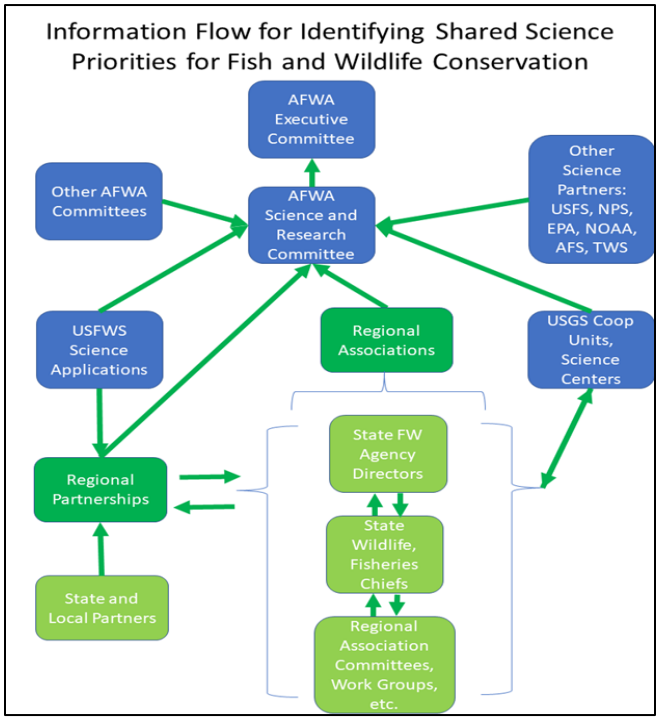
1. Conduct a formal, standardized survey of AFWA state agencies at least every 4 years to identify science-based management needs.

2. Conduct analogous outreach among federal consumers of science (e.g., including FWS Refuge Program, FWS Ecological Services, USFS, EPA, NPS, BLM, and NOAA).
3. Use existing surveys to identify science-based management needs within specific sectors of the conservation enterprise (e.g., needs survey regularly conducted by APHIS WS).
4. Concurrent with needs development, develop a better understanding of how AFWA consumer agencies currently meet science needs.
5. Establish an iterative process (for both state and federal consumers) to enhance the value of the science needs process by clarifying the exact nature of the science-based management need. This process would include outreach to other appropriate AFWA Committees. In addition to these questions of clarity, the Science and Research Committee would request that all AFWA Committees and work groups communicate science-based management needs at least every two years.
6. Work with the regional AFWA secretaries to identify the science-based management needs of each regional association[1]. Use this information to create a matrix of state, regional, and national science-based management needs.
7. Communicate identified priority science-based management needs to the AFWA Executive Committee at least annually to assist the Executive Committee as they establish priorities for the Association.
8. Facilitate communication of priorities approved by the Executive Committee to other AFWA Committees (especially the National Grants Committee) with the aim of promoting alignment between priorities and other AFWA processes.

The diagram at the top of the next page depicts a schematic of information flow to and from the Science and Research Committee.

[1] [1] Discussions with the regional secretaries suggest that providing them with 4-5 questions related to science related management priorities (e.g., disease, climate, invasives, emerging technologies, landscapes), together with a brief explanation of why the information is needed and how it with benefit agency management, will be useful. They would then distribute the questions to appropriate committees and work groups and then provide responses to the Science and Research Committee.

Diagram 1



Recommendations Pertaining to Science Providers:

1. Implement an iterative survey that identifies a catalog of ongoing science and science priorities as perceived by the research community (e.g., Cooperative Research Units, Science Centers, FS laboratories, University Partners, etc.). This survey effort would repeat at least every 4 years simultaneous with the AFWA science-based management needs survey of science consumers.
2. Compare and contrast AFWA science-based management needs with this catalog[2].
3. Provide this comparison as a document to both science consumers and science providers and actively establish productive and adaptive conversations.
4. Establish a mechanism for communicating the results of ongoing science and management efforts that incorporate that science to AFWA member organizations.

Timeline (through September 2021)

1. Identify process(es) utilized by the organizations referenced in Diagram 1 (above) to identify and act upon science and research needs. Develop visual maps of those

[2] In 2020, there was 87% alignment between AFWA's existing five science priority categories. As well, there are intriguing regional differences (i.e., big game corridors in the West, aquatic biodiversity in the southeast, climate impacts in the northern states and Alaska).

processes, including timelines, to identify overlap and opportunity for those processes to integrate.

2. Initiate a survey of federal science consumers to identify science-based management needs.
3. Initiate the catalog of ongoing science and priorities of science providers
4. Establish processes and initiate collection of science-based management needs of the regional associations and collect that information.
5. Add granularity to the findings of 2019 State Science Survey using methods outlined above.
6. Establish linkages to the other two objectives outlined in the President's Task Force Report (i.e., linkages to regional science and landscape initiatives).

Five questions to Regional Associations regarding Science-Based Management Needs

Justification: The Association of Fish and Wildlife Agencies Director's Executive Committee has asked the Association to develop clear national priorities for science-based management needs. This task has been assigned to the Science and Research Committee. Because needs likely differ across the country, the Science and Research Committee is asking each of the regional associations to provide their priority challenges in each of five areas. The five areas were identified in the 2019 AFWA Science Needs Survey. Notwithstanding, the Committee also urges the regional associations to provide any priorities that may not fall within the five areas.

1. Wildlife Health. What fish and wildlife diseases are most important to your agency? Why? If plant diseases are also a fish and wildlife management concern, which plant diseases are especially concerning? Why? How are you addressing your wildlife health science concerns at the present time? With regards to CWD, what are your most pressing science-based management needs when it comes to disease surveillance, management, and stakeholder engagement? If you perceive a need for greater interjurisdictional cooperation, how would you address this?
2. Weather and Temperature-related Concerns. What changes in weather and/or precipitation regimes are impacting your fish, wildlife, and habitat management at the present time? What are your concerns about changing regimes in the future? How are you addressing your climate related science concerns at the present time? Is there a need for step-down guidance from regional modelling efforts to more local concerns in your jurisdiction?
3. Invasive Species. Which aquatic and terrestrial invasive species are, at present, of greatest concern? Why? If you perceive a need for better science to inform your management of these species, on which areas would you focus research? What aquatic and terrestrial invasive species do you predict will become most important in the future? Why? How are you addressing your science needs at the present time?
4. Emerging Technologies. What needs do you have for more advanced technologies (e.g., animal side tests or decontamination regimes for CWD)? What programs within your agency have the greatest needs? What cooperators would best help you to develop needed technologies? What inventories of emerging technological improvements would be valuable to your agency?
5. Interjurisdictional cooperation (surveillance, management, assessment). What are your greatest needs for alignment between your agency and surrounding agencies for the management of fish and wildlife? What management concerns would be better addressed through interagency science-based approaches?

Significance: Science-based management priorities forwarded by the regional AFWAs will become major components recommendations from the Science and Research Committee to the AFWA Executive Committee. In turn, the recommendations will help guide the deliberations of other AFWA Committees, and in particular, the National Grants Committee as it formulates National Conservation Needs. As well, the identified priorities will inform AFWA interactions with Congress and with various federal natural resource agencies.