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**Executive Board Meeting**

August 21-23, 2023

Amway Grand Plaza Hotel

187 Monroe Avenue NW

Grand Rapids, MI

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August 21-23, 2023

Amway Grand Plaza Hotel

187 Monroe Avenue NW

Grand Rapids, MI

*An option for remote participation was provided.*

# MEETING AGENDA

(All times are Central)

*Monday, August 21, 8:30-12:00,* *Governor’s Room*

**Call to Order**

1. Call to Order (Brad Parsons)

**Prepare for MICRA Delegate Meeting**

1. Policy and Government Affairs Update for MICRA Delegates (Ashlee Smith)
2. Success! Now What? Operationalizing the Mississippi River Basin Fishery Commission (Parsons)
3. Review of MICRA’s Draft 2024-2028 Priorities Document (Greg Conover)
4. Review of MICRA’s Draft Aquatic Habitat Action Plan (Conover)
5. Potential Revisions to MICRA’s Constitution and By-laws (Conover)
6. Additional Topics and Preparations for the MICRA Delegate Meeting (Parsons)

*Monday, August 21, 1:00-5:00, Governor’s Room*

**MICRA Delegate Meeting**

1. MICRA Delegate Meeting Agenda

*Tuesday, August 22, 8:00-5:00, DeVos Place – Grand Gallery C*

**MICRA Sponsored AFS Symposium**

1. Mississippi River Basin Habitat Management for Interjurisdictional Fishes Symposium Program

*Tuesday, August 22, 5:30-9:30, Governor’s Room*

**MICRA Mixer**

*Wednesday, August 23, 8:30-12:00, Governor’s Room*

**MICRA Delegate Meeting Follow-up**

1. MICRA Delegate Meeting and Symposium After-Action Review (Parsons)

**Old Business**

1. Mississippi River Basin Fishery Commission Next Steps (Parsons)
2. Legislative, Policy, and Outreach Next Steps (Smith)
3. Finalizing MICRA’s Draft Aquatic Habitat Action Plan (Conover)
4. Finalizing MICRA’s Draft 2024-2028 Priorities Document (Conover)
5. Finalizing MICRA’s Draft 2019-2023 Priorities Accomplishment Tracking (Conover)
6. Approval of the Executive Board’s February 2023 Meeting Notes (Parsons)
7. Review of Action Items (Conover)

***Lunch Break***

*Wednesday, August 23, 1:00-5:00, Governor’s Room*

**Committee Updates**

1. Paddlefish/Sturgeon Committee Update (Sara Tripp)
2. MICRA AIS Committee Update (Bourgeois)
3. MRBP Update (Rob Bourgeois)
4. Invasive Carp Advisory Committee Update (Brian Schoenung and Rob Simmonds)
5. Sub-basin Invasive Carp Partnership Coordination Update (Neal Jackson and Caleb Aldridge)

**Executive Board Member Updates**

1. Executive Board Member Updates (All)

**Chairman and Coordinator Reports**

1. Chairman’s Report (Parsons)
2. Coordinator’s Report (Conover)

**New Business**

1. Webpage Dashboard Demonstration (Rebecca Neeley and Ross Ruehmann)
2. Appointment of New MICRA Chair-elect (Parsons)
3. Develop MICRA’s 2024 Operational Budget (Conover)
4. Schedule Fall Conference Call and Winter Executive Board Meeting (Parsons)
5. Other New Business / Parking Lot (Parsons)

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**Executive Board Meeting Minutes**

August 21-23, 2023

Amway Grand Plaza Hotel

187 Monroe Avenue NW

Grand Rapids, MI

# DECISIONS AND ACTION ITEMS

\* A quorum of voting members was not present throughout the meeting. When necessary, decisions were approved by the Executive Board via email following the meeting.

Decisions

1. MICRA will target National Invasive Species Awareness Week (NISAW) February 26 – March 1, 2024, for a DC Fly-in event.
2. The Executive Board agreed to target November 8, 2023, for Congressional briefings in Washington, DC.
3. The Executive Board agreed to provide the Aquatic Habitat Action Plan to the delegates once finalized rather than requesting another review of the document.
4. The Executive Board agreed to use 6th order and larger streams for the MICRA list of interjurisdictional rivers in the basin.
5. The Executive Board agreed to continue moving forward with a proposed increase in state member annual membership dues from $1,500 to $3,000 beginning in 2024.
6. The Executive Board agreed that rivers on federal lands, with federal authorities (e.g., navigable streams, National Wild and Scenic Rivers), and those within the Ceded Territories should be included MICRA’s list of interjurisdictional rivers.
7. The Executive Board agreed to remove reservoirs from the list of interjurisdictional rivers for consistency across the sub-basins. A general statement about reservoirs could be added.
8. Executive Board members agreed to a 2-week review period of the draft meeting notes for the February 2023 Executive Board meeting once they are provided by Conover.
9. Conover will provide a final list of February 2023 decisions and action items to the Executive Board members along with the final draft meeting notes for the February 2023 meeting.
10. The Executive Board approved a draft letter from the Paddlefish Sturgeon Committee in support of the North American Sturgeon and Paddlefish Society’s petition to establish October 27th as National Sturgeon Day.
11. The Executive Board agreed to seek nominations for the MICRA Chair-elect on a “loose” rotation among the following sub-basins: ARW&LMR, MOR, OHR&TNCR, and UMR.
12. The Executive Board tentatively scheduled a virtual meeting from 9am-11am Central on Friday, October 27th.
13. The Executive Board tentatively scheduled an in-person meeting January 29-30, 2024, in Chattanooga, Tennessee, prior to the Southern Division AFS meeting.

Action Items

1. JC Nelson will introduce MICRA to the Mississippi River Cities and Towns Initiative Executive Director, Colin Wellenkamp.
2. Ashlee Smith will attempt to find Congressional sponsors and confirm rooms for Congressional briefings (one Senate and one House) on November 8, 2023.
3. Ashlee Smith will provide a save-the-date email for Congressional briefing in Washington, DC, on November 8, 2023, to Conover for distribution to the MICRA member agencies and USACE.
4. Executive Board members will work to identify a representative from each sub-basin to participate in the proposed Congressional briefings in Washington, DC, on November 8, 2023.
5. Ashlee Smith will send a request for pictures to be used on social media and a Mississippi River Basin Fishery Commission coalition to Conover for distribution to the MICRA Delegates and sub-basin invasive carp partnerships.
6. The Executive Board will attempt to recruit participation from more delegates for short 1- or 2-day visits during the 2024 DC Fly-in.
7. Ashlee Smith will request MICRA Delegates 1) to continue to speak with their agency director regarding the Mississippi River Fishery Commission and associated draft legislation, and 2) to notify her of opportunities to get Congressional staff out to observe field work and talk with delegates.
8. Bourgeois will work with the AIS Committee members to provide any additional AIS priorities for the draft 2024-2028 Priorities document to the Executive Board by November 1.
9. Conover will provide a revised draft 2024-2028 Priorities document to the Executive Board in early November.
10. The Executive Board will review the revised draft 2024-2028 Priorities document and provide it to the MICRA Delegates for a final review by November 30 if there are substantial changes.
11. The Executive Board will finalize the draft 2024-2028 Priorities document and post it on the MICRA website in December.
12. Conover will include a discussion of next steps for aquatic habitat on the agenda for the board’s next meeting.
13. Conover will include a discussion about an interjurisdictional fisheries symposium on the agenda for the board’s next meeting, including a list of upcoming meeting dates and locations (e.g., AFS, Midwest, etc.).
14. The Executive Board will develop a justification for a proposed increase in state agency annual membership dues from $1,500 to $3,000 t0 explain why the additional funding is needed, how it will be used, and the benefit it will provide back to the member agencies.
15. Conover will work with Parsons and Batten to send a follow up email to the MICRA Delegates to let them know the board’s decision to propose a By-laws amendment to increase the state agency member annual dues to $3,000 beginning in 2024.
16. Batten and Smith will work with the sub-basin representatives to schedule sub-basin or 1-on-1 calls with MICRA delegates to discuss the fishery commission and draft legislation.
17. Neal Jackson will share the TNCR Phase 1 decision analysis results with the MICRA Executive Board once the process is complete and the results have been provided to USACE.
18. Smith will organize a call with the state members of the Executive Board within the next 2-weeks to continue discussing MICRA’s 2024 WRDA priorities.
19. Conover will send Smith the additional coalition prospects that were identified by the Executive Board members during their August 2022 meeting.
20. Conover will work with Angela Erves to see if additional information on federal authorities, federal lands, and Ceded Territory can be added to the sub-basin tables of interjurisdictional rivers in the Mississippi River Basin.
21. Conover will follow-up with the respective sub-basin representatives to discuss sub-basin specific questions on the draft lists of 6th order and larger rivers.
22. Conover will update the draft 2024-2028 Priorities document based on the board’s review and discussion of the comments discussed during their August 2023 meeting.
23. Conover will update the 2019-2023 Priorities Accomplishment tracking at the end of the year and provide it to the Executive Board members for review.
24. The Executive Board will finalize the draft 2019-2023 Priorities accomplishment tracking after Conover provides a final draft at the end of the year.
25. Conover will provide the draft February 2023 Executive Board meeting notes for review prior to the October 27th meeting.
26. The Executive Board will consider approval of the February 2023 Executive Board draft meeting notes during the October 27th meeting.
27. Executive Board members will review the Decisions and Action Items provided in the August 2023 meeting briefing book and provide updates to Conover as they are addressed.
28. JC Nelson will provide Conover with the soon to be released USGS research priorities for paddlefish and sturgeon for dissemination and review by the Paddlefish Sturgeon Committee members.
29. The Executive Board will consider the information provided by the ICAC regarding the potential allocation of USFWS FY23 “plus-up” funding in FY24 and determine if any recommendation will be provided by MICRA to USFWS.
30. Conover will follow-up with the sub-basin invasive carp partnership coordinators to determine if sub-basin fact sheets can be provided prior to the Congressional briefing tentatively planned for November 8, 2023.
31. Parsons and Smith will update the contractual agreement between MICRA and Ellis Smith Policy Solutions to reflect the 9-month extension that was approved by the Executive Board June 30, 2024.
32. Conover will make proposed updates to the MICRA By-laws and share with the MICRA Executive Board members for discussion during the October 27th meeting.
33. Rebecca Neeley will determine the possibility of the La Crosse FWCO developing a web-based dashboard tool for MICRA that includes MICRA sub-basin group boundaries, congressional districts, MICRA’s 6th order and larger streams, and the characterization of relative abundance of bigheaded carps similar to the figure included in the USFWS-led Report to Congress.
34. The Executive Board will consider what a few top priority communications needs or maps might look like and the data layers that would be needed to develop them.
35. Kasey Whiteman will seek a nomination for the MICRA Chair-elect 2024-2025 term from the Missouri River sub-basin delegates.
36. The Executive Board will vote electronically to approve an additional $5,000 travel budget for Ashlee Smith for the remainder of 2023.
37. The Executive Board will vote electronically to approve the proposed 2024 operational budget with the addition of $1,000 to support ICAC and sub-basin invasive carp partnership meeting expenses.

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**Executive Board Meeting**

August 21-23, 2023

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# MEETING NOTES

\* Meeting notes have been added to the briefing book using red font.

## **Call to Order**

Roll call and introductions.

**2022 MICRA Executive Board Members**

*Voting Members*

Arkansas/Red/White Rivers Ken Cunningham, ODWC Present

Lower Mississippi River Mark Thurman, TWRA Present

Missouri River Kasey Whiteman, MDC Present

Ohio River Rich Zweifel, OH DNR Present

Tennessee/Cumberland Rivers Dave Dreves, KDFWR Present

Upper Mississippi River Joe Larscheid, IA DNR Present1

USFWS Aaron Woldt, USFWS Present1

USGS JC Nelson, USGS Present

\* A quorum six voting members was present for the meeting.

*Non-voting members*

MICRA Chairperson Brad Parsons, MN DNR Absent

MICRA Chairperson-Elect Ben Batten, AGFC Present2

MICRA Past Chairman Brian Schoenung, IL DNR Present

MICRA Coordinator Greg Conover, USFWS Present

AIS Committee / MRBP Liaison Rob Bourgeois, LDWF Present[[1]](#footnote-1)

Invasive Carp Advisory Committee Rob Simmonds, USFWS Present

Paddlefish/Sturgeon Committee Sara Tripp, IL DNR Present1

*Introductions:*

Allan Brown, USFWS

Angie Rodgers, USFWS

Ashlee Smith, Sequoya Strategies

Dave Smith, USACE-ERDC

Jeff Janvrin, WI DNR

Neil Rude, MN DNR

Neal Jackson1, USFWS

Caleb Aldridge1, USFWS

Rebecca Neeley1, USFWS

Ross Ruehmann1, USFWS

## Policy and Government Affairs Update for MICRA Delegates

*Discussion Item:*

Ashlee Smith will lead preparations for the MICRA Delegate meeting discussion regarding the following three agenda topics.

1. Report out on MICRA’s March 2023 DC Fly-in and Congressional outreach
2. Fishery Commission initiative, legislative, and coalition progress
3. Next steps for Congressional and partner outreach

The MICRA Delegate meeting agenda includes 80-minutes to discuss these topics.

*Discussion Notes:*

What do we want to convey to the delegates this afternoon? What is the fishery commission status? Senators Wicker (R-MS) and Boseman (R-AR) will be official co-sponsors. Smith has not been able to meet with Senator Duckworth’s (D-IL) staff yet. Smith said that she thinks the bill can get through the Senate but is not confident that it will get through the House. Representative Westerman’s (R-AR) support will be critical, but his staff have not been very responsive.

The House Appropriations Committee wants to return spending levels to pre-2023 levels and have proposed multiple cuts. In fact, the House has reduced the USFWS’s Invasive Carp budget from $31 million in FY23 to $29 million in FY24. The proposed budget includes $4 million specifically for contract fishing and no less than $500,000 for new university collaboration. There is a lot of language on contract fishing. They do seem to continue to support habitat restoration. The Department of Interior budget tends to follow the Senate bills, so there is some hope that there will not be a cut in FY24.

There was some discussion last year about requesting funding in the USACE Aquatic Habitat budget line for ERDC to support deterrents work in the basin. There is a proposed increase in the FY24 budget related to barriers in the Tennessee-Cumberland system and Tombigbee Waterway. Smith has not seen the language yet and there is some uncertainty around this funding increase.

From the commission standpoint, the biggest thing now is to get a democrat co-sponsor. That is the hard push now. As soon as we get a Democrat to sign on as a co-sponsor, the bill should be introduced into committee. We will need to continue to work on the House side.

Senator Ron Johnson’s (R-WI) staff attended the field tour in La Crosse, WI, earlier this month. Smith is trying to get a Zoom meeting setup with his DC office to follow-up.

There is a field tour on the lower Mississippi River for Congressional staff scheduled for next week in Vicksburg. It will be co-hosted with ERDC. Representative Bennie Thompson’s (D-MS) office will be attending the field tour. He is one of the most senior House members on the Democrat side. Smith is confident that Rep. Thompson’s will sign on as a Democrat co-sponsor, but she needs to first confirm that will not hurt on the Republican side because the House is so much more contentious.

Smith is not concerned if the co-sponsors are not secured, and the bill introduced before December. She wants to make a hard push after the first of the year. There is no money in the FY24 Appropriations bill for setting up the commission. MICRA needs to figure out what they are going to ask for in FY25 Appropriations and the 2024 WRDA reauthorization. WRDA requests usually are not due until February or March. This year the deadline was moved up to October which will be before MICRA’s next fly-in.

Smith recommended ramping up the coalition effort in support of the commission. She recommended developing a coalition website similar to the website for the grasslands act. This will cost $1,000 to $1,500. Smith met with the North American Invasive Species Management Association’s (NAISMA) Legislative Committee recently and they were very supportive of the commission. They are interested in coordinating on issues going into National Invasive Species Awareness Week (NISAW). She recommended scheduling MICRA’s 2024 fly-in during NISAW (February 26 – March 1, 2024). Scheduling in February would be better than March. We might want to setup a couple panels with industry reps. Unfortunately, there is nothing associated with NISAW to invite staffers to and bring them in. MICRA has partnered with the Western states to host joint briefings on AIS in the Capitol Visitors Center, held standalone briefing that were sponsored by members, and one year there was a briefing in the Visitors Center with dead invasive carp in coolers for members to see.

* MICRA will target National Invasive Species Awareness Week (NISAW) February 26 – March 1, 2024, for a DC Fly-in event.
* The Executive Board will attempt to recruit participation from more delegates for short 1- or 2-day visits during the 2024 DC Fly-in

Smith recommended MICRA host a multi-agency briefing in DC in October. She has already talked to offices about sponsoring a briefing. Ideally, it would be best to have representatives from all six sub-basins. MICRA held a briefing one year that included maps of the invasive carp distribution and Congressional districts for each sub-basin. A MICRA sub-basin rep was stationed by each map after the briefing so that staffers could find their sub-basin rep and talk in more detail. We may want to avoid early October in case there is a lapse in appropriations and government shutdown. The weeks of October 23rd and November 6th were thrown out as potential dates, preferably on a Wednesday.

Representative Thompson is also a co-sponsor on the MRCTI’s SMART Act. Smith was asked if she has been in communication with MRCTI. MRCTI has an event scheduled in DC March 6-9, 2024. Smith recommended that MICRA work more with MRCTI. Nelson recommended that a MICRA representative attend MRCTI’s annual meeting the week of September 11 in Bemidji, MN.

* JC Nelson will introduce MICRA to the Mississippi River Cities and Towns Initiative Executive Director, Colin Wellenkamp.

We need to identify a date for the Congressional briefing this fall that our state representatives and federal partners will all be able to attend to speak towards how they are using their appropriations in the basin. That will be difficult for USGS since they receive funds for invasive carp, but they are not specifically directed towards the Mississippi River Basin. Are you asking the Executive Board members to handle this or are we talking about other representatives from the sub-basins? Technical staff would be fine if the board members or delegates have people they’d like to have participate. Each speaker will likely have about 5 minutes, so we are talking very high-level talking points. It would be good to have a mix of administrators and technical staff. Are these contentious? No, we need people that are familiar with what is happening and can address general questions. It would also be helpful to have states away from the mainstem river to participate to support the basinwide nature of the issues. We may want to consider taking more detailed maps of the sub-basins. Are there states within the individual sub-basins that we should target for participating in the briefing? Smith can look at the key offices within each sub-basin, but she requested the board to first finalize a date so she can get a save-the-date out to the Congressional offices. The details can be provided after the initial save-the-date with general information about the briefing. The federal agencies will need a date, description of what they are being requested to speak about, and a list of who is being invited to the briefing to get approval from their Congressional Affairs offices.

MICRA budgeted $12,000 for the 2023 DC fly-in. Approximately half of those funds were used, leaving roughly $6,000 available to support travel and other expenses related to an October or November Congressional briefing.

Will this be both a House and Senate briefing? Yes, if we can get one scheduled with both sides.

* The Executive Board agreed to target November 8, 2023, for Congressional briefings in Washington, DC.
* Ashlee Smith will attempt to find Congressional sponsors and confirm rooms for Congressional briefings (one Senate and one House) on November 8, 2023.
* Ashlee Smith will provide a save-the-date email for Congressional briefing in Washington, DC, on November 8, 2023, to Conover for distribution to the MICRA member agencies and USACE.
* Executive Board members will work to identify a representative from each sub-basin to participate in the proposed Congressional briefings in Washington, DC, on November 8, 2023.

Is there more to discuss to prepare for this afternoon? Smith’s primary needs from the delegates are 1) for them to participate on Zoom meetings with her and Congressional staff from their state’s member offices on Capitol Hill, and 2) to help get their state’s key members or their staff out on the water for a local field visit and to discuss MICRA.

For this afternoon, Smith will provide an update on the status of co-sponsors for the draft legislation, potential timing for the bill to be introduced into committee, and the need for MICRA and the coalition to make a hard push in early 2024.

Smith requested pictures of their rivers, staff doing work, and fish for social media from Executive Board members and other delegates. Pictures can be texted or e-mailed to her. Smith can send regular reminders to the MICRA Delegates. We may be better off sending the request directly to field staff. Smith will include this request with her update this afternoon.

* Ashlee Smith will send a request for pictures to be used on social media and a Mississippi River Basin Fishery Commission coalition to Conover for distribution to the MICRA Delegates and sub-basin invasive carp partnerships.

Should we bring up the 2024 DC fly-in and request participation? Yes. It would be helpful to have more people participate for one or two days to attend the visits with their state’s offices.

* The Executive Board will attempt to recruit participation from more delegates for short 1- or 2-day visits during the 2024 DC Fly-in.

Smith will remind delegates to continue briefing their agency directors about the commission and draft legislation. There are likely delegates that are not plugged in closely and are not discussing this with their director on a regular basis. Some of the directors and some of the MICRA delegates have changed over the past year.

* Ashlee Smith will request MICRA Delegates 1) to continue to speak with their agency director regarding the Mississippi River Fishery Commission and associated draft legislation, and 2) to notify her of opportunities to get Congressional staff out to observe field work and talk with delegates.

## Success! Now What? Operationalizing the Mississippi River Basin Fishery Commission

*Discussion Item:*

Parsons will lead preparations for the MICRA Delegate meeting 30-minute discussion regarding ‘Success! Now what?”. This topic was added to the MICRA Delegate meeting agenda to begin discussion with the broader membership regarding operationalizing the fishery commission. The Executive Board previously suggested including a discussion regarding ‘increasing resource management agency capacity’ related to both the proposed fishery commission and invasive carp.

*Discussion Notes:*

Batten led a discussion about operationalizing the commission. In short, appropriations for the first year of the commission is $1 million to get the organization stood up. The initial step would be to hire an executive director. The board discussed keeping staff minimal but adding key positions such as an administrative assistant/grant specialist, a communications director that could also serve as a deputy director or director in training if needed, and a staff biologist. There was general discussion with USFWS about the potential for the MICRA Coordinator to transfer into a support staff position for the commission.

Would the grant specialist have a role in the current invasive carp funds that are going out to the states? No, that is different funding and there is no intention to change the current process. The grant specialist would handle administration of the grant from DOI or USFWS to support the commission. It’s possible this person would need to handle grants from the commission to the member agencies for the non-competitive grants. That will depend on whether the host agency will administer the non-competitive grants directly to the commission members rather than a single grant for all funds to the commission. There will be a large grant workload for someone.

What are the proposed funding amounts in the draft legislation? year 1: $1 million; years 2-6: $30 million/year; and years 7-11: $50 million/year. As written, DOI will also receive $500,000/year to host the commission.

The other major topic on this section is capacity building in the state agency through commission and invasive carp funding. Specifically, can the states deliver on what is being proposed with the commission? And what are the challenges for the states in building capacity?

Arkansas: The legislature controls the number of positions the agency is allowed to fill. It would take until the next session in 2025 to seek an increase in the number of positions. There are some exceptions. The agency thought it had great justification in 2023 to increase the number of positions by 45 that resulted in no positions be added. Even if the commission comes through and the agency could say they have $1 million to help put people on the ground, they would not be able to do it.

Ohio: The agency has been reluctant to bring on full-time staff on soft money. If there is a consistent, reliable funding stream that can be used to support full-time staff, then they would likely have support to bring on one or two positions.

Is there a nuance that needs to be made to the invasive carp funding or the commission funding if it comes to fruition to make it more like the state/interstate management plan funding? That is funding that must be appropriated annually, but many states have used that funding to justify adding an AIS coordinator position to their staff. Are these funds considered more reliable or viewed differently from the invasive carp funds?

There was a suggestion from the ICAC relative to the discussion about how to administer the plus-up funding. There were a number of states that were very interested in having $100,000 off the top go to each state to support a position and travel. Not all states or sub-basins receive enough funding to build staff and travel as overhead into their projects. Rob Bourgeois, Louisiana, described the problem of building staff and travel into a suite of project proposals that may or may not get funded from year to year.

The state ANS management plan funding has been very consistent for several years. How long do you have to receive that funding before it is considered consistent and reliable? Every state is probably different and there likely isn’t a magic number.

Tennessee: The agency has housed positions somewhat on soft money. The Commission in Tennessee, rather than the state legislature, controls the number of agency positions. The agency has recently lost capacity for new positions for a little while.

Oklahoma: The agency has one aquatic nuisance species biologist and one technician. They work on all aquatic nuisance species, not just invasive carp. They also coordinate the state’s fish kill responses. The agency has two grants to do invasive carp work on two rivers and was able to add a full-time, 3-year term technician position. The agency had not hired term positions before. This position went through without a problem and will hopefully be a mechanism that additional positions can be added relatively quickly with additional funding in the future. The position is 100% funded by carp funding, there is no state match.

There is no match requirement in the commission legislation. That will make a big difference for several states.

Kentucky: The agency has 10 staff hired on invasive carp funding. A steadier source of funding would be helpful. Within the agency, there is not much resistance to adding positions if they are 100% funded. But the agency may bump into a top-level employee cap. The agency is tapped out on SFR and other grant funds so if there was any match the agency would likely deny any requests to add staff that was less than 100% funded.

Illinois: None of the partnerships’ invasive carp funding is being used to fund positions. The agency does have invasive carp positions supported by GLRI funding.

When Schoenung was fish chief in Indiana, he did not have any problem setting up a biologist, program manager, and two assistant biologists based on the invasive carp funding. The challenge is when the project that the positions are funded through unexpectedly doesn’t get funded.

Missouri: It would depend on what level of position the agency tries to add. They have been able to add hourly temporary employees. There is a cap on salaried positions. In the past, they have had success accepting outside funds to support term positions with semi-permanency. There are options to pursue to attempt to add positions.

We need to tease apart two questions related to capacity. The first is related to invasive carp and what can the USFWS do to provide the states adequate consistency and reliability to be willing to add needed capacity. What does consistent and reliable mean? Similarly, the second question is related to commission funding and added capacity to support the commission’s work. The purpose of the commission is added resources and capacity for interjurisdictional fisheries management. If the agencies are running into position caps, is there something that MICRA can do to inform the Directors and help support requests for increased position caps to support the commission? Is there a different mechanism that we have not discussed to allow you to get the work done?

Could the commission provide the additional capacity for the states rather than providing funding? That could get complicated from the commission’s standpoint. Some directors are challenging their staff to get more done without adding to their position counts. AGFC has been working with outside organizations and NGO’s to provide funding for outside positions that work for the agency. Are you proposing that a commission employee would be hired and paid by the commission but stationed within a state agency to support interjurisdictional fisheries work? Yes, they could be essentially assigned as agency staff. Ohio DNR has not been able to get new full-time employees added using GLRI funding and does not have the option to add term positions. The agency has been utilizing state universities to use these funds and get the work done. Several states mentioned the use of universities to get more work done.

Several different contract arrangements and options used by different agencies and entities were discussed.

There would be a considerable administrative burden on the commission if there is wide interest in hiring commission staff positions that are then assigned to work for the states. Payroll, benefits, human resources, etc. would all fall to the responsibility of the commission. There are considerations with the number of employees that we will need to be aware of. We previously discussed the need for some contract support for legal and accounting needs in addition to the four initial positions for the commission. Those contract needs will be much higher if the commission is hiring additional staff to work for the states. This may be a good option for states that are not able to add capacity in house. We should build is as much flexibility as we can.

*Notes from February 2023 Executive Board Meeting:*

Parsons requested the board members to have a focused discussion on the reality of the proposed fishery commission being authorized. That is, how do we prepare for that reality. MICRA will be in DC for the annual Fly-in in a couple weeks and the delegates may be asked some challenging questions. We want to be prepared for those discussions and we want to be prepared to act should the fishery commission be authorized.

Most of our focus to this point has been positioning ourselves for success in establishing a fishery commission. We haven’t spent a lot of time discussing the foundation so that the board is ready to move and begin to implement the commission and cooperative resource management as soon as the fishery commission is authorization and funding potentially appropriated. Now it is time to shift our focus to preparing for success following an authorization. For example, what will logistics of the commission look like, what is the structure that it will encompass, how do we develop our charter so that it is something we can implement as soon as the authorization is passed that we anticipate is coming. How do we establish that system so that someone will want to step into the role of the first Executive Director/Secretary of this new fishery commission?

Smith is late for the Executive Board meeting because she stayed in DC to talk with two Senators that she is hopeful will co-sponsor the legislation to authorize the Fishery Commission. She believes there is real potential for the fishery commission to be authorized by this Congress. We want to be prepared to implement and not get caught flatfooted.

The board has previously touched on initial staffing for the fishery commission at a high level, but we need to have a plan for the specific positions that would immediately need to be filled and the qualities that the board members would like to see when recruiting for these positions. It would be useful for the board members to start thinking about their networks and who we might want to potentially recruit for the new secretariat.

Should we be looking outside of MICRA for assistance in guiding us through this part of the process? Would it be appropriate to reach out to the AFWA Management Assistance Team?

As the draft legislation gets legs, the MICRA delegates are likely to get more questions from their leaderships and Administrations. We need to be prepared to discuss details and address questions both internally and externally.

As currently laid out, the initial action will be for the MICRA Executive Board to hire an Executive Director to stand up the remainder of the Secretariat under the supervision of the board. The Joint Strategic Plan will serve as a guiding document. Initially, the MICRA Executive Board would continue to meet until the fishery commission structure is operationalized. We will need to develop an equitable way of distributing the non-competitive portion of the appropriations to the commission members. An even allocation across all member agencies may not be the best approach.

Getting something started doesn’t require the same skill set as running something long term. Do we need an Executive Director whose skill set is to get the fishery commission up and running or are we looking for someone who can nurture and grow the fishery commission? Is it too early to consider potential individuals that are well suited for our needs? We may want to focus on the specific positions and different skill sets for the moment. For example, we may want a communications director to work alongside the executive director. A financial person to manage grants may be another immediate need.

We need to be cautious and keep any positions to a minimum. There will be some basic needs and cost to staffing the fishery commission. There is a strong emphasis by legislators right now in reducing administrative costs or keeping them as low as possible. Proposals that have a lot of administrative costs are not doing well. Those that are most successful have stricter limits on administrative costs than we have seen in a while. We need a plan for what the commission will need for staff, but I encourage us to keep it as light as possible initially. The Great Lakes Fishery Commission (GLFC) started much smaller than what it looks like today.

We’ve previously discussed an administrative assistant as a fundamental initial need for the fishery commission or secretariat to function. We do not want the executive director spending time on basic administrative functions.

Four key positions were proposed for discussion:

1. Executive director
   1. First position hired – by MICRA Executive Board
   2. Tasked with hiring additional secretariat staff
   3. Work with a consultant to assist with developing secretariat and governance structure with commission membership?
2. Communications director
   1. Potentially serve as deputy (director in training)
   2. Need may depend on who is hired as executive director
3. Grants manager / administrator
4. IJ fishery biologist

UMRBA is a lean and effective organization that is structured much like what is proposed. They have added a staff biologist as they have grown over the last 10 years.

Could the executive director and communications director be combined if needed? Ideally, they would be separate so that neither position is tasked with too many responsibilities to function effectively as needed. The communications director could also be used as a trainee position for the executive director (i.e., deputy or assistant) if a retiree or short-term hire was made for the initial executive director.

Something that is not captured here is legal assistance. It does not need to be a staff person necessarily, but there will be a need for legal assistance in establishing the organization properly (e.g., registering the entity, internal revenue service, etc.). We can look at contracting for communications or other needs to keep staff size smaller.

What would the mechanics of moving money to the states look like? The authority for the USFWS to move funding to the fishery commission is the authorizing legislation. The fishery commission would then manage moving funds to the member agencies or others in the case of the competitive grants. There are many federal laws that get passed along with funding so there will be a significant need for accountability, tracking, and regulatory aspects. Who is going to make sure of all this for the fishery commission if it is issuing grants or sub-awards of the federal funds?

The GLFC funding goes through the Department of State and not USFWS. If the funding came through the Department of Interior or USFWS, there are several authorities in place to make both competitive and non-competitive grants to partners. Congress can grant authority to agencies to pass money through for various purposes. That type of authorization may or may not be part of any legislation that authorizes the formation of a fishery commission. There are multiple options that could be explored.

If Congress appropriates funding to support the fishery commission, would the host federal agency administer the competitive and non-competitive grants, or would the funding be passed through to the commission to then administer the grants? Either the federal host agency or the commission would likely need to hire a full-time person to administer 30 or more grants.

The GLFC is a unique situation. The most recent ruling from solicitors is that once U.S. federal funds are mixed with Canadian federal funds, the funds are no longer considered U.S. federal funds.

Potential contract support:

1. Legal
2. Accounting / CPA
3. Communications

Considerations:

* Salary and benefits / payroll / retirement for commission staff
  + Commission staff, agency staff, or combination
    - GLFC: Inter-governmental Personnel Act and Cooperative Agreements
    - SARP: State dues and grant funding
* Allocation of non-competitive grants to commission member states
* State agency dues
  + How much?
  + How used?

Who does the Executive Director answer to? Initially the MICRA Executive Board until the transition to the fishery commission governance is complete. The MICRA Executive Board is proposed to transition to the commissioners, with one commissioner representing each sub-basin and two federal entity commissioners. The executive director and secretariat would work under the commissioners.

Would the commission be a federally entity? Would the executive director be a federal employee? No.

Should we expect USFWS to pull their current level of support for the partnership once the fishery commission is authorized and there is a secretariat handling the work of the commission? Future support would likely look different, but I would not characterize it as pulling back. The USFWS has several staff that support the GLFC. In the end, USFWS could potentially be at a similar or increased level from what it is now. It is all unknown at this point and we can only speculate how the agency may choose to participate once the commission structure is formalized. There would likely be interest in maintaining a liaison type role with the fishery commission.

If the commission is its own entity, then there are numerous administrative needs that will need to be setup around hiring staff, e.g., payroll, pension, and benefits such as health care and retirement. There is precedence that can be used. There can be agency staff working for the commission or commission staff or a combination of both. In the early days of the GLFC, the Service had staff working under agreements for the commission on both a part-time and full-time basis. It may not be necessary for the commission to hire all the key staff out of the gate. The USFWS had someone working for the commission for eight or nine years. There are still a couple USFWS employees working part-time for the GLFC. The salary, benefits, and retirement are all paid by the USFWS and GLFC reimburses only for salary. Those types of arrangements could be part of the initial or long-term structure. The Inter-governmental Personal Act and cooperative agreements are a couple of options. SARP uses some sort of arrangement for their coordinator and other staff. It may be another group for us to look at.

We will need to reach consensus on the allocation of the non-competitive grants to the commission member states. All member states currently pay the same level of membership dues to MICRA. The expectation is that all funds would be used to support work in the Mississippi River Basin. The states with a small proportion of the basin’s interjurisdictional rivers will need to determine what level of funding they need to support their collaborative fisheries management in these waters.

A different model would be to allocate the funding (evenly?) to the sub-basins and let the sub-basins determine how to allocate the funding among their states. The allocation would need to be based on a non-competitive model and not competitively within the sub-basin. Who will handle the coordination and decision-making role within each of the sub-basins? For example, does the ORFMT or UMRCC have the capacity to fill that role? What about the Arkansas-Red-White and Tennessee Cumberland sub-basins that do not have a formalized coordination structure in place like the other four sub-basins? There are differences in the level at which the state agencies are involved or participate in the different sub-basin partnerships. The sub-basin representatives would be responsible for discussing the allocation of non-competitive funding at the sub-basin level. That model would take more investment in coordination time than to do it at a basinwide scale.

I would not like the USFWS ANS state/interstate plan implementation funding model where the entire pie is split evenly among everyone. That model does not make sense for this scenario.

If the non-competitive funds are intended to support the addition of staff among the member agencies, then we would not want to be looking at changing or shifting these allocations on an annual basis. We will need input from the member agencies regarding their individual needs and abilities to add staff support. Is there a set of questions that we should send out to the delegates to gather their input, for example:

* Would the state intend to hire additional staff to be committed to the commission and large rivers interjurisdictional fisheries management work?
* What would the anticipate doing or needing?

There are different ways that we can go about gathering input from the delegates and we should consider how best to do that.

When we are talking with Congressional staff in DC, the most important thing for us to be able to clearly articulate is how the fishery commission will help the states and benefit the general public. How does more capacity make a meaningful difference?

* State and federal resource management agencies recognize the need and want to do more for sustainable management and utilization of interjurisdictional fishery resources but lack the resources and capacity to coordinate, plan, implement, and evaluate cooperative management actions
* States may not feel comfortable investing limited Sport Fish Restoration (SFR) funds into large river fisheries management when more of their constituents are interested in reservoir fisheries.
* The proposed commission would provide a secure funding source to support large rivers work without cutting into their SFR funds.
* Allows states to manage fisheries where SFR ends, e.g., paddlefish
* Allows states to have focused effort on large river, interjurisdictional fisheries “to provide for long-term, sustainable fishery resources and fishing opportunities into the future” – Joint Strategic Plan
* Dedicated staff to convene states and effectively accomplish cooperative management as opposed to ineffective approach afforded by MICRA with voluntary state dues ($1,500/year) and one part-time staff person

When management decisions are reached by the commission, the states are able to use that strength when discussing management direction with constituents and the state administration. Both Illinois and Indiana have relatively small shoreline of Lake Michigan, but the states are an equal part of the discussions that occur through the commission.

What is your vision for state engagement with the commission? For example, Minnesota has several positions that are dedicated to working just on the state’s large rivers. The commission would allow states to increase capacity for large rivers fisheries management that may not be as strongly supported by the state’s fishing license buying public. It will allow states to work where sport fish restoration funding ends. Kentucky has considerable needs for managing paddlefish in our interjurisdictional waters, but we don’t have the funding to support this work. Interjurisdictional fisheries that have inadequate resources available to manage as we do other fisheries in the state that are supported by SFR funds.

The real advantage comes from having a single entity that is dedicated to and focused on supporting interjurisdictional fisheries management in the basin. Having the entity in place that is responsible for the planning, coordination, convening of meetings, provides support, brings the right people together at the right times, and has a uniform focus on addressing priorities. Many of the GLFC staff’s function is not as biologists but as conveners.

At a sub-basin level, we have numerous sport fish and non-game species that are interjurisdictional, highly migratory, and are important to all the states. We also have a lot of different regulations for these species among the four states. However, in our case there is only one state that really has the staff that can collect the data necessary to inform management decisions. The fishery commission would allow the other states to increase their capacity to manage these large rivers interjurisdictional fisheries.

The fishery commission could be an important mechanism to provide capacity for states to collaborate in the numerous ecosystem restoration initiatives that emerging around the basin. The fishery commission will also facilitate multi-agency coordination on a basinwide scale and leverage success from one sub-basin to the others.

Is MICRA requesting designated funding in conjunction with the authorization of the fishery commission? That is a steep hill to climb. Yes, the stability in funding is needed for the states to consider adding staff. The draft legislation includes authorization for increasing funding levels to support the commission. The first year is $1 million to get the commission stood up and operational. The authorization increases to $30 million for several years to provide the non-competitive grants to states, and then it increases to $50 million for several more years to expand the amount of funding available for competitive grants to support the commission’s priorities. It would be similar to RBFF that is called for by law. ORSANCO is another example.

The formalized structure and funding provide all states the opportunity to be at the table to discuss and develop collaborative management decisions affecting the basin’s fishery resources.

There is an initial need for planning and coordination that precedes the work on the ground. These are likely the first steps once the secretariat and governance are in place.

* Sub-basin management plans (akin to the GLFC lake management plans) to operationalize the Joint Strategic Plan
* Collaboratively develop shared management objectives at the sub-basin scale
* Prioritize management and research needs to support management

How do you measure your success in getting what you want as you go along? First step is getting it setup so that you can do the management that you want to do later. Decision makers will want to know: what is needed, what is preventing you from getting there, and how will the fishery commission remove these barriers to allow for success? It will be important to communicate progress and success along the way. You need to be able to simply convey the complexity of the issue.

We could look at how the UMR is looking at some of the values of ecosystem resilience in communicating what success might look like. For example, increasing habitat diversity increases opportunities for different species to have refugia to utilize. Investments through the UMRR program are at least $33 million/year and now are increasing to upwards of $70 million. There are additional ecosystem investments through the NESP. Those kinds of messages can be used to discuss what is needed for the entire Mississippi River Basin. The states recognized the need and invested in MICRA as an initial step towards the establishment of a fishery commission.

Is there a canned example of species that the states want to prevent from happening to other species? Paddlefish, catfish species, and SFR funding limitations. We can speak to the highly modified nature of the large river systems brought about by the actions of federal agencies.

Is it just where SFR funding stops or is it also that it’s not enough? The funding is additive to the management that states are able to accomplish with SFR. Many states do not have a mechanism or the resources to direct towards large rivers fisheries management needs.

The fishery commission fills a need for an entity that can bring the management agencies together to collaborate on interjurisdictional issues. Brings states and federal agencies together to address issues such as large river habitat restoration.

Topics to revisit:

* Does the board need to start putting together a rough budget on the initial administrative and operational needs, i.e., how will the $1 million in appropriations be used?
* Is more discussion needed regarding a request to AFWA or seeking a contractor to continue these planning discussions?
* What are our next steps?

More thinking and discussion about the fishery commission at this level of detail is needed. It will be valuable to hear feedback from the DC fly-in time about their discussions with Congressional staff.

## Review of MICRA’s Draft 2024-2028 MICRA’s Priorities Document

*Discussion Item:*

Conover will lead preparations for the MICRA Delegate meeting 30-minute discussion about the draft 2024-2028 MICRA Priorities document. No changes were recommended by the MICRA Delegates following the review of the draft provided on May 8. However, Mark Gaikowski provided several comments recommending the additional of native freshwater mussel priorities. Several comments were also received from the MICRA AIS Committee members regarding priorities under the AIS objective. No revisions were suggested to the appendix with 2019-2023 accomplishments.

The draft 2024-2028 MICRA priorities document is provided as a supporting document in [Appendix 1](#Appendix1). The Executive Board will review the comments and suggested revisions and consider messaging regarding the draft priorities document for the MICRA Delegate meeting.

*Discussion Notes:*

The document was sent out for review by the delegates. No substantial comments were received from the Delegates. The document was also shared by the committee chairs with the standing committees. Gaikowski provided several comments noting ways that native freshwater mussel priorities could be added throughout the document. The AIS Committee provided a couple place holders for priorities that they are working to develop.

The Executive Board had planned to hold a conference call prior to the MICRA Delegate meeting to talk through the comments that were received on the initial draft, but that call did not happen. The Delegates have had the opportunity to review the initial draft and should be familiar with this document. We can let them know that the next step is for the Executive Board to talk through the comments received during tomorrow’s board meeting. The board will also work the AIS Committee to consider the new recommendations they will be providing. Once complete, the revised draft will be shared with the Delegates noting that the board anticipates 2-3 additions but not substantive changes to the initial draft. If there are no further comments from the Delegates, the revised draft will be finalized and posted on the MICRA website.

Bourgeois was asked for a time estimate for the AIS Committee to provide the additional recommendations to the Executive Board. When are they needed by the Executive Board? The board would like to have the document finalized before the end of the year. The delegates will be provided a 30-day review of the revised draft. The Executive Board will need some time for review and possible discussion if desired. It would be best to have all additions and final revisions provided to Conover by the end of October so he can provide it to the Executive Board in early November.

The two new recommendations that the AIS Committee is considering would be for the committee to address organisms-in-trade and baitfish. If the priorities are not provided in time to finalize the document by the end of the year, the committee can still work on developing and addressing the priorities. The Priorities document is intended to be a living document and can be updated during the 5-year operational period whenever new priorities come forward.

* Bourgeois will work with the AIS Committee members to provide any additional AIS priorities for the draft 2024-2028 Priorities document to the Executive Board by November 1.
* Conover will provide a revised draft 2024-2028 Priorities document to the Executive Board in early November.
* The Executive Board will review the revised draft 2024-2028 Priorities document and provide it to the MICRA Delegates for a final review by November 30 if there are substantial changes.
* The Executive Board will finalize the draft 2024-2028 Priorities document and post it on the MICRA website in December.

The other part of the draft 2024-2028 Priorities document is the accomplishment tracking of the 2019-2023 priorities provided in the appendix. No comments or additions were received on the appendix from the delegates. There are several on-going actions noted in the appendix that will need to be updated at the end of the year.

## Review of MICRA’s Draft Aquatic Habitat Action Plan

*Discussion:*

Conover will lead preparations for the MICRA Delegate meeting 30-minute discussion about the draft MICRA Aquatic Habitat Action Plan.

Remaining steps for finalizing the draft Action Plan are to:

1. Finalize MICRA’s updated list of interjurisdictional rivers in the basin and add as an appendix to the document.
2. Update the sub-basin tables and figures of interjurisdictional rivers.
3. Correct and update the basin wide map included on page iii.

General comments received on the draft list of 6th order and larger interjurisdictional river in the basin are provided below for consideration. The draft report is provided as [Appendix 2](#Appendix2) of the briefing book.

General Comments

* Is stream order the most informative? Would a 6-digit HUC be easier to standardize this effort and limitation of IJ rivers?
* I do like the idea of adding some rivers based on order even if they are not interjurisdictional, especially since they may be/are very important for several species (sturgeon, catfishes, paddlefish, buffalo, etc.). However, I believe incorporating them does water down the original intent of interjurisdictional classification focusing on more than one management authority. Perhaps only include > 5th order rivers if they meet the criteria for the LMR’s Black “not an interjurisdictional river but is formed by interjurisdictional tributaries” where the interjurisdictional tributary meets a certain order criteria. Also, see response to #5 below.
* Stream order alone should not be a deciding criteria. Multiple criteria will best capture the intent and definition that has been used by MICRA when developing the original IJ river’s list. It is not mentioned below, but there must have been reasons for including rivers like the Kaskaskia and Big Muddy in Illinois. Perhaps it had to do with important spawning areas for sturgeon or paddlefish? It appears some on the original list were included because they were also federally authorized navigation projects. A portion of the Kaskaskia is a federally authorized commercial navigation river. This seems like a justifiable reason to keep any of the federally authorized commercial navigation rivers on the list. The presence of commercial navigation does meet the criteria of more than one management entity.
* I have an unofficial map of federally recognized tribal areas. There are many more rivers west of the Mississippi that would be included using the Tribal lands criteria, but it would also be easy to miss some since it is not official. However, the larger Tribal interjurisdictional rivers > 4th order seems like a reasonable cutoff with some textual reference as to why that cutoff was used. But, as stated above, there are advantages to including rivers that are interjurisdictional due to Tribal lands even if 4th order.

*Discussion Notes:*

The Executive Board intended for the document to be finalized prior to this meeting so that it could be presented as final during the All-Delegate meeting and the Aquatic Habitat symposium this week. The board requested Angela Erves to revise the list based on 6th order and larger interjurisdictional rivers. A draft revised list was shared with the delegates by the sub-basin representatives and a few comments were received. General comments are provided above in the briefing book notes. The list was again updated based on the comments received. The updated lists are provided in the notes for Agenda Item #13.

* The Executive Board agreed to use 6th order and larger streams for the MICRA list of interjurisdictional rivers in the basin.

Conover reviewed the remaining steps for finalizing the draft Aquatic Habitat Action Plan. The plan includes a chapter for each sub-basin. Each chapter includes a sub-basin specific table and map of the rivers from the MICRA list of 6th order and larger interjurisdictional rivers. All tables and maps will need to be updated in the sub-basin chapters. There is also a basin-wide map that will need to be updated. An appendix will need to be added that provides MICRA’s full updated list of 6th order and larger interjurisdictional rivers in the basin. The document is very close to being final.

Does the Executive Board want to finalize the document and provide it to the delegates as final, or should the document be shared with the delegates for a final review? The plan for this afternoon is to inform the delegates about this action plan, specifically what it is, why the Executive Board developed it, what its purpose is, who the intended audience is, and how close it is to be final. It is probably not necessary to provide an overview of the document itself.

* The Executive Board agreed to provide the final Aquatic Habitat Action Plan to the delegates once finalized rather than requesting another review of the document.

Once the action plan is finalized, the Executive Board planned to develop sub-basin fact sheets. The Aquatic Habitat Committee previously provided the Executive Board with draft fact sheets.

Conover reviewed the comments that were received and described some of the challenges that Angela Erves encountered. The project was designed to identify rivers that flow through or border more than one state. There are a few rivers such as the Illinois River (UMR) and Holston River (TNCR) that are not interjurisdictional themselves but are formed by interjurisdictional rivers. Capturing these exceptions has added to the work involved in developing this list. She was also requested to go back and add rivers that flow through or border tribal lands but did not make the list as interjurisdictional because they are solely within a single state. All rivers on the updated list that flow through or border tribal lands are now noted in the sub-basin tables.

Including all rivers that have a navigation authority would bring in the Illinois, Kaskaskia, and Big Muddy rivers in the UMR that were previously on MICRA’s list but are not interjurisdictional at a state level. A data driven method to identify rivers with a federal navigation authority and other federal authorities would be a good improvement.

Do the tribal lands include the ceded lands? I don’t know what data layer was used.

What does this list dictate? If a river that should have been included is not on the list, would we be prevented from doing a MICRA project or spending MICRA funds on work in that river? No, the list is simply to show the number and expanse of interjurisdictional rivers in the basin. MICRA originally established a list of interjurisdictional rivers and fish species in the basin shortly after the partnership was formed. The development of the Aquatic Habitat Action Plan brought to light the need to update the list of interjurisdictional rivers. The board previously decided to include a revised list of interjurisdictional rivers in the basin as an appendix to the action plan so that there is a citable source for the number of interjurisdictional rivers in the basin. There is really no harm done if a river is unintentionally omitted. We are trying to develop the list in a way that is document and can be reproduced.

For this afternoon’s meeting with the delegates, we simply need to inform them that we are working to finalize a revised list of interjurisdictional rivers in the basin before finalizing the tables and maps in the action plan. Further discussion on finalizing MICRA’s list of interjurisdictional rivers was delayed until Wednesday.

We should be ready to explain what MICRA’s list means and how it compliments other lists such as the Fishers and Farmers and Reservoirs Fish Habitat Partnerships rather than competing with them.

## Potential Revisions to MICRA’s Constitution and By-laws

*Discussion:*

Parsons will lead preparations for the MICRA Delegate meeting 20-minute discussion on the board’s recommendation to increase MICRA state agency member annual dues from $1,500 to $3,000. This change will require amendment of the By-laws and approval of by a ¾ majority of the MICRA membership.

Conover will discuss additional potential amendments to the By-laws that the Executive Board will consider. Items for discussion are noted in [Appendix 3](#Appendix3).

*Discussion Notes:*

There is an agenda topic for this afternoon’s All-Delegate meeting to discuss the proposed increase in MICRA membership dues. This will require an amendment to MICRA’s Constitution and By-Laws which requires a vote by the delegates and a 3/4 majority in favor of the amendment. A vote can be done by e-mail or in-person if we have a quorum in attendance this afternoon. There may be some strategy in seeking approval of the proposed dues increase this afternoon and then following up with an email vote to approve the additional updates proposed in Appendix 3.

When was the last time the dues were increased? Dues have not been increased since the partnership was formed in 1990.

Seventeen delegates are needed for quorum at an in-person meeting. Would we need ¾ majority of those in attendance or of all MICRA members? The by-laws specify ¾ of all MICRA members. We will need to conduct this business by e-mail.

For today, the discussion will be an FYI and an opportunity to check the delegates’ reactions to the proposed increase.

There was discussion about proposing an increase to $3,000 or $5,000 or using a sliding scale. The problem is $3,000 is doubling the current dues rate for states. $3,000 or $5,000 is largely inconsequential, it is the same workload for the state to process the payment. It was recommended that $5,000 would be a more meaningful increase and would provide more substantial resources for MICRA’s Congressional outreach efforts.

We need to discuss why a dues increase is needed and how the additional funds will be used. It would be very helpful for MICRA to be able to provide travel support for Congressional staff to attend field tours when needed.

We don’t want to lose membership because of too large of dues increase. The states pay membership dues for a lot of other partnerships. Some states may limit the number of partnerships or associations that agencies can pay membership dues to. The board members did not anticipate a problem with their agencies in response to a dues increase to $5,000.

When would this go into effect? The goal would be to have the By-laws amendment approved by the delegates by the end of 2023 and the new dues rate in effect for 2024. Dues are voluntary, so we can encourage the states to pay the increased rate in 2024 if possible but to plan on paying the increased rate in 2025.

It would be good to provide the delegates with some justification for the dues increase that they can take back to their agencies. Considering inflation, $1,500 in 1991 is worth more than $3,300 in 2023. MICRA’s increased policy work is consuming more and more of the partnership’s budget and there is less available to support projects and committees.

For this afternoon, we can also let them know that the board will also be recommending some additional updates to clean up the Constitution and By-laws which were last updated more than10 years ago. Conover provided the board with an overview of the recommended updates provided in Appendix 3. The board needs to clarify whether the Chair-elect is a voting position. The board should discuss whether the ARW and TNCR should be included in the rotation for the MICRA Chairperson or should they be included with the LMR and OHR, respectively, for the purpose of nominating a new Chair-elect. There is considerable overlap between the ARW and LMR, and the TNCR and OHR, which can make it difficult to secure a nomination. There is also a question about proposing a set rotation among the sub-basins for nominating a Chair-elect. That may be better to do at the Executive Board level rather than in the Constitution and By-laws. The identified sub-basin groups need updated, there is no Arkansas River Conservation Committee or Tennessee River Fish Management Group. Conover called the board’s attention to the audit of MICRA’s financial accounts and records.

We do not plan to walk through these updates with the delegates this afternoon. We will just let them know that if we are going to put forward an amendment to increase the membership dues, we are also going to provide some additional changes to clean up the document. We may want to separate the updates into a different item to vote on from the dues increase in the same email.

## Additional Topics and Preparations for the MICRA Delegate meeting

*Discussion:*

Is there anything else that needs discussed in preparation for the MICRA Delegate meeting?

*Discussion Notes:*

The board members were asked if they preferred to present the awards to Neil Rude and Jeff Janvrin for organizing MICRA’s Aquatic Habitat Symposium as part of the All-Delegate meeting, at the conclusion of the symposium, Wednesday morning as part of the Executive Board meeting, or during the Tuesday evening mixer. The board decided on the Tuesday evening mixer.

We will try to get Duane Chapman to the Tuesday evening mixer to present him with the River Champion Award.

No other items were brought up for discussion.

## MICRA Delegate Meeting Agenda

*Notes:*

Minutes of the MICRA Delegate meeting are provided below. Detailed meeting notes were provided to the MICRA Executive Board members in a separate document. Seventeen state agencies and four federal agencies/entities were represented.

**MISSISSIPPI INTERSTATE COOPERATIVE RESOURCE ASSOCIATION**

August 21, 2023

1:00 PM – 5:00 PM (EST)

Amway Grand Plaza Hotel

Governor’s Room

187 Monroe Avenue NW

Grand Rapids, MI

*Remote Participation*

[Join Zoom Meeting](https://us06web.zoom.us/j/88046777428?pwd=S1pnRWRyVVIwa2UvQ1o4WmkxNmIydz09)

Meeting ID: 880 4677 7428  
Passcode: 612825

Meeting Agenda

1:00 Welcome and Introductions (Brad Parsons)

1:10 MICRA’s Policy and Government Affairs Work in 2023 (Ashlee Smith)

* Fishery Commission Initiative, Legislative, and Coalition Progress
* Next Steps for Congressional and Partner Outreach

2:30 Success! Now what? Operationalizing the Mississippi River Basin Fishery Commission (Parsons)

3:00 Break / Refreshments

3:30 Draft 2024-2028 MICRA’s Priorities Document (Parsons and Greg Conover)

4:00 Review of MICRA’s Aquatic Habitat Action Plan (Parsons and Conover)

4:30 Proposal to Increase MICRA Member Annual Dues (Parsons)

4:50 Closing Remarks (Parsons)

5:00 Adjourn / Mixer

6:00 Mixer Closes

**ACTION ITEMS**

1. Delegates were asked to let Ashlee Smith or Ben Batten know if they would be willing to participate in the 2024 DC Fly-in tentatively scheduled for February 26 – March 1, 2024.
2. Delegates were requested to assist with providing two-sided state fact sheets with AIS issues on one side and interjurisdictional fisheries information on the other side (template to be provided by the AIS Committee) by the end of January 2024 for use during MICRA’s 2024 DC Fly-in.
3. The draft legislation to authorize a Mississippi River Basin Fishery Commission and MICRA talking points will be shared with the delegates again following the meeting.
4. Delegates were asked to make sure their directors are briefed on the proposed Mississippi River Basin Fishery Commission and the associated draft legislation that will soon be introduced into the Senate Environment and Public Works (EPW) Committee.
5. Delegates may be requested by Ashlee Smith this fall to participate in remote meetings with staff in Congressional Offices in their states to discuss the proposed Mississippi River Basin Fishery Commission.
6. Delegates were asked to let Ashlee Smith know if there are organizations in their respective states that should be briefed and invited to participate in the Mississippi River Basin Fishery Commission coalition.
7. Delegates (and their staff) were asked to text (601-988-8577) or email ([asmith@sequoya.org](mailto:asmith@sequoya.org)) Ashlee Smith pictures with a short description of their field work, Mississippi River Basin scenery, interjurisdictional fish, AIS, etc. to be used on the coalition website and social media posts.
8. Delegates were asked to let Ashlee Smith know whenever there is an opportunity to invite Congressional staff out to observe large rivers field work.
9. Delegates were asked to contact Ashlee or Ben Batten if they are interested in participating or have staff that they would like to have participate in the Congressional briefing in DC tentatively planned for November 8.
10. Ashlee Smith will investigate the governance documents of existing fishery commissions.
11. The Executive Board will provide the Delegates with a final draft of the 2024-2028 Priorities Document later this Fall and highlight any major revisions or additions so they can be quickly and easily reviewed.
12. The Executive Board will share the final version of the MICRA Aquatic Habitat Action Plan with the delegates once it is finalized this Fall.
13. The Executive Board will consider adding information to the revised list of interjurisdictional rivers in the basin on federal authorities and ceded territories that result in interjurisdictional management of fisheries and aquatic resources.
14. The Executive Board will reconsider the amount of the proposed annual dues increase for state agency members and develop a justification that explains why the increase is needed and identifies what the states will get back in return for their investment in the partnership.

**MEETING ATTENDEES**

1. Ben Batten, Arkansas Game and Fish Commission, MICRA Chair-elect
2. Dave Smith, U.S. Army Corps of Engineers
3. George Scholten, Iowa Department of Natural Resources
4. Rich Zweifel, Ohio Department of Natural Resources, Ohio River Sub-basin Representative
5. Ken Cunningham, Oklahoma Division of Wildlife, Arkansas-Red-White Rivers Sub-basin Representative
6. JC Nelson, U.S. Geological Survey
7. Dave Dreves, Kentucky Department of Fish and Wildlife Resources, Tennessee-Cumberland Rivers Sub-basin Representative
8. Greg Conover, U.S. Fish and Wildlife Service, MICRA Coordinator
9. Justine Hasz, Wisconsin Department of Natural Resources
10. Angie Rodgers, U.S. Fish and Wildlife Service, LMRCC Coordinator
11. Allan Brown, U.S. Fish and Wildlife Service
12. Raynie Harlan, Louisiana Department of Wildlife and Fisheries
13. Ashlee Smith, Sequoya Strategies, MICRA Contractor
14. Kevin Irons, Illinois Department of Natural Resources
15. Brian Schoenung, Illinois Department of Natural Resources, MICRA Past-chair
16. Tim Bister, Texas Parks and Wildlife[[2]](#footnote-2)
17. Aaron Woldt, U.S. Fish and Wildlife Service1
18. Katie Zipfel, West Virginia Department of Natural Resources1
19. Christian Waters, North Carolina Wildlife Resources Commission1
20. Bob Caccese, Pennsylvania Fish and Boat Commission1
21. Heather Smiles, Pennsylvania Fish and Boat Commission1
22. Clint Jones, Tennessee Valley Authority1
23. Bruce Drektrah, Missouri Department of Conservation1
24. Jerry Brown, Mississippi Department of Wildlife, Fisheries, and Parks1
25. Mark Thurman, Tennessee Wildlife Resources Agency1
26. John Lott, South Dakota Game Fish and Parks1
27. Brad Parsons, Minnesota Department of Natural Resources1

## Mississippi River Basin Habitat Management for Interjurisdictional Fishes Symposium Program

Tue, August 22, 8:00 AM - 5:00 PM

DeVos Place - Grand Gallery C

Description

The waters of the Mississippi River Basin (Basin) annually provide more than $19 billion of recreational fishing value. This economic value derives in part from species that require Basin habitats managed by two or more government agencies, including tribal governments. These “interjurisdictional fishes” require cooperation at multiple levels of government to sustain resilient populations and the habitat critical to key life stages. The Mississippi River Interstate Cooperative Resource Association (MICRA) identified implementation of aquatic habitat enhancement or rehabilitation projects in the Basin as a critical component of agency habitat rehabilitation programs to meet the life history needs of interjurisdictional species. Numerous completed projects within the Basin demonstrate the feasibility of implementing large scale habitat improvement. This symposium will use examples to share insights from Basin-wide project implementation and completion and describe progress of projects soon to be completed for the benefit of interjurisdictional fishes and other species.

Session Chairs

Organizer: Neil P Rude, Minnesota Department of Natural Resources

Co-organizer: Jeffrey Janvrin, Wisconsin Department of Natural Resources

Presentations

8:00 AM - 8:20 AM

MICRA's Aquatic Habitat Action Plan for Native Interjurisdictional Fish

Greg Conover, USFWS

8:20 AM - 8:40 AM

A historical perspective on the value of interstate partnerships

Andrew Stephenson, Upper Mississippi River Basin Association

8:40 AM - 9:00 AM

Restoring America’s Greatest River: Partnerships and Potential for the Lower Mississippi

Angeline Rodgers, U.S. Fish and Wildlife Service; Jack Killgore, U.S. Army Engineer

Research and Development Center; Gretchen Benjamin, The Nature Conservancy, Retired

9:00 AM - 9:20 AM

Island Construction: Managing Upper Mississippi River Connectivity through Rebuilding Natural River Levees

Jeffrey Janvrin, Wisconsin Department of Natural Resources

9:20 AM - 9:40 AM

Fisheries habitat reconnection and improvements in the Mississippi River batture of Louisiana

Raynie Harlan, LDWF Inland Fisheries; Robby Maxwell, LA Dept. of Wildlife and Fisheries; Richard McGuffee, LDWF Inland Fisheries

9:40 AM - 1:20 PM

Plenary/Lunch

1:20 PM - 1:40 PM

Fish community change over 15 years at Emiquon – a restored Illinois River backwater

Jim T. Lamer, Illinois Natural History Survey; Toby Holda, INHS; Levi Solomon; Amber Blackert, INHS

1:40 PM - 2:00 PM

The Klondike Dam Removal - Restoring Stream Connectivity in the Big Sioux River

Michael Hawkins, M.S., Iowa DNR - Fisheries

2:00 PM - 2:20 PM

Insights from Stream and Floodplain Restoration Efforts

Kevin Haupt, USFWS

2:20 PM - 3:00 PM

Ecological Restoration of a Midwest Agricultural Stream through Innovation and Fertile Collaboration

Jerry Sweeten, PhDUS, Ecosystemsconnections.com; Kevin Haupt, United States Fish and Wildlife Service

3:00 PM - 3:20 PM

Break

3:20 PM - 4:00 PM

Invasive Carp Underwater Acoustic Deterrent at Mississippi River Lock 19

Marybeth K. Brey, U.S. Geological Survey; Christa M. Woodley, US Army Engineer Research and Development Center; Jessica C. Stanton, PhD, U.S. Geological Survey; Andrea K. Fritts, Andrea Fritts, PhD, U.S. Geological Survey; Matthew Sholtis, U.S. Geological Survey Columbia River Research Lab; Theodore Castro-Santos, U.S. Geological Survey Eastern Ecological Science Center

4:00 PM - 4:20 PM

Fish Passage Design and Pre-Construction Monitoring at Lock and Dam 22on the Upper Mississippi River

Mark Cornish, U.S. Army Corps of Engineers

4:20 PM - 4:40 PM

Fisheries Habitat Improvement through Dredging of Mississippi River Backwaters

Jeffrey Janvrin, Wisconsin Department of Natural Resources

4:40 PM - 5:00 PM

Panel Discussion

## MICRA Delegate Meeting and Symposium After-Action Review

*Discussion:*

The Executive Board members will review the MICRA delegate meeting and the AFS Symposium to consider next steps moving forward.

*Discussion Notes:*

*Aquatic Habitat Symposium*

Batten thanked Neil Rude and Jeff Janvrin for their heroic efforts to organize the Mississippi River Basin Habitat Management for Interjurisdictional Fishes Symposium that was held the previous day as part of the American Fisheries Society annual meeting. Rude and Janvrin were each presented with a plaque and an insulated water bottle with MICRA’s logo during the Tuesday evening social with the MICRA delegates.

Rude and Janvrin were asked for their feedback on the task of being asked to assist MICRA by organizing the symposium. The symposium was recommended during the Executive Board’s discussion about sunsetting the Habitat Committee. It was intended to facilitate inter-basin information exchange in the absence of a standing committee. If this is repeated in the future, the board might want to encourage more participation from the management staff. They were pleased with the attendance throughout the symposium and thought there were a lot of good connections made. It would have helped to have more engagement with the state delegates to get more lower-level staff involved. There were additional projects that they had hoped to include but were not able to get lined up.

Do you think MICRA accomplished increasing communication across the sub-basins and facilitated coordination and sharing ideas between the states and other partners? It was a good start. When they first started to reach out for presentations, it was surprisingly difficult to identify example projects from the different sub-basins. When the Habitat Committee held its only face-to-face meeting, it was difficult for the committee members to think about large river habitat restoration projects. The symposium provided us with a starting list of projects from around the basin. If the Executive Board decides to host another symposium, it would be good to provide people with 2-3 years notice so they can get the meeting on their agency’s travel schedules and budgets accordingly.

It was interesting to hear about projects going on around the basin. It was eye opening to hear about the differences in the level of activity across the sub-basins. It would have been nice to have had more diversity of projects throughout the basin. That may have been a result of needing more time to talk with on-the-ground staff. There are a lot of lessons and ideas that can be shared across the sub-basins. Something that works within one sub-basin is likely not directly transferable to the other because they are all so different, but the more you understand the efforts in the other basins you can apply pieces to your own situation to find something that works.

Is there interest in publishing these presentations in a special issue of some form? There has been some discussion in the Upper Mississippi River about bringing together a group of biologists every 4 years or so to share their experiences and what they’ve learned from monitoring, so people know what is working, but not get into the full rigor of peer-reviewed publications. It could be summarized in a less rigorous proceedings or another similar document.

Has there been any consideration of a fully virtual symposium? That would take the travel element out of it. USGS hosted a Mississippi River Basin Science Forum earlier this year that was fully virtual. There were 500 people in attendance both days. There is a lot of interest in habitat in the Mississippi River Basin right now. USGS could assist with a conference or symposium proceedings if they were to assist with something like that. Its another option for bringing people together to discuss an issue or set of issues.

Another option to consider would be to request each sub-basin to provide two projects to highlight on the MICRA website. This could be done using a storyboard or geonarrative. That is a good starting point that could be built out.

The board will be finalizing the Aquatic Habitat Action Plan and then developing the sub-basin fact sheets. We may want to keep habitat on our radar and the agenda for future meetings.

* Conover will include a discussion of next steps for aquatic habitat on the agenda for the board’s next meeting.

There is an August 2021 meeting action item for the board to consider hosting a symposium on interjurisdictional fisheries management in the basin. That was put on hold until the aquatic habitat symposium was complete. We can discuss this during the board’s winter meeting.

* Conover will include a discussion about an interjurisdictional fisheries symposium on the agenda for the board’s next meeting, including a list of upcoming meeting dates and locations (e.g., AFS, Midwest, etc.).

*MICRA Delegate Meeting*

Batten summarized the discussion with the delegates regarding the proposed increase in state member annual dues. The Executive Board previously agreed to recommend an increase to $3,000 but based on the discussion prior to the Delegates meeting the board members were leaning towards recommending an increase to $5,000 per year. However, the input from the delegates in attendance was more supportive of an increase to $3,000. The board discussed options for moving forward. If approved, some states may not have budgeted accordingly and may not be able to pay the increased rate in 2024. This should be addressed when the increase is sent to the delegates for approval and can be addressed again when 2024 dues invoices are mailed out.

* The Executive Board agreed to continue moving forward with a proposed increase in state member annual membership dues from $1,500 to $3,000 beginning in 2024.
* The Executive Board will develop a justification for a proposed increase in state agency annual membership dues from $1,500 to $3,000 t0 explain why the additional funding is needed, how it will be used, and the benefit it will provide back to the member agencies.
* Conover will work with Parsons and Batten to send a follow up email to the MICRA Delegates to let them know the board’s decision to propose a By-laws amendment to increase the state agency member annual dues to $3,000 beginning in 2024.

Membership dues invoices are typically mailed out in January or February; however, some states have requested to be invoiced in July.

The board discussed the effectiveness of holding the Delegates Meeting in conjunction with the AFS Annual Meeting and the Aquatic Habitat Symposium. Getting 28 state fish chiefs together will be difficult no matter what. Promoting along with this or another national meeting is likely the best strategy. Many fish chiefs do not attend AFWA or regional AFWA meetings. Logistically, it worked well for the board members. Meeting in conjunction with national meetings is considerably more expensive for MICRA. The conference registration fee is an added expense for board members unless they were planning to attend the conference, in which case the MICRA meetings interfere with conference events. It is better when the conference is located within the basin. Are there other meetings that are better attended by MICRA Delegates? The AFWA Water Resources and Policy Committee is often well attended by MICRA Delegates when it meets within the basin.

The board organizes delegate meetings as needed but at least once every 5 years. Will this change with the fishery commission? The fish chiefs would likely need to meet at least annually under a commission structure. It will always be challenging to have representation from all delegates given the number of states and geographic scope of the basin.

Is it worth doing a 1-on-1 outreach effort to engage the new or inactive fish chiefs in the basin? We will need to do that if/when a bill drops to authorize the commission. The sub-basin representatives could reach out to their delegates. A single call for each sub-basin may be a good alternative. We can also let them know that 1-on-1 calls are an option for anyone that is interested or is not available for a sub-basin call. The sub-basin calls seem to be better attended than the all-delegate calls.

* Batten and Smith will work with the sub-basin representatives to schedule sub-basin or 1-on-1 calls with MICRA delegates to discuss the fishery commission and draft legislation.

## Mississippi River Basin Fishery Commission Next Steps

*Discussion:*

Parsons will lead a group discussion building from the Executive Board’s February 2023 meeting regarding operationalizing the Mississippi River Basin Fishery Commission. In February 2023, the Executive Board identified the following three topics to revisit:

1. Does the board need to start putting together a rough budget on the initial administrative and operational needs, i.e., how will the $1 million in appropriations be used?
2. Is more discussion needed regarding a request to AFWA or seeking a contractor to continue these planning discussions?
3. What are our next steps?

*Discussion Notes:*

There was acknowledgement that the Executive Board does not need to have a plan completely lined out, but it would be in our best interest to be able to communicate within $100,000 what the commission will do with the initial $1 million in appropriations and to have a rough idea of what the transition and timeframe look like once the commission is authorized. Not detailed governance or by-laws level. Unless the commission is authorized in an appropriations bill, the commission could be waiting for the initial appropriations after a bill is passed authorizing the commission. That scenario would provide MICRA with time to begin working on governance documents and staffing plans so that the Executive Board can act as soon as funding for the commission is appropriated. It could be months or years between authorization and appropriations. There will be several things for MICRA to begin preparing immediately, e.g., initial charter documents, rules and procedures, the official document used for states to join the commission, elect and convene the governing council, etc. The legislation states that once two states join the commission is officially formed. MICRA Executive Board meetings may need to double as Commission meetings until funds are appropriated and an Executive Director for the commission is hired. Who writes those documents? Do we hire a consultant for that work? It depends on the appropriations situation. We will want to borrow from some of the other commissions’ documents. The commission can start to function after an authorization even without appropriations. Fiscal Year 2025 would be the earliest that funding would be appropriated for the commission. Where does the appropriated funding go? As currently proposed, the appropriations would go to the Department of Interior who would then administer the funds to the commission. There will likely be some time where both MICRA and the commission are functioning at the same time until the commission is fully operational and MICRA can be dissolved.

There is some legwork that could be done to research the transition. Someone could start by contacting each of the existing commissions to discuss their governance documents. A state agency would likely hire an attorney to work on something like this. Smith could potentially assist with this once the legislation is passed. She knows a lawyer with the right experience and background that MICRA could reach out to.

What can we start working on now rather than scrambling once the authorizing bill is passed? It would be good to start holding regular calls focused on the transition. The board might want to consider a transition team sub-committee, but who would be able to participate?

*February 2023 Discussion Notes*:

Parsons requested the board members to have a focused discussion on the reality of the proposed fishery commission being authorized. That is, how do we prepare for that reality. MICRA will be in DC for the annual Fly-in in a couple weeks and the delegates may be asked some challenging questions. We want to be prepared for those discussions and we want to be prepared to act should the fishery commission be authorized.

Most of our focus to this point has been positioning ourselves for success in establishing a fishery commission. We haven’t spent a lot of time discussing the foundation so that the board is ready to move and begin to implement the commission and cooperative resource management as soon as the fishery commission is authorization and funding potentially appropriated. Now it is time to shift our focus to preparing for success following an authorization. For example, what will logistics of the commission look like, what is the structure that it will encompass, how do we develop our charter so that it is something we can implement as soon as the authorization is passed that we anticipate is coming. How do we establish that system so that someone will want to step into the role of the first Executive Director/Secretary of this new fishery commission?

Smith is late for the Executive Board meeting because she stayed in DC to talk with two Senators that she is hopeful will co-sponsor the legislation to authorize the Fishery Commission. She believes there is real potential for the fishery commission to be authorized by this Congress. We want to be prepared to implement and not get caught flatfooted.

The board has previously touched on initial staffing for the fishery commission at a high level, but we need to have a plan for the specific positions that would immediately need to be filled and the qualities that the board members would like to see when recruiting for these positions. It would be useful for the board members to start thinking about their networks and who we might want to potentially recruit for the new secretariat.

Should we be looking outside of MICRA for assistance in guiding us through this part of the process? Would it be appropriate to reach out to the AFWA Management Assistance Team?

As the draft legislation gets legs, the MICRA delegates are likely to get more questions from their leaderships and Administrations. We need to be prepared to discuss details and address questions both internally and externally.

As currently laid out, the initial action will be for the MICRA Executive Board to hire an Executive Director to stand up the remainder of the Secretariat under the supervision of the board. The Joint Strategic Plan will serve as a guiding document. Initially, the MICRA Executive Board would continue to meet until the fishery commission structure is operationalized. We will need to develop an equitable way of distributing the non-competitive portion of the appropriations to the commission members. An even allocation across all member agencies may not be the best approach.

Getting something started doesn’t require the same skill set as running something long term. Do we need an Executive Director whose skill set is to get the fishery commission up and running or are we looking for someone who can nurture and grow the fishery commission? Is it too early to consider potential individuals that are well suited for our needs? We may want to focus on the specific positions and different skill sets for the moment. For example, we may want a communications director to work alongside the executive director. A financial person to manage grants may be another immediate need.

We need to be cautious and keep any positions to a minimum. There will be some basic needs and cost to staffing the fishery commission. There is a strong emphasis by legislators right now in reducing administrative costs or keeping them as low as possible. Proposals that have a lot of administrative costs are not doing well. Those that are most successful have stricter limits on administrative costs than we have seen in a while. We need a plan for what the commission will need for staff, but I encourage us to keep it as light as possible initially. The Great Lakes Fishery Commission (GLFC) started much smaller than what it looks like today.

We’ve previously discussed an administrative assistant as a fundamental initial need for the fishery commission or secretariat to function. We do not want the executive director spending time on basic administrative functions.

Four key positions were proposed for discussion:

1. Executive director
   1. First position hired – by MICRA Executive Board
   2. Tasked with hiring additional secretariat staff
   3. Work with a consultant to assist with developing secretariat and governance structure with commission membership?
2. Communications director
   1. Potentially serve as deputy (director in training)
   2. Need may depend on who is hired as executive director
3. Grants manager / administrator
4. IJ fishery biologist

UMRBA is a lean and effective organization that is structured much like what is proposed. They have added a staff biologist as they have grown over the last 10 years.

Could the executive director and communications director be combined if needed? Ideally, they would be separate so that neither position is tasked with too many responsibilities to function effectively as needed. The communications director could also be used as a trainee position for the executive director (i.e., deputy or assistant) if a retiree or short-term hire was made for the initial executive director.

Something that is not captured here is legal assistance. It does not need to be a staff person necessarily, but there will be a need for legal assistance in establishing the organization properly (e.g., registering the entity, internal revenue service, etc.). We can look at contracting for communications or other needs to keep staff size smaller.

What would the mechanics of moving money to the states look like? The authority for the USFWS to move funding to the fishery commission is the authorizing legislation. The fishery commission would then manage moving funds to the member agencies or others in the case of the competitive grants. There are many federal laws that get passed along with funding so there will be a significant need for accountability, tracking, and regulatory aspects. Who is going to make sure of all this for the fishery commission if it is issuing grants or sub-awards of the federal funds?

The GLFC funding goes through the Department of State and not USFWS. If the funding came through the Department of Interior or USFWS, there are several authorities in place to make both competitive and non-competitive grants to partners. Congress can grant authority to agencies to pass money through for various purposes. That type of authorization may or may not be part of any legislation that authorizes the formation of a fishery commission. There are multiple options that could be explored.

If Congress appropriates funding to support the fishery commission, would the host federal agency administer the competitive and non-competitive grants, or would the funding be passed through to the commission to then administer the grants? Either the federal host agency or the commission would likely need to hire a full-time person to administer 30 or more grants.

The GLFC is a unique situation. The most recent ruling from solicitors is that once U.S. federal funds are mixed with Canadian federal funds, the funds are no longer considered U.S. federal funds.

Potential contract support:

1. Legal
2. Accounting / CPA
3. Communications

Considerations:

* Salary and benefits / payroll / retirement for commission staff
  + Commission staff, agency staff, or combination
    - GLFC: Inter-governmental Personnel Act and Cooperative Agreements
    - SARP: State dues and grant funding
* Allocation of non-competitive grants to commission member states
* State agency dues
  + How much?
  + How used?

Who does the Executive Director answer to? Initially the MICRA Executive Board until the transition to the fishery commission governance is complete. The MICRA Executive Board is proposed to transition to the commissioners, with one commissioner representing each sub-basin and two federal entity commissioners. The executive director and secretariat would work under the commissioners.

Would the commission be a federally entity? Would the executive director be a federal employee? No.

Should we expect USFWS to pull their current level of support for the partnership once the fishery commission is authorized and there is a secretariat handling the work of the commission? Future support would likely look different, but I would not characterize it as pulling back. The USFWS has several staff that support the GLFC. In the end, USFWS could potentially be at a similar or increased level from what it is now. It is all unknown at this point and we can only speculate how the agency may choose to participate once the commission structure is formalized. There would likely be interest in maintaining a liaison type role with the fishery commission.

If the commission is its own entity, then there are numerous administrative needs that will need to be setup around hiring staff, e.g., payroll, pension, and benefits such as health care and retirement. There are precedence that can be used. There can be agency staff working for the commission or commission staff or a combination of both. In the early days of the GLFC, the Service had staff working under agreements for the commission on both a part-time and full-time basis. It may not be necessary for the commission to hire all the key staff out of the gate. The USFWS had someone working for the commission for eight or nine years. There are still a couple USFWS employees working part-time for the GLFC. The salary, benefits, and retirement are all paid by the USFWS and GLFC reimburses only for salary. Those types of arrangements could be part of the initial or long-term structure. The Inter-governmental Personal Act and cooperative agreements are a couple of options. SARP uses some sort of arrangement for their coordinator and other staff. It may be another group for us to look at.

We will need to reach consensus on the allocation of the non-competitive grants to the commission member states. All member states currently pay the same level of membership dues to MICRA. The expectation is that all funds would be used to support work in the Mississippi River Basin. The states with a small proportion of the basin’s interjurisdictional rivers will need to determine what level of funding they need to support their collaborative fisheries management in these waters.

A different model would be to allocate the funding (evenly?) to the sub-basins and let the sub-basins determine how to allocate the funding among their states. The allocation would need to be based on a non-competitive model and not competitively within the sub-basin. Who will handle the coordination and decision-making role within each of the sub-basins? For example, does the ORFMT or UMRCC have the capacity to fill that role? What about the Arkansas-Red-White and Tennessee Cumberland sub-basins that do not have a formalized coordination structure in place like the other four sub-basins? There are differences in the level at which the state agencies are involved or participate in the different sub-basin partnerships. The sub-basin representatives would be responsible for discussing the allocation of non-competitive funding at the sub-basin level. That model would take more investment in coordination time than to do it at a basinwide scale.

I would not like the USFWS ANS state/interstate plan implementation funding model where the entire pie is split evenly among everyone. That model does not make sense for this scenario.

If the non-competitive funds are intended to support the addition of staff among the member agencies, then we would not want to be looking at changing or shifting these allocations on an annual basis. We will need input from the member agencies regarding their individual needs and abilities to add staff support. Is there a set of questions that we should send out to the delegates to gather their input, for example:

* Would the state intend to hire additional staff to be committed to the commission and large rivers interjurisdictional fisheries management work?
* What would the anticipate doing or needing?

There are different ways that we can go about gathering input from the delegates and we should consider how best to do that.

When we are talking with Congressional staff in DC, the most important thing for us to be able to clearly articulate is how the fishery commission will help the states and benefit the general public. How does more capacity make a meaningful difference?

* State and federal resource management agencies recognize the need and want to do more for sustainable management and utilization of interjurisdictional fishery resources but lack the resources and capacity to coordinate, plan, implement, and evaluate cooperative management actions
* States may not feel comfortable investing limited Sport Fish Restoration (SFR) funds into large river fisheries management when more of their constituents are interested in reservoir fisheries.
* The proposed commission would provide a secure funding source to support large rivers work without cutting into their SFR funds.
* Allows states to manage fisheries where SFR ends, e.g., paddlefish
* Allows states to have focused effort on large river, interjurisdictional fisheries “to provide for long-term, sustainable fishery resources and fishing opportunities into the future” – Joint Strategic Plan
* Dedicated staff to convene states and effectively accomplish cooperative management as opposed to ineffective approach afforded by MICRA with voluntary state dues ($1,500/year) and one part-time staff person

When management decisions are reached by the commission, the states are able to use that strength when discussing management direction with constituents and the state administration. Both Illinois and Indiana have relatively small shoreline of Lake Michigan, but the states are an equal part of the discussions that occur through the commission.

What is your vision for state engagement with the commission? For example, Minnesota has several positions that are dedicated to working just on the state’s large rivers. The commission would allow states to increase capacity for large rivers fisheries management that may not be as strongly supported by the state’s fishing license buying public. It will allow states to work where sport fish restoration funding ends. Kentucky has considerable needs for managing paddlefish in our interjurisdictional waters, but we don’t have the funding to support this work. Interjurisdictional fisheries that have inadequate resources available to manage as we do other fisheries in the state that are supported by SFR funds.

The real advantage comes from having a single entity that is dedicated to and focused on supporting interjurisdictional fisheries management in the basin. Having the entity in place that is responsible for the planning, coordination, convening of meetings, provides support, brings the right people together at the right times, and has a uniform focus on addressing priorities. Many of the GLFC staff’s function is not as biologists but as conveners.

At a sub-basin level, we have numerous sport fish and non-game species that are interjurisdictional, highly migratory, and are important to all the states. We also have a lot of different regulations for these species among the four states. However, in our case there is only one state that really has the staff that can collect the data necessary to inform management decisions. The fishery commission would allow the other states to increase their capacity to manage these large rivers interjurisdictional fisheries.

The fishery commission could be an important mechanism to provide capacity for states to collaborate in the numerous ecosystem restoration initiatives that emerging around the basin. The fishery commission will also facilitate multi-agency coordination on a basinwide scale and leverage success from one sub-basin to the others.

Is MICRA requesting designated funding in conjunction with the authorization of the fishery commission? That is a steep hill to climb. Yes, the stability in funding is needed for the states to consider adding staff. The draft legislation includes authorization for increasing funding levels to support the commission. The first year is $1 million to get the commission stood up and operational. The authorization increases to $30 million for several years to provide the non-competitive grants to states, and then it increases to $50 million for several more years to expand the amount of funding available for competitive grants to support the commission’s priorities. It would be similar to RBFF that is called for by law. ORSANCO is another example.

The formalized structure and funding provide all states the opportunity to be at the table to discuss and develop collaborative management decisions affecting the basin’s fishery resources.

There is an initial need for planning and coordination that precedes the work on the ground. These are likely the first steps once the secretariat and governance are in place.

* Sub-basin management plans (akin to the GLFC lake management plans) to operationalize the Joint Strategic Plan
* Collaboratively develop shared management objectives at the sub-basin scale
* Prioritize management and research needs to support management

How do you measure your success in getting what you want as you go along? First step is getting it setup so that you can do the management that you want to do later. Decision makers will want to know: what is needed, what is preventing you from getting there, and how will the fishery commission remove these barriers to allow for success? It will be important to communicate progress and success along the way. You need to be able to simply convey the complexity of the issue.

We could look at how the UMR is looking at some of the values of ecosystem resilience in communicating what success might look like. For example, increasing habitat diversity increases opportunities for different species to have refugia to utilize. Investments through the UMRR program are at least $33 million/year and now are increasing to upwards of $70 million. There are additional ecosystem investments through the NESP. Those kinds of messages can be used to discuss what is needed for the entire Mississippi River Basin. The states recognized the need and invested in MICRA as an initial step towards the establishment of a fishery commission.

Is there a canned example of species that the states want to prevent from happening to other species? Paddlefish, catfish species, and SFR funding limitations. We can speak to the highly modified nature of the large river systems brought about by the actions of federal agencies.

Is it just where SFR funding stops or is it also that it’s not enough? The funding is additive to the management that states are able to accomplish with SFR. Many states do not have a mechanism or the resources to direct towards large rivers fisheries management needs.

The fishery commission fills a need for an entity that can bring the management agencies together to collaborate on interjurisdictional issues. Brings states and federal agencies together to address issues such as large river habitat restoration.

Topics to revisit:

* Does the board need to start putting together a rough budget on the initial administrative and operational needs, i.e., how will the $1 million in appropriations be used?
* Is more discussion needed regarding a request to AFWA or seeking a contractor to continue these planning discussions?
* What are our next steps?

More thinking and discussion about the fishery commission at this level of detail is needed. It will be valuable to hear feedback from the DC fly-in time about their discussions with Congressional staff.

## Legislative, Policy, and Outreach Next Steps

*Discussion:*

Ashlee Smith will lead a discussion with the Executive Board to discuss next steps regarding MICRA’s policy and government affairs priorities.

*Discussion Notes:*

Ashlee Smith shared and reviewed MICRA’s 2022 DC fly-in talking points related to WRDA (see below) and led a discussion about potential WRDA related needs for the pending 2024 reauthorization.

Smith said she feels like more people are joining the conversation around the need for USACE to initiate the scoping phase of a feasibility study to prevent the two-way transfer of AIS as was authorized with the Great Lakes and Mississippi River Interbasin Study (GLMRIS). She plans to talk with UMRBA for support with this priority need for the basin. The offices all seem to be in support of this when it is discussed during the fly-ins but there has been no movement to date. More focus on the Energy, Water, and Development Appropriations sub-committee is needed in 2024. Since this has already been authorized, it just needs funded. Could it be funded by GLRI? That would require the Great Lakes states to consider downstream transfer as a priority, but the focus has all been on upstream movement of invasive carp. USACE submits projects for funding under GLRI. Rock Island District is the lead from the Brandon Road Project. MICRA has been told by Rock Island District that this project has been included in their work plan each year but when it gets to DC it doesn’t make it in. Is there a need to talk to the Chicago District? It would seem like two-way transfer should be a priority as USACE is investing a lot of time and money into research and development of several tools such as flushing locks, C02, electricity, and more for Brandon Road Lock and Dam. The Rock Island District has said multiple times that Brandon Road address two-way transfer when that is not the case. There may be some outreach needed with USACE leadership to raise awareness about two-way transfer needs.

MICRA’s recommendation for the addition of “financial assistance” to USFWS’s responsibilities under WRRDA 2014 and the recommendation to establish a “Fish and Wildlife Service Program to Provide Financial Assistance to States for Invasive Carp Management and Control” were not addressed in WRDA 2022. This has been difficult to explain to staff members, especially the need to limit the indirect cost rate. Staff realize that USFWS does not have provide financial assistance, but they see that it is getting done. State Federal Aid coordinators may be able to help provide clarification for communicating the need related to limiting indirect cost rates. How high a priority is this? States can influence university’s indirect cost rate to a point. They can’t request universities to lower their indirect cost rate, but the state can tell the universities that they cannot afford their proposals and request that they find away to lower the overall cost. Is there work not getting done because these two needs have not been addressed?

There have been other dedicated funding programs passed in WRDA, e.g., the Delaware River Program. There have been no appropriations for the USFWS program authorized under Section 509(b). MICRA recommended the establishment of this basinwide financial assistance program in lieu of the limited program authorized in Section 509(b). It may be clear to recommend the program without making the connection to 509(b) because it gets very confusing. It doesn’t hurt if 509(b) stays in WRDA but is never funded.

A point of clarification was needed for the discussion. The document that Ashlee was reviewing was from MICRA’s 2022 DC fly-in. She is wanting to determine which of these needs remain priorities for MICRA in 2024 and their relative importance because the deadline for submitting requests for the 2024 WRDA reauthorization has been moved up to October 2023. Usually, MICRA discusses WRDA related needs with staff in February ahead of a March or April deadline. The deadline in 2022 was moved up to the week before the MICRA fly-in.

WRDA 2014, Section 1039, directed USFWS to lead a multi-agency effort to manage and control invasive carp in the basin (only Upper Mississippi River and Ohio River basins were included in 2014). WRDA 2020, Section 509(b), authorized USFWS to establish a program to provide financial assistance to states to implement measures to eradicate invasive carp with priority to the Cumberland River and Tennessee River watersheds. The authorization also includes $4 million to carry out the program in fiscal years 2021 through 2025. There have been no appropriations for this authorization. Point of clarification, none of the USFWS’s invasive carp funding has ever come through WRDA. There is no authorization in WRDA for USFWS to receive funding to lead the multi-agency effort to manage and control invasive carp in the basin. WRRDA 2014, Section 1039, does not include an authorization of appropriations for USFWS. FY2015 appropriations language directed USFWS to use the increase in invasive carp funding to manage and control invasive carp in the Mississippi River Basin.

WRDA 2020, Section 506, expanded the scope of the USFWS-led multi-agency effort in the basin from the Upper Mississippi River and Ohio River sub-basins to all six sub-basins.

Circling back to #2, what is the purpose of the recommendation to add financial assistance to the USFWS directive? Basically, to cement the hand-shake agreement between USFWS and the states.

What kind of reception did you get when you last discussed these priorities? They struggle to see the need since funds are moving to the states. No one is complaining that things aren’t working. Did this priority originate early on before there was consistency in the financial assistance that USFWS has been providing to the states? Are we now at a point of “if it’s not broke, don’t fix it”?

WRDA 2020, Section 509(a), authorizes the pilot deterrents program in the Tennessee and Cumberland rivers. The program was authorized at $25 million but USACE only requested around $250,000 in FY21 and $500,000 in FY22 and FY23. The Tombigbee Waterway was added as a mandatory location for the pilot program in WRDA 2022. This was #4 in the 2022 talking points and can be removed from the list for 2024.

In 2022, MICRA recommended an increase in the authorizations for appropriations to implement the pilot deterrents program. Smith does not expect any action on this until USACE requests the currently authorized appropriations and begins work on one or more deterrents projects. Dreves relayed a concern from the Tennessee-Cumberland sub-basin delegates prior to the meeting regarding the cost-share requirement associated with this program. The program currently has a 75:25 cost-share requirement. The Brandon Road Project is a 90:10 cost-share. The projects implemented under this program should be 100% federally funded or 90:10 cost-share at most. Smith recommended leaving #5 exactly as written. Is there a list of priority project locations? USACE hopes to have the list by the end of this year. How long will it take to get a project funded and implemented once the list if finalized? It could move quickly if USACE requested additional funds for FY24. The TNCR is working through Phase 1 of a decision analysis to identify priority deterrent locations in the Tennessee and Cumberland rivers to provide to USACE in the coming weeks. There is not a need for a feasibility study for projects implemented under this program. Neal Jackson was requested to share the final Phase 1 recommendations with the MICRA Executive Board.

* Neal Jackson will share the TNCR Phase 1 decision analysis results with the MICRA Executive Board once the process is complete and the results have been provided to USACE.

How do we expand this to other sub-basins? There is interest in the Arkansas and the White rivers. That is what #6 addresses. There may be an opportunity for preliminary research in these systems. USGS has released a report on the uADS and BAFF projects. A holistic approach to deterrent needs throughout the basin is an important consideration. Prioritizing across sub-basins will be a challenge and may require a structured decision-making approach. From a management standpoint, we do not want to continue repeating efforts at the sub-basin scale and then repeating at broader and broader scales. We should be approaching more holistically when possible. The states cannot afford a 25% or even 10% cost-share plus O&M and R&R in perpetuity for one project let alone multiple deterrents projects throughout the basin. This needs to be addressed up front. USACE will cover 100% O&M for the pilot projects, but those are only pilot projects.

Batten suggested a new priority regarding an authorization for construction of the Hatchie-Lossahatchie habitat project. The chiefs report will be available in May 2024 and an authorization will be required before it can move to construction. More information is needed on what should be included with this request. I.e., should this include an appropriations amount?

MICRA’s WRDA talking points are often very technical. Let’s have another discussion to determine what MICRA’s highest priorities are and make them as clear as possible. The suggestion was made to schedule a follow-up call with the state members of the Executive Board and Ashlee Smith to continue the discussion about MICRA’s WRDA priorities.

* Smith will organize a call with the state members of the Executive Board within the next 2-weeks to continue discussing MICRA’s 2024 WRDA priorities.

Smith was asked what she needed for an additional travel budget through the end of 2023. Smith has a couple field trips for congressional outreach and the October briefing yet in 2023. In addition to congressional outreach, it would be good to get MICRA to more partner events like the Lower Mississippi River Science Symposium, MRCTI, UMRBA, and other meetings to network and socialize the fishery commission. The Missouri River Basin Inter-Agency Round Table is a federal agencies group to consider reaching out to. USGS will be providing an update on their involvement with MICRA at the groups upcoming meeting.

Smith reviewed her list of needs related to policy outreach: social media content, state fact sheets, and names of potential coalition partners that have not been contacted yet. There was a good list of potential coalition partners that was developed at the board’s last meeting.

* Conover will send Smith the additional coalition prospects that were identified by the Executive Board members during their August 2022 meeting.

Smith is planning to begin ramping up the organization and efforts with the coalition. She would likely to have a regularly scheduled monthly coalition call and make individual calls to the other organizations that have been identified as potential coalition partners.

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## Finalizing MICRA’s Draft Aquatic Habitat Action Plan

*Discussion:*

During the Executive Board’s February 2022 meeting, board members discussed multiple problems with the existing MICRA list of interjurisdictional rivers included in the near final Aquatic Habitat Action Plan. Several action items resulted from that discussion.

1. Rodgers will work with her GIS specialist to develop a few lists of interjurisdictional rivers in the Mississippi River Basin using different criteria for the board to consider.
2. The Executive Board will consider proposed new GIS-based lists of interjurisdictional rivers in the Mississippi River Basin and make a decision on the preferred criteria and list to use as an updated list for MICRA.
3. Conover will work with Janvrin to finalize the draft action plan once the Executive Board approves a new MICRA list of interjurisdictional rivers in the Mississippi River Basin.

Conover has been working with Angela Erves since the Executive Board meeting in February 2023 to develop a list of 6th order and larger interjurisdictional rivers. Executive Board members were provided revised sub-basin lists in May. Erves and Conover have been working to address comments and develop final sub-basin lists. Updated sub-basin lists are provided below for review and discussion with the Executive Board.

The Executive Board will also review the revisions and comments in the draft Action Plan provided in [Appendix 2](#Appendix2) of the briefing book. Board members will then discuss next steps and a timeline for finalizing the Aquatic Habitat Action Plan by the end of 2023.

Remaining steps for finalizing the draft Action Plan are to:

1. Finalize MICRA’s updated list of interjurisdictional rivers in the basin (see pages 20-27 in the briefing book) and add the list as an appendix to the Action Plan.
2. Update the sub-basin tables and figures of interjurisdictional rivers.
3. Correct and update the basin wide map included on page iii.

*Discussion Notes:*

Angela Erves provided the Executive Board with a list of 6th order and larger interjurisdictional rivers in the basin. Near final lists are provided below, each has notes and questions for discussion. Rivers listed in black font were on MICRA’s original list, green font indicates rivers that have been added, and red font denotes a recommended deletion from the previous draft revision that the board reviewed.

The only recommended deletion is in the Arkansas-Red-White sub-basin. Erves is using available datasets and keeping notes, so the list is reproducible. There is a discrepancy between the USGS dataset and MDC’s website regarding the Eleven Point and Spring rivers. The USGS database identifies the Spring River as a tributary to the Eleven Point, where as MDC’s website (<https://mdc.mo.gov/your-property/watershed-inventory/eleven-point-river>) states that the Eleven Point “join(s) the Spring River approximately 3.7 miles above the Spring River/Black River Confluence.”

Erves has found other short segments of rivers in the USGS database that are unnamed. There is a tool within NHD where you can contribute information that will be reviewed for updating the database.

The lists for each sub-basin now include data for each interjurisdictional river including stream order, states (and provinces) with jurisdictional authority, and which rivers flow through or border tribal lands. Some rivers are included in the list that are entirely within a single state. These rivers are included (with footnotes) because the flow through or border tribal lands, or because they are formed by one or more interjurisdictional tributaries. For example, the North Canadian River is only in Oklahoma, but it flows through or borders tribal lands and is an interjurisdictional river based on that criterion. The Beaver River is a tributary river to the North Canadian River that flows through Texas and Oklahoma. Both Twelve Mile Bayou and Loggy Bayou are entirely within Louisiana but are included on the list because they are formed by interjurisdictional tributary rivers.

Nelson recommended earlier this week that an additional column be added to the tables to indicate rivers with a federal nexus or authority. He also recommended adding information on the Ceded Territories. The Executive Board was asked if they would like to request Erves to research and add that information to the lists of interjurisdictional rivers now or at some point in the future as an update after the Action Plan is finalized. It depends on Erves capacity and how long it would take to complete. The list won’t change, we will just be adding more information. There were rivers such as the Kaskaskia River in Illinois that was on the original MICRA list that has been removed from the revised list that would now be added back if it is a 6th order or larger river because of the federal navigation authority.

* The Executive Board agreed that rivers on federal lands, with federal authorities (e.g., navigable streams, National Wild and Scenic Rivers), and those within the Ceded Territories should be included MICRA’s list of interjurisdictional rivers.
* Conover will work with Angela Erves to see if additional information on federal authorities, federal lands, and Ceded Territory can be added to the sub-basin tables of interjurisdictional rivers in the Mississippi River Basin.

Rob Bourgeois recommended that the Amite River be removed from the Lower Mississippi River sub-basin list. It does not have any connection with the Mississippi River other than man-made connections.

There was some discussion about the boundaries of the Lower Mississippi River and the Arkansas-Red-White sub-basin boundaries. Rather than the Arkansas-Red-White rivers sub-basin beginning at their confluence with the Mississippi River, the boundaries MICRA has been using are based on USGS HUCS. This results in Red River tributaries being broken out between the Arkansas-Red-White rivers sub-basin list and the Lower Mississippi River sub-basin list. This has created issues for invasive carp projects and grants too. The board agreed that this is the right approach so that the lists and maps are reproducible.

Information has been added to indicate when tributaries in the Missouri River Basin flow through or border Canadian provinces. The board was supportive of including the information on Canadian provinces.

The Big Sandy River in the Ohio River Basin has been a bit of a problem. Erves has verified that a stretch of river is missing from the NHD but should be included in MICRA’s list. This is another piece of information that will need to be provided to the USGS NHD for updating the database.

The Pigeon River was removed from the Tennessee-Cumberland Rivers Sub-basin list because it is a 5th order stream.

Several rivers included in the Tennessee-Cumberland Rivers Sub-basin list include reservoirs in parenthesis (specifically, the Tennessee, Wautaga, Little Tennessee, Hiwassee, and Cumberland rivers). For example, Tennessee River (including Kentucky Lake, Pickwick Lake, and Guntersville Lake). This is not done consistently for all six sub-basins. The are reservoirs included for two rivers (White and Big Cypress rivers) on the Arkansas-Red-White Rivers list and Big Stone Lake is listed with the Minnesota River in the Upper Mississippi River sub-basin list. No other rivers in the other sub-basins identify reservoirs. Further, Dale Hollow Lake listed in parenthesis following the Cumberland River is formed on the Obey River, a 5th order tributary to the Cumberland River. The Executive Board was asked if reservoirs should be listed regardless of stream order, handled consistently with the 6th order and larger criteria, or simply removed from the list. The big reservoirs are certainly interjurisdictional waters of notoriety. Maybe we should consider developing a separate list of reservoirs as a different project or go back and add reservoirs to this list in the future.

* The Executive Board agreed to remove reservoirs from the list of interjurisdictional rivers for consistency across the sub-basins. A general statement about reservoirs could be added.

The Atchafalaya River and Tennessee-Tombigbee Waterway (TTW) were included as distributaries in MICRA’s original list of interjurisdictional rivers. It was previously decided to keep the Atchafalaya River on the list as it is formed by the Mississippi and Red rivers. The TTW is currently included in the Tennessee-Cumberland Rivers Sub-basin list with a footnote that it is included because it connects the Tennessee River and the Tombigbee River in the Mobile Drainage. Stream order is listed as ‘N/A’ because the TTW is not included in the USGS NHD. The Executive Board was asked how they would like to handle the TTW. Aside from the inter-basin connection, the TTW is not a significant body of water from an interjurisdictional fisheries management perspective.

Overall, there is a little follow-up needed with each of the sub-basin reps to address the remaining questions and finalize the lists.

* Conover will follow-up with the respective sub-basin representatives to discuss sub-basin specific questions on the draft lists of 6th order and larger rivers.

Erves provided updated sub-basin maps that are also provided below. The board members were asked for input on the maps regarding the level of detail provided, for example, do 6th order and larger rivers provide too much or too little detail, and should the maps include or not include river names. Erves can finalize the maps once we have input from the Executive Board members.

Conover reviewed the comments he received from the Executive Board members and the subsequent revisions to the draft Aquatic Habitat Action Plan. The remaining steps for finalizing the document are to 1) update the sub-basin lists of interjurisdictional rivers with information on ceded territories and federal authorities, 2) update the sub-basin figures and tables in the draft plan, 3) add the new MICRA list of 6th order and larger interjurisdictional rivers in the basin as an appendix, and 4) final approval by the board.

**Arkansas-Red-White Rivers Sub-basin – 6th order and larger interjurisdictional rivers**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Rivers** | | | | | **Stream Order** | **States** | **Tribal** |
| **White (including Bull Shoals, Norfork, and Table Rock Reservoirs)** | | | | | **8** | **AR, MO** |  |
|  | **North Fork** | | | | **6** | **MO, AR** |  |
|  | **Black** | | | | **7** | **MO, AR** |  |
|  | | **Current** | | | **6** | **AR, MO** |  |
|  | | **Eleven Point** | | | **6** | **AR, MO** |  |
|  | | | | **~~Spring~~ ~~1~~** | **~~5~~** | **~~MO, AR~~** |  |
| **Arkansas** | | | | | **9** | **CO, KS, OK, AR** | **x** |
|  | **Salt Fork Arkansas** | | | | **7** | **OK, KS** | **x** |
|  | | **Medicine Lodge** | | | **6** | **OK, KS** |  |
|  | | **Chikaskia** | | | **6** | **OK, KS** | **x** |
|  | **Cimarron** | | | | **6** | **OK, KS, CO** | **x** |
|  | **Verdigris** | | | | **7** | **KS, OK** | **x** |
|  | | **Caney** | | | **6** | **OK, KS** | **x** |
|  | | | | **Little Caney** | **6** | **OK, KS** | **x** |
|  | **Neosho** | | | | **7** | **OK, KS** | **x** |
|  | | **Spring** | | | **6** | **MO, KS, OK** | **x** |
|  | **Illinois** | | | | **6** | **AR, OK** | **x** |
|  | **Canadian** | | | | **8** | **OK, TX, NM** | **x** |
|  | | **North Canadian3** | | | **7** | **OK** | **x** |
|  | | | | **Beaver** | **6** | **OK, TX** | **x** |
|  | **Poteau** | | | | **6** | **AR, OK** | **x** |
| **Red** | | | | | **7** | **LA, AR, OK, TX** | **x** |
|  | **North Fork Red River** | | | | **6** | **OK, TX** |  |
|  | **Washita** | | | | **6** | **OK, TX** | **x** |
|  | **Muddy Boggy Creek3** | | | | **6** | **OK** | **x** |
|  | **Kiamichi3** | | | | **6** | **OK** | **x** |
|  | **Little** | | | | **6** | **OK, AR** | **x** |
|  | | **Mountain Fork** | | | **6** | **OK, AR** | **x** |
|  | **Sulphur** | | | | **6** | **AR, TX** |  |
|  | **Twelve Mile Bayou2** | | | | **6** | **LA** |  |
|  | | | **Big Cypress (including Cypress Springs, Lake Bob Sandlin, Lake O’ the Pines, and Caddo Lake)** | | **6** | **TX, LA** |  |
|  | **Loggy Bayou2** | | | | **6** | **LA** |  |
|  | | **Bayou Dorcheat** | | | **6** | **AR, LA** |  |

Green text are additions to MICRA list.

Red text are recommended deletions due to stream order.

Notes:

1 The 3.7 mile stretch of river between the confluence of the Eleven Point and Black rivers is not in the USGS NHD flowline database. USGS NHD database shows Spring River flows into the Eleven Point, but MDC’s website states that the Eleven Point flows into the Spring and the Spring flows into the Black. Recommend leaving the Spring River off MICRA’s list based on data in the USGS NHD database.

2 Twelve Mile Bayou and Loggy Bayou are not interjurisdictional rivers but are formed by IJ tributaries.

3 North Canadian, Muddy Boggy Creek, and Kiamichi flow through or border tribal lands.

Map

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**Lower Mississippi River Sub-basin – 6th order and larger interjurisdictional rivers**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | | **Stream Order** | **States** | **Tribal** | |
|  | **Mississippi** | | | | **10** | **MS, LA, TN, AR, MO, KY** |  | |
|  | **Ohio** | | | | **9** | **OH, PA, WV, KY, IN, IL** |  |
|  | **Hatchie** | | | | **6** | **TN, MS** |  |
|  | **St. Francis** | | | | **7** | **AR, MO** |  |
|  | | **Right Hand Chute Little River** | | | **6** | **MO, AR** |  |
|  | **White** | | | | **8** | **AR, MO** |  |
|  | **Arkansas** | | | | **9** | **AR, KS, CO, OK** |  |
|  | **Yazoo** | | | | **7** | **MS, LA** |  |
|  | **Red** | | | | **8** | **TX, OK, AR, LA** |  |
|  | | **Black1** | | | **7** | **LA** |  |
|  | | | **Oauchita** | | **7** | **LA, AR** |  |
|  | | | | **Bayou Bartholomew** | **6** | **LA, AR** |  |
|  | | | | **Boeuf** | **6** | **LA, AR** |  |
|  | **Amite** | | | | **7** | **MS, LA** |  |
|  | **Atchafalaya2** | | | | **8** | **LA** |  |

Green text are additions to MICRA list.

Notes:

1 The Black River is not an interjurisdictional river but is formed by interjurisdictional tributaries.

2 The Atchafalaya River is a distributary river formed by the Mississippi and Red Rivers.

Questions:

1. Is the Amite River a Mississippi River tributary? Reference material says it drains into Lake Maurepas which is connected to Lake Pontchartrain.
2. Arkansas, Red, and White are all listed as tributaries of the lower Mississippi River. All tributaries of the Arkansas and White rivers are listed in the Arkansas-Red-White Sub-basin table. However, the Red River includes one tributary (Black River) in the LMR table and multiple others in the ARW table. This breaks out in the sub-basin maps and can be avoided with a single table of Mississippi River Basin tributaries in appendix of report.

Diagram, map

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**Missouri River Sub-basin** **– 6th order and larger interjurisdictional rivers**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | | | | | | **Stream Order** | | **States** | | **Tribal** | |
|  | **Missouri** | | | | | | | | **9** | | **MO, NE, SD, ND, MT, IA, KS** | | **x** | |
|  | | **Madison** | | | | | | | **6** | | **WY, MT** | |  | |
|  | | **Gallatin** | | | | | | | **6** | | **WY, MT** | |  | |
|  | | **Milk2** | | | | | | | **6** | | **MT, AB3, SK3** | | **X** | |
|  | | **Marias2** | | | | | | | **6** | | **MT, SK3** | | **X** | |
|  | | **Yellowstone** | | | | | | | **8** | | **WY, MT, ND** | |  | |
|  | | | | **Clarks Fork** | | | | | **6** | | **WY, MT** | |  | |
|  | | | | **Bighorn2** | | | | | **7** | | **MT, WY** | | **X** | |
|  | | | | | | **Wind2** | | | **7** | | **WY** | | **X** | |
|  | | | | **Tongue2** | | | | | **6** | | **MT, WY** | | **X** | |
|  | | | | **Powder** | | | | | **6** | | **MT, WY** | |  | |
|  | | **Little Missouri** | | | | | | | **6** | | **SD, ND, WY, MT** | | **X** | |
|  | | **Grand1** | | | | | | | **6** | | **SD** | |  | |
|  | | | | **North Fork Grand** | | | | | **6** | | **ND, SD** | |  | |
|  | | **Moreau2** | | | | | | | **6** | | **SD** | | **X** | |
|  | | **Cheyenne** | | | | | | | **7** | | **WY, SD** | |  | |
|  | | | | **Belle Fourche** | | | | | **6** | | **WY, SD** | |  | |
|  | | **White** | | | | | | | **6** | | **SD, NE** | | **X** | |
|  | | **Niobrara** | | | | | | | **6** | | **WY, NE** | |  | |
|  | | **James** | | | | | | | **7** | | **ND, SD** | |  | |
|  | | **Big Sioux** | | | | | | | **7** | | **SD, IA** | |  | |
|  | | | | **Rock** | | | | | **6** | | **MN, IA** | |  | |
|  | | | **Little Sioux** | | | | | | **6** | | **IA, MN** | |  | |
|  | | | **Platte1** | | | | | | **8** | | **NE** | |  | |
|  | | | | **South Platte** | | | | | **7** | | **NE, CO** | |  | |
|  | | | | | | **Laramie** | | | **6** | | **WY, CO** | |  | |
|  | | | | **North Platte** | | | | | **7** | | **NE, WY, CO** | |  | |
|  | | | **Nishnabotna** | | | | | **6** | | **IA, MO, NE** | |  | |
|  | | | **Kansas1** | | | | | **8** | | **KS** | |  | |
|  | | | | | **Smoky Hill** | | | **7** | | **CO, KS** | |  | |
|  | | | | | **Republican** | | | **7** | | **NE, KS** | |  | |
|  | | | | | | | **Beaver Creek** | **6** | | **WY, SD** | |  | |
|  | | | | | **Big Blue** | | | **7** | | **NE, KS** | |  | |
|  | | | | | | | **Little Blue** | **6** | | **NE, KS** | |  | |
|  | | | **Grand** | | | | | **7** | | **IA, MO** | |  | |
|  | | | | | **Thompson** | | | **6** | | **IA, MO** | |  | |
|  | | | **Osage1** | | | | | **7** | | **MO** | |  | |
|  | | | | | **Marais des Cygne** | | | **6** | | **KS, MO** | |  | |

Green text are additions to MICRA list.

Notes:

1 The Grand (SD), Platte, Kansas, and Osage rivers are not interjurisdictional rivers but are formed by interjurisdictional tributaries.

2 The Milk, Marias, Bighorn, Wind, Tongue, and Moreau rivers flow through or border tribal lands.

3 AB = Alberta Canada, SK = Saskatchewan

Question:

1. Do we want to include provinces in addition to states?

Diagram

Description automatically generated

**Ohio River Sub-basin – 6th order and larger interjurisdictional rivers**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | | | | | **Stream Order** | **States** | **Tribal** |
|  | **Ohio** | | | | | | | **9** | **OH, PA, WV, KY, IN, IL** |  |
|  | | **Allegheny** | | | | | | **8** | **NY, PA** |  |
|  | | **Monongahela** | | | | | | **7** | **PA, WV** |  |
|  | | | **Cheat** | | | | **6** | | **WV, PA** |  |
|  | | | **Youghiogheny** | | | | **6** | | **PA, MD** |  |
|  | **Beaver1** | | | | | | **7** | | **PA** |  |
|  | | | **Mahoning** | | | | **6** | | **OH, PA** |  |
|  | **Little Beaver Creek** | | | | | | **6** | | **OH, PA** |  |
|  | **Kanawha1** | | | | | | **6** | | **WV** |  |
|  | | | **New** | | | | **6** | | **WV, VA, NC** |  |
|  | | **Big Sandy** | | | | | **7** | | **WV, KY** |  |
|  | | | **Tug Fork** | | | | **6** | | **KY, WV, VA** |  |
|  | | | **Levisa Fork** | | | | **6** | | **VA, KY** |  |
|  | | | | | **Russell Fork** | | **6** | | **KY, VA** |  |
|  | | **Wabash** | | | | **6** | | | **IN, IL, OH** |  |
|  | | | | **Vermillion** | | **6** | | | **IL, IN** |  |
|  | | **Cumberland** | | | | | **7** | | **KY, TN** |  |
|  | | **Tennessee** | | | | | **8** | | **KY, TN, MS, AL** |  |

Green text are additions to MICRA list.

Yellow highlighted cell is being verified by Angela.

Notes:

1 The Beaver and Kanawha rivers are not interjurisdictional rivers but are formed by interjurisdictional tributaries.

Map

Description automatically generated

**Tennessee and Cumberland Rivers Sub-basin – 6th order and larger interjurisdictional rivers**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | **Stream Order** | **States** | **Tribal** |
|  | **Tennessee (including Kentucky Lake, Pickwick Lake, and Guntersville Lake)** | | | **8** | **KY, TN, MS, AL** |  |
|  | **Holston1** | | | **6** | **TN** |  |
|  | | **South Fork Holston** | | **6** | **TN, VA** |  |
|  | | | **Wautaga (including Wautaga Reservoir)** | **6** | **TN, NC** |  |
|  | **French Broad** | | | **7** | **TN, NC** |  |
|  | | **~~Pigeon~~** | | **~~5~~** | **~~TN, NC~~** |  |
|  | | **Nolichucky** | | **6** | **TN, NC** |  |
|  | **Little Tennessee (including Tellico and Calderwood Reservoirs)** | | | **6** | **TN, NC, GA** |  |
|  | **Clinch** | | | **6** | **VA, TN** |  |
|  | **Hiwassee (including Chatuge and Nottely Reservoirs)** | | | **6** | **TN, AL** |  |
|  | **Elk** | | | **7** | **TN, AL** |  |
|  | **Tennessee-Tombigbee Waterway2** | | | **N/A** | **TN, MS, AL** |  |
|  | **Cumberland (including Cordell Hull Lake and Dale Hollow Lake)3** | | | **7** | **KY, TN** |  |
|  | **Red** | | | **6** | **KY, TN** |  |

Green text are additions to MICRA list.

The Pigeon River is recommended for deletion due to stream order.

Notes:

1 The Holston River is not an interjurisdictional river, but it is formed by interjurisdictional tributaries.

2 The Tennessee-Tombigbee Waterway divide cut is not in the USGS NHD flowline database so no stream order is available for this manmade canal. It is included in MICRA’s list because it is an IJ waterway and connects the TN river to the Tombigbee River in the Mobile Drainage.

Questions:

1. Are Wautaga, Tellico, Calderwood, and Cordell Hull reservoirs IJ? All are formed by dams on 6th order or larger IJ rivers.
2. Dale Hollow Lake is formed on 5th order Obey River. Should it stay on the list?
3. Tennessee Tombigbee Waterway was included in the original list of MICRA IJ rivers. Is there interest in including as a distributary in the revised list?

Map

Description automatically generated

**Upper Mississippi River Sub-basin – 6th order and larger interjurisdictional rivers**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | **Stream Order** | **States** | **Tribal** |
|  | **Mississippi River** | | | **10** | **MN, WI, IA, IL, MO** |  |
|  | **Minnesota (incl. Big Stone Lake)** | | | **8** | **MN, SD** |  |
|  | | **Whetstone** | | **6** | **SD, MN** |  |
|  | **St. Croix** | | | **6** | **MN, WI** |  |
|  | **Chippewa1** | | | **7** | **WI** | **x** |
|  | **Black1** | | | **6** | **WI** | **x** |
|  | **Wisconsin1** | | | **6** | **WI** | **x** |
|  | **Rock** | | | **7** | **IL, WI** |  |
|  | | **Pecatonica** | | **7** | **IL, WI** |  |
|  | | | **Sugar** | **6** | **IL, WI** |  |
|  | **Iowa1** | | | **7** | **IA** | **x** |
|  | **Des Moines** | | | **7** | **IA, MN, MO** |  |
|  | **Illinois2** | | | **8** | **IL** |  |
|  | | **Kankakee** | | **6** | **IN, IL** |  |
|  | | | **Iroquois** | **6** | **IN, IL** |  |
|  | | **Fox** | | **6** | **WI, IL** |  |
|  | **Missouri** | | | **9** | **MO, NE, SD, ND, MT, IA, KS** | **x** |

Green text are additions to MICRA list.

Notes:

1 The Chippewa, Black, Wisconsin, and Iowa rivers flow through tribal lands.

2 The Illinois River is not an interjurisdictional river, but it is formed by interjurisdictional tributaries.

Comments:

1. Upper Iowa, Wapsinicon, Cedar, and Shell Rock should be maintained due to 2 state jurisdiction. There are others but will let those basins weigh in (i.e., TN/Cumberland and Ohio have several proposed to be dropped that I believe should be maintained.)

Diagram, map

Description automatically generated

## Finalizing MICRA’s Draft 2024-2028 Priorities Document

*Discussion Item*:

The Executive Board will review the comments and suggested revisions in the draft 2024-2028 priorities document and discuss next steps and a timeline for finalizing the document. The document is provided in [Appendix 1](#Appendix1).

*Discussion Notes:*

Gaikowski provided several comments suggesting ways to add native freshwater mussel priorities throughout the draft document. Does MICRA define “fisheries” to include both fin fishes and mussels? Yes. Are herpetofauna or insects included? Perhaps included as “aquatic resources”.

MICRA eliminated the Native Freshwater Mussel Committee (NFMC) once the Freshwater Mussel Conservation Society (FMCS) was established. MICRA’s NFMC led to the formation of FMCS. MICRA maintained the NFMC and some mussel priorities for a number of years. Rather than an active committee with basinwide membership, the NFMC Chair served as a liaison between MICRA and FMCS. After he retired a few years ago, the board decided to sunset MICRA’s NFMC and address the partnership’s mussel priorities through the FMCS. The FMCS President joined the Executive Board at it's meeting in August 2022 where there was some discussion about making the linkage between the two groups more formal. That has not move forward yet.

Does adding several mussel priorities to the document align with the board’s decision to advance our mussel priorities through FMCS? Another consideration for the board when considering these comments is ‘what specifically is MICRA going to do to address each priority in the next five years?’ because the purpose of this document is intended to focus the Executive Board’s work over the next five years.

MICRA has done very little work directly related to native freshwater mussels over the last five years. There were no mussel priorities recommended by the delegates.

USGS is finalizing a native mussel research plan. In many cases, recovery of threatened and endangered mussels would be directly linked to the management of the host fish species. Rather than going a different direction, perhaps what is needed is a general priority that states that MICRA will continue to support FMCS and their native mussel work that impacts or is impacted by interjurisdictional fisheries in the Mississippi River Basin. It is important to for MICRA to maintain this relationship with FMCS and to highlight the importance of native freshwater mussels to the system and the importance of interjurisdictional fish to native freshwater mussels. There is a priority that states “support and collaborate with the Freshwater Mollusk Conservation Society to conserve native freshwater mussels.” Gaikowski recommended expanding this considerably to a direct role for MICRA in coordinating inter-basin coordination and creating a basin-wide and sub-basin mussel coordination teams. That is a lot to take on and attempt to accomplish over the next five years. Maybe we consider a sub-bullet to the existing priority along the lines of ‘once per year the FMCS is invited to discuss native freshwater mussel priorities with the Executive Board’. That is basically what was agreed to in August 2022. There is no reason that additional native mussel priorities cannot be added to the existing priorities document during the 5-year operational period. That would be a better approach than to over-promise and under-deliver.

If we do a great job with interjurisdictional fisheries and aquatic habitat, native mussels will also benefit. Mussel needs can be brought to light through the habitat restoration priorities.

The AIS Committee provided comments and suggested revisions to the AIS objective. How do the Lacey Act recommendations fit in with other efforts happening outside of MICRA? That is, should MICRA be leading or something that MICRA would be a part of as a multi-conservation group effort? The latter and potentially taking an active role in seeking Congressional support.

There was some clarification recommended to the diploid grass carp recommendation under promoting the development of consistent basin-wide regulatory approaches. There were also two place holders put in for recommendations related to bait trade and organisms in trade that the AIS Committee is working to flesh out. These are priorities that the committee intends to work on over the next 5 years. There was some discussion within the committee that they should be able to work on those priorities even if they are not identified in the Priorities document. It was suggested that the board should take an 80:20 approach to the Priorities document. That is, 80% of the priorities that MICRA will work on over the next 5 years should be captured in the document, but just because something is not in the document does not mean that it should not be addressed. The document gives us start on where to focus with limited time and resources.

We discussed a timeline for the committee to provide recommended additions to the Executive Board with Bourgeois on Monday. The board members would like to review the revised document in whole once the proposed additions are finalized rather than just reviewing and considering the proposed additions.

There is a priority related to supporting the ICAC. There are a few bullets related to what the ICAC should focus on. Would it be useful to add a communications priority to the effect of ‘Work with the USFWS to support sub-basin partnership and basin-wide internal and external invasive carp communication needs’? The Executive Board highlighted communications needs during our meeting last August and requested USFWS FY23 plus-up funding be used to assist with these needs. There has been no further discussion of that request. As the ICAC has been discussing the distribution of USFWS FY24 funding to the partnerships, there has been a question about basin-wide priorities that the Executive Board might identify as a funding priority in addition to the sub-basin projects. Should there be some discussion about pushing some of this to the invasivecarp.us website?

Does somebody from the ICAC sit on the ICRCC? No. Schoenung is the co-chair of both the ICAC and MRWG.

Is there a benefit to having communications called out or does that put more workload on the ICAC that isn’t needed.? I think there is an awareness that there needs to be some renewed communication both internally and externally. There may not be a need or benefit from the Executive Board highlighting this unless it something the group sees as lacking and wants to raise to the top of the concerns for the ICAC to address.

The last recommendation was to add a bullet along the lines of “Increase diversity in human resources working on fisheries and aquatic resources and provide opportunities for the public to become engaged in this effort” under Objective 4. This has been addressed more generally in the introduction with the following statement.

“Accomplishing this shared goal statement would benefit from increased diversity, equity, inclusion, and accessibility in human resources working on fisheries and aquatic resources and by providing opportunities for the public to become engaged in this effort.”

If included as a priority, what specifically would the Executive Board or MICRA work to accomplish in the next 5 years? Wouldn’t the human resources portion of the proposed recommendation fall more under the individual member agencies rather than MICRA? Does MICRA have a role in this? Not unless MICRA were to encourage the member agencies. Human Resources (HR) seems to be outside the scope of a communications plan. It should be focused on MICRA activities not on HR practices.

Something that USGS has been discussing more and has come up through MRCTI is making the river more accessible to all demographics and all populations. Fishing is by far the easiest to communicate. That may be something for MICRA to look at in the future. We can certainly consider this as MICRA goes about its business as called out in the introduction. If there was a component there that the Executive Board could act upon it would be in outreach and communication efforts. There is not a tremendous amount of outreach and communication that MICRA implements on a regular basis. This would be good to consider in the development of MICRA’s communication plan.

Was the comment in the introduction added before or after this priority was recommended? After. The board agreed to add that sentence but is now considering the specific priority that was recommended. There were no similar recommendations made by the state delegates. The board agreed with addressing in the introduction and not including a specific priority under the communications objective.

There was no additional input from the delegates on the appendix with accomplishment tracking for 2019-2023. There are a number of on-going activities that will hopefully be updated as accomplishments by the end of the year. Conover will need to update the appendix and the board will need to review at the end of the year.

* Conover will update the draft 2024-2028 Priorities document based on the board’s review and discussion of the comments discussed during their August 2023 meeting.

Additional action items related to finalizing the document were identified during Monday’s discussion in preparation for the All-Delegate meeting.

## Finalizing MICRA’s Draft 2019-2023 Priorities Accomplishment Tracking

*Discussion:*

The Executive Board will review the draft 2019-2023 priorities document accomplishment tracking and discuss next steps and a timeline for finalizing the document. The draft document is provided in [Appendix 4](#Appendix4).

*Discussion Notes:*

There was no additional input received from the delegates on the appendix with accomplishment tracking for 2019-2023. There are a number of on-going activities that will hopefully be updated as accomplishments by the end of the year. Conover will need to update the appendix and the board will need to review at the end of the year.

* Conover will update the 2029-2023 Priorities Accomplishment tracking at the end of the year and provide it to the Executive Board members for review.
* The Executive Board will finalize the draft 2019-2023 Priorities accomplishment tracking after Conover provides a final draft at the end of the year.

## Approval of the Executive Board’s February 2023 Meeting Notes

*Discussion:*

Conover will provide an update on the status of the meeting notes from the Executive Board’s February 2023 meeting.

*Discussion Notes:*

Conover did not get the February 2023 draft meeting notes to the Executive Board in sufficient time to approve them at this meeting. Board members agreed to a 2-week review period once Conover provides the draft meeting notes. Any comments or revisions will be discussed during the board’s Fall conference call.

* Executive Board members agreed to a 2-week review period of the draft meeting notes for the February 2023 Executive Board meeting once they are provided by Conover.
* Conover will provide the draft February 2023 Executive Board meeting notes for review prior to the October 27th meeting.
* The Executive Board will consider approval of the February 2023 Executive Board draft meeting notes during the October 27th meeting.

## Review of Action Items

*Discussion Item:*

Executive Board members will review the status of Decisions and Action Items from the board’s February 2023 meeting and discuss completion of outstanding action items. Outstanding Action Items from previous meetings are also included for consideration. Status of each action item was noted in the briefing book ahead of the Executive Board meeting in green font if complete and red font if not completed.

*Discussion Notes:*

This discussion was tabled due to lack of time. Executive Board members were asked to review the action items in the briefing book on their own following the meeting and to provide updates to Conover. Status of action items and questions are noted below. The February 2023 decisions and action items are draft, and a final list will be provided with the final draft meeting notes for the February 2023 meeting.

* Executive Board members will review the Decisions and Action Items provided in the August 2023 meeting briefing book and provide updates to Conover as they are addressed.
* Conover will provide a final list of February 2023 decisions and action items to the Executive Board members along with the final draft meeting notes for the February 2023 meeting.

**February 2023 Meeting**

Decisions

1. The Executive Board requested detailed notes following Executive Board meetings for their reference and a meeting summary to be uploaded to the MICRA website rather than the detailed meeting notes.
2. The Executive Board approved a nomination for Duane Chapman to receive the MICRA River Champion Award.
3. The Executive Board approved the MRBP’s request for the MICRA AIS Committee chair to also serve in the MRBP’s newly created MICRA Liaison position.
4. The Executive Board will consider development of a “storyboard” for an interactive map housed on the MICRA website as a next step after the revision of MICRA’s list of interjurisdictional rivers has been finalized.
5. The Executive Board approved the revised August 2022 Executive Board meeting notes as final.
6. The Executive Board, sub-basin invasive carp partnership coordinators, and ICAC will all continue to consider and discuss basinwide invasive carp communications needs.

Action Items

1. Gaikowski will contact USACE Rock Island District to determine if a letter of support from MICRA can still be included with the USACE’s Upper Mississippi River Restoration Program 2022 Report to Congress, and if so, who the letter should be submitted to.

*Complete: Letter submitted*

1. Conover will invite Duane Chapman to attend the MICRA Executive Board’s Summer meeting to receive the MICRA River Champion Award.

*Complete:*

1. Conover will review the MICRA By-laws and research Robert’s Rules of Order to determine if the MICRA Chair-elect is, or should be, a voting board member.

*Complete: Will be discussed during the August 2023 meeting.*

1. Conover will notify the ANS Task Force Executive Secretary that Rob Bourgeois will now serve as MICRA’s primary representative to the ANS Task Force and the MICRA Chair will serve as the alternate voting representative.

*Complete:*

1. Conover will contact Stephen McMurray to let him know that MICRA can provide up to $1,000 in financial assistance to support the FMCS Biennial Symposium.

*On-going: Follow-up needed with new FMCS Chair*

1. Conover will contact Stephen McMurray regarding potential native mussel priorities for the next MICRA priorities document.

*On-going: Follow-up needed with new FMCS Chair*

1. Angela Erves will provide the Executive Board members with lists of 4th and 5th order and larger interjurisdictional rivers for each sub-basin by the end of February.

*Complete*

1. Executive Board members will review the lists of interjurisdictional rivers provided by Angela Erves and provide a response within 2 weeks.

*Complete*

1. Conover will create meeting minutes from the August 2022 Executive Board meeting notes that include the meeting agenda, participants, and decisions and action items to be uploaded to the MICRA website.

*Incomplete*

1. Simmonds will send an updated list of ICAC and technical workgroup representatives to Conover; Conover will send to the sub-basin representatives; and the sub-basin representatives will send to their respective sub-basin delegates for their information.

*?*

1. Conover will follow-up with Smith to determine what invasive carp maps she is interested in and for what purpose so that he can help her directly or coordinate as needed.

*On-going*

1. Thurman will send an electronic version of the TWRA invasive carp fact sheet to Conover, and he will share it with the board members and invasive carp sub-basin partnership coordinators.

*Complete*

1. Bourgeois will share the TWRA video from the Congressional field visit at Pickwick Dam in August 2021, along with the appropriate context, at the next AIS Committee meeting.

*Complete*

1. The ICAC was asked to provide the Executive Board with a list of questions to survey the basin states regarding limitations, challenges, and needs for increasing staff capacity to collaboratively work on invasive carp and how MICRA can potentially assist address these needs.

*Incomplete*

1. The ICAC was asked to develop a list of survey questions to gather baseline information from the basin states on current invasive carp removal efforts and potentially other needs to support the workgroups with the basinwide population assessment.

*On-going: Control Actions Workgroup recently formed and will address this action item.*

1. The Executive Board will survey the delegates (questions to be developed by the ICAC) regarding staffing or hiring challenges to increase capacity for invasive carp work, as well as asking separate questions regarding the likelihood that the states would use fishery commission funding to hire additional staff to work on collaborative interjurisdictional fisheries management through the commission.

*Incomplete: This is on the agenda for the August MICRA Delegate meeting.*

1. The Executive Board will survey the delegates (questions to be developed by the ICAC) regarding current invasive carp removal efforts.

*Incomplete:*

1. Smith will provide Kim Lutz, AWI, with an updated version of MICRA’s talking points for the 2023 DC fly-in.

*?*

**Outstanding Action Items**

June 2023 Conference Call

1. The Executive Board will also need to approve an additional travel budget for Ashlee Smith for the rest of 2023.

*Incomplete: Executive Board will address during the August 2023 meeting.*

1. The Executive Board agreed to revisit the development of a recommendation to USFWS regarding FY23 invasive carp funding during their August meeting.

*On-going: Executive Board will address during the August 2023 meeting.*

1. Conover will share the revised draft MICRA 2024-2028 priorities document with all delegates prior to the August all-delegate meeting.

*Incomplete: Updated version included in the August 2023 meeting briefing book but was not shared with the Executive Board or Delegates in time for review ahead of the meeting. This was time sensitive so will be deleted.*

April 2023 Conference Call

1. The Executive Board may need a call to discuss any major comments received from the delegates or Executive Board on the draft MICRA 2024-2028 priorities document.

*On-going: Discussion added to the August 2023 meeting agenda, but a stand-alone Executive Board conference call was not scheduled between meetings.*

August 2022

1. The sub-basin partnership coordinators and ICAC co-chairs will provide examples of communications needs and barriers to the Executive Board.

*Not started: This action item should be further discussed during the board’s February 2023 meeting.*

1. The Executive Board will hold a conference call specifically focused on resuming this discussion about internal and external communication needs, particularly the following considerations (see details in August 2022 meeting notes page 25).

*Complete: Conference call held February 24, 2023*

1. The Executive Board will work with the sub-basin partnership coordinators to develop a request and guidance regarding sub-basin scale objectives for invasive carp management and control.

*Complete: Chair sent a request to the sub-basin coordinators that was shared with the invasive carp partnerships.*

1. The sub-basin partnership coordinators will work with their respective sub-basin partnerships to identify sub-basin scale objectives to assist the ICAC and MICRA Executive Board with basinwide planning and communications.

*On-going: Update from sub-basin partnership coordinators during the August 2023 meeting?*

1. The sub-basin partnership coordinators and the ICAC co-chairs will continue to discuss how the sub-basin scale objectives should be consistently developed and will report back to the Executive Board when they have reached consensus.

*On-going: Update from sub-basin partnership coordinators during the August 2023 meeting?*

1. Gaikowski will work with USGS staff to provide the Executive Board and Invasive Carp Advisory Committee with a factsheet on FishTracks and the potential to expand the database to include telemetry data from other sub-basins and species.

*Complete: Factsheet provided to sub-basin partnership coordinators and ICAC Co-chairs in June and included in the August 2023 meeting briefing book. See* [*Appendix 5*](#Appendix5)*.*

1. Sub-basin partnership coordinators will share the FishTracks factsheet with their partners once it is updated and provided by USGS.

*?*

1. Sub-basin partnership coordinators will discuss the Executive Boards interest in basinwide platforms for data management and analysis with the sub-basin partnerships.

*?*

1. Sub-basin partnership coordinators will work with USGS to schedule a webinar on FishTracks for the sub-basin partnerships.

*Incomplete*

1. Sub-basin partnership coordinators follow-up with their partners to determine interest and concerns in a basinwide approach to collecting and storing telemetry data.

*?*

1. The Executive Board will work with Ashlee Smith to schedule a few Zoom meetings for the MICRA Delegates to be briefed on MICRA’s fishery commission outreach effort.

*Complete: Meetings were held February 14 and 16.*

1. Parsons will contact Dirk Miller, Deputy Chief of Fisheries, Wyoming Game and Fish Department, regarding the MICRA Joint Strategic Plan.

*Complete: Wyoming is hesitant to sign the MOA.*

1. Parsons will follow-up with Montana, Nebraska, and Colorado regarding status of their director’s signing the MICRA Joint Strategic Plan Memorandum of Agreement.

*Complete: Nebraska signed the MOA. No response from Montana or Colorado.*

1. Marybeth Brey will be invited to provide an overview of the FishTracks database at the next Paddlefish Sturgeon Committee meeting.

*Complete*

1. Conover will follow-up with Stephen McMurray about the Freshwater Mollusk Conservation Society referring to MICRA in their guidance documents and providing an annual update to the Executive Board.

*On-going: Need to follow-up with new FMCS Chair.*

1. Conover will follow-up with Stephen McMurray to discuss incorporating Freshwater Mollusk Conservation Society priorities into the next MICRA priorities document.

*On-going: Need to follow-up with new FMCS Chair.*

1. Conover will add the final February 2022 Executive Board meeting notes to the MICRA website.

*Incomplete*

1. Sub-basin representatives will provide the annotated 2019-2023 MICRA Priorities document to their respective sub-basin delegates to request initial input on 2024-2028 priorities by the end of the calendar year.

*Complete*

1. Conover will follow-up with Gaikowski and a few USFWS field offices regarding Innovasea discount pricing of telemetry equipment.

*On-going: USGS progress on this?*

February 2022

1. The Executive Board will consider proposed new GIS-based lists of interjurisdictional rivers in the Mississippi River Basin and make a decision on the preferred criteria and list to use as an updated list for MICRA.

*Complete*

1. Conover will work with Janvrin to finalize the draft action plan once the Executive Board approves a new MICRA list of interjurisdictional rivers in the Mississippi River Basin.

*On-going*

August 2021

1. Conover will add a discussion about an interjurisdictional fisheries symposium to the agenda for the next MICRA Executive Board meeting.

*Incomplete: Potentially discuss during the after-action discussion of the habitat symposium during the August 2023 meeting.*

1. Conover will reach out to Bruce Reid to inform him about the Executive Board’s interest in improving the MICRAs website and gage his interest in discussing the website with the MICRA Executive Board.

*Incomplete: Website action items not addressed yet.*

## Paddlefish/Sturgeon Committee Update

*Discussion:*

Sara Tripp, IL DNR, will provide the Executive Board with an update on the Paddlefish/Sturgeon Committee.

*Discussion Notes:*

Sara reviewed highlights from the written update provided below. Sara also discussed the draft letter provided below is support of the North American Sturgeon and Paddlefish Society (NASPS) in their petition to establish October 27th as National Sturgeon Day.

USGS is within days of releasing the agency’s draft paddlefish and sturgeon research framework. Assuming the document will be available for external review, the Paddlefish Sturgeon Committee members were asked to review the USGS document to look for areas where USGS’s research priorities align with the committee’s priorities and to identify areas where USGS may be able to help fill in research gaps.

* JC Nelson will provide Conover with the soon to be released USGS research priorities for paddlefish and sturgeon for dissemination and review by the Paddlefish Sturgeon Committee members.

USGS is close to having an updated data sharing agreement for Fishtracks that could be shared out with different agencies to include data on invasive carp and other species. The vacant database administrator position has been refilled and USGS anticipates more movement soon.

Chris Vandergoot,Director Great Lakes Acoustic Telemetry Observation System, reached out to Conover recently to discuss telemetry data management in the Mississippi River Basin and offered to assist MICRA if needed. What communication is happening with the GLATOS managers and how can we do our best to develop a data management system for the Mississippi River Basin without reinventing the wheel and that will communicate with GLATOS? There has been on-going discussion for years. USGS concern is that GLATOS is very closed unless you are part of the research team. Fishtracks is an open database that is publicly accessible. There are hurtles to overcome with these differences.

Is there anything that GLATOS or Ocean Tracking Network can do to support or assist USGS to have a Mississippi River Basin system operational sooner? Fishtracks was started with GLRI funding. USGS struggles with the operational costs for these types of programs. It would be helpful for MICRA to communicate support for this if it is something that the partnership wants.

Are there three USGS staff that support Fishtracks? Yes, two have been hired. All are replacement positions. The biggest task for USGS right now is to transition the database from the platform that it sat on to the Login.gov platform due to security requirements.

There has been a sense of urgency for a basinwide database communicated from partners implementing acoustic telemetry projects for invasive carp. There is a lot of interest for including other species as was discussed within the Paddlefish Sturgeon Committee.

If Fishtracks does what the group wants, there are multiple examples of other large databases managed by USGS at the enterprise level rather than the center level (e.g., NAS) that provide a path forward. Support from a broad group like MICRA would be helpful.

Is USGS working on the partnership agreement? That would be helpful for the sub-basin invasive carp coordinators to have to distribute within their partnerships for awareness of what this would mean for the different agencies. USGS hopes to have this reviewed and approved relatively soon.

What do we need to do to make sure that paddlefish folks are talking to invasive carp folks, etc? Is there something here that MICRA can do to facilitate this type of communication? Hopefully, this is addressed to some extent through the standing committee chairs that are attending the Executive Board meetings, hearing these discussions, and then sharing the information out to their respective committee members. Report outs like this are great as long as they get shared out to the full membership. MICRA engaging with other partnerships groups like the federal agency Missouri River group discussed earlier in the day would be good to inform them what the states are talking about.

The Paddlefish Sturgeon Committee developed a draft letter in support of the North American Sturgeon and Paddlefish Society’s petition to establish October 27th as National Sturgeon Day. A nation Paddlefish Day was established in 2019. October 27th was chosen for national sturgeon day in reference to the 10 sturgeon and paddlefish species in the United States and 27 species worldwide.

There was a brief discussion about whether the letter could be sent by the Committee chair or if should be sent by the MICRA Chair. There was no perceived advantage of the letter being sent by the MICRA Chair.

* The Executive Board approved a draft letter from the Paddlefish Sturgeon Committee in support of the North American Sturgeon and Paddlefish Society’s petition to establish October 27th as National Sturgeon Day.

**MISSISSIPPI INTERSTATE COOPERATIVE RESOURCE ASSOCIATION MEETING**

August 23, 2023

**Paddlefish and Sturgeon Committee Update**

Since last update – Annual Meeting March 29-30 in Sedalia, MO

*Commercial Fishing Workgroup:*

* The group reviewed the recommendations from the PDFH report
* Start with:
  + Seasons based on water temperature of 58°
  + Each state will work to achieve F30
* Next Steps for the Workgroup

1. Cooperatively manage for F30% for interjurisdictional, commercial Paddlefish fisheries throughout the Mississippi River basin. Consider regulation changes (e.g., season length/dates, permit quotas, gear restrictions, and minimum length limits) as needed to achieve/maintain F30%.

2. All states managing commercial or recreational Paddlefish fisheries participate in the development of the basinwide framework for Paddlefish management throughout the basin.

3. Update/develop sub-basin or waterbody specific Paddlefish management plans as needed.

4. Each state managing a commercial Paddlefish fishery aligns their season dates with those recommended in this report to limit harvest within a 58° F water temperature threshold to minimize bycatch and sub-legal fish mortality.

5. Regularly engage Law Enforcement personnel in interjurisdictional Paddlefish management discussions with agency biologists, including coordination meetings with neighboring states (as needed) and the MICRA Paddlefish and Sturgeon Committee.

6. Identify Paddlefish harvest information needs (e.g., biologic and law enforcement oriented) and standardize methods for documenting and reporting commercial Paddlefish harvest data.

7. Collaboratively address priority research needs identified in this report.

8. Annually request a summary report from CITES that includes all information provided by state agencies.

* Research needs identified:

1. Sensitivity Analysis
   1. Would inform greatest uncertainty
   2. Data are already in hand
   3. Who – neutral third party?
2. Spatially explicit population modeling (heterogeneity)
   1. Maturity data
   2. Microchemistry
   3. Telemetry
3. Age validation
4. Other causes of fluctuating harvest rates (abiotic and biotic)
   1. Effects of invasive species

*Basinwide Paddlefish Management Framework*

A subgroup of our committee has been working with Dr. Dennis Scarnecchia to further develop the basinwide framework. At the annual meeting we went over and discussed the consensus statements to ensure all states are in agreement with the intentions of the framework.

Dr. Scarnecchia plans to make progress in the next month and will keep the group posted. He will be letting the group know where he would like some input and contributions.

*Technical Presentations*

Fish Tracks – Marybeth Brey (USGS)

Fish Tracks is a multiagency/multispecies acoustic telemetry database. They plan to incorporate more multiagency and multijurisdiction projects, but they foresee the need for each agency to have a biologist or datamanager to QA/QC and maintain agency data as well as the need for a program manager at the USGS just to manage and oversee Fish Tracks which would require funding. The USGS is currently reaching out to larger groups to partner and help fund.

Shovelnose Sturgeon bomb radiocarbon analysis results – Ryan Hupfeld (IA DNR)

As stated in the group many times and in many papers, there is a huge need to develop an accurate way to age long-lived fish such as sturgeon. Ryan worked with Dr. Allen Andrews to use Bomb Radiocarbon (C14 dating) to determine if we could more accurately age sturgeon and determine lifespan. Two aging structures were used the sagittal otolith and the pectoral fin ray. Two techniques were also used in estimating the age lumping (only dominate annuli counted) and splitting (all annuli counted). The fin ray was more precise but estimated the age as nearly half that of the otolith. Lifespan of Shovelnose Sturgeon using C14 dating was ~40 years compared to max ages using fin rays previously of ~20 years. Fin rays underestimate age and should not be used in the future for ageing.

Paddlefish Genetics – Dr. Ed Heist (SIU)

Dr. Heist summarized genetic analysis of many paddlefish populations throughout the range both open river populations with natural reproduction and isolated reservoir populations that are reliant upon stocking. Ultimately it was found that there is not a large genetic distinction due to distance within open river systems but more genetic distinction between isolated populations that are maintained through stocking. This is due to less genetic diversity within these isolated populations. The low genetic diversity leads to low effective population size and can increase that chance for inbreeding depression.

Lake Sturgeon ESA Listing – Jessica Hogrefe (USFWS)

Reviewing a petition to list Lake Sturgeon under the Endangered Species Act. There was enough information in the petition to initiate investigating, the deadline for the review is June of 2024. The USFWS started collecting and reviewing data in 2021 and they are now in the final stages of a draft SSA. There will be a peer/partner review by July 2023 of this draft, this will be a 30-day review period. This review is meant to ensure that all the available data is included. After this review, the SSA will go to the USFWS to make a determination.

CITES update – Debra Abercrombie and Amanda Lamberson (USFWS)

Debra and Amanda described the entire CITES process to the group and how it relates to roe. Also, discussions were had on what data they collect and how that data may help the states manage sturgeon and paddlefish.

*Next Steps for the committee:*

Immediate Next Steps:

* Paddlefish Framework- Dennis S. and working group
* Develop paddlefish strategic plan for the committee
* Using compiled Lake Sturgeon management information, determine need for framework and/or strategic plan
* Supporting the development and utilization of a centralized acoustic tagging database such as FishTracks for paddlefish, sturgeon, and other interjurisdictional large river fishes
* Develop a list of prioritized research needs for paddlefish and sturgeon spp.
* Review existing committee documents: Tagging, stocking, genetics protocols

Future:

* Sturgeon spp. Framework
* Ageing of Paddlefish and Sturgeon spp.- Developing accurate ageing techniques or stock assessment methodologies
  + Bomb radiocarbon analysis/DNA methylation
* Evaluating other sources of mortality other than harvest for paddlefish
* Maturity schedule of Paddlefish and Sturgeon spp.
  + GSI/Fecundity stages in Mississippi River Basin of Paddlefish and Sturgeon spp.
  + Prime spawners
* Compiling Sturgeon spp. and Paddlefish tagging information
  + Standard operating procedures for tagging paddlefish and sturgeon species? – in strategic plan or framework?
  + Mark/Recapture analysis for growth, survival, longevity, etc
  + Tagging coordination among agencies- Basin wide tagging strategy
  + Metadata associated with fish and location
  + Acoustic telemetry
* Genomics for parentage and fish mgt.
  + Microsatellite genetic analysis
* Shovelnose Sturgeon-
  + Commercial and recreational harvest management and regulations- consistency
  + Exploitation
  + Life history/population demographics
  + Age/Growth data- Fin rays are inaccurate
  + Framework for shovelnose sturgeon?
  + High water temperature- mass mortality events
  + SOPs for collecting data on fish kills
* Lake Sturgeon
  + Bycatch of lake sturgeon- how to document this consistently
  + Data collection basin-wide- How to do this and how to make it useful?
  + Stocking evaluations?
  + Query of states on lake sturgeon management, stocking, genetics, tagging and research projects in each state
  + Framework document for lake sturgeon?
* Dam operations- Sustainable Rivers Program
* Reduce mortality events, increase natural reproduction

Emerging Issues

* Major changes in the ecosystem (e.g., invasive species, habitat changes, habitat rehabilitation/enhancement, etc.)
* Influences on paddlefish/sturgeon spp.?
* Recruitment
* Reservoir environments are changing
* Hydropower
* Aquaculture of non-native species
  + Sterlet Sturgeon
* Sturgeon/Paddlefish domestication
* Hatchery vs. wild fish fitness
* Stocking protocols
* Movement of stocked fish through dams, impact on “wild” populations
* Polyploidal deficiencies in Sturgeon in TN- Eric sent out information on this
* Technological advances in fishing equipment
* Paddlefish/Sturgeon bycatch of other commercial fisheries (i.e., buffalo/carp harvest)
* Other sources of paddlefish/sturgeon mortality besides harvest
  + Bycatch mortality, high water temperatures, etc.
* Accounting for population heterogeneity via spatially explicit population modeling
* Sensitivity analysis to understand the uncertainty in a stock assessment model and help direct future data needs

*Priorities Review*

Draft text for the 2024-2028 Priorities Document to share with the Executive Committee (below).

1. Use standing technical committees and temporary working groups as needed to provide for the development of coordinated strategies to address priority issues and identify basin-wide research needs to support conservation, management, and utilization of native interjurisdictional fishes and aquatic resources.
   1. Support continued efforts for coordinated basin-wide management of paddlefish and sturgeon species.
      1. The Paddlefish and Sturgeon Committee will complete development of a basinwide management framework for paddlefish.
      2. Develop or update sub-basin paddlefish management plans in support of the basinwide paddlefish management framework.
      3. The Paddlefish and Sturgeon Committee will consider the need for the continued coordination and management of a basin-wide tag database for paddlefish in support of the basin-wide paddlefish management framework and the sub-basin management plans, and provide recommendations to the Executive Board regarding the future of the database.
      4. The Paddlefish and Sturgeon Committee will provide the Executive Board with a recommendation and cost estimate for completing sensitivity analysis of the commercial harvest states’ available Paddlefish age and growth data to inform priority next steps and additional research needs.
      5. The Paddlefish and Sturgeon Committee will develop a list of priority research needs to advance cooperative interjurisdictional management of paddlefish and sturgeon.

Diagram

Description automatically generated

August 17, 2023

To: National Day Calendar Review Team

712 West Main Street

Mandan, ND 58554

Dear Review Team,

The MICRA Sturgeon and Paddlefish Committee is writing this letter in support of the North American Sturgeon and Paddlefish Society (NASPS) in their petition to establish October 27th as National Sturgeon Day. NASPS is a 501(c)(3) non-profit professional society dedicated to promoting the conservation and restoration of sturgeon and paddlefish through developing and advancing research on their biology, management, and sustainable use. While a National Paddlefish Day was established in 2019, there is no day to recognize the nine iconic, ancient sturgeon species inhabiting the United States. We ask that the National Day Calendar Review Team approve NASPS’ request to establish October 27 (in reference to the 10 sturgeon and paddlefish species in the United States and 27 species in the world) as National Sturgeon Day to help further awareness of the restoration and conservation needs of sturgeon species in North America and worldwide.

MICRA is an organization of 28 state natural resource departments organized in 1991.  MICRA’s mission is to improve the conservation, management, development, and utilization of interjurisdictional fishery resources in the Mississippi River Basin through improved coordination and communication among the responsible management entities. Four of the ten North American paddlefish and sturgeon species are endemic to the Mississippi River Basin. These include the paddlefish, lake sturgeon, shovelnose sturgeon, and pallid sturgeon which inhabit the Basin’s large rivers, lakes, impoundments, and oxbow lakes. A fifth species, the Alabama sturgeon, occurs in the Tennessee-Tombigbee Waterway, a man-made distributary of the Basin.

One of the main goals of the MICRA Paddlefish and Sturgeon Committee’s Strategic Plan is to increase the public’s awareness of the existence of paddlefish and sturgeon species, appreciation of the ecological and economic importance of these species, and understanding of the environmental and human‑related impacts that threaten their welfare and continued existence. Establishing this National Sturgeon Day will help achieve this goal by bringing awareness to many Americans. We respectfully request that the National Day Calendar consider NASPS’ request to establish National Sturgeon Day on October 27.

## MICRA AIS Committee Update

*Discussion:*

Rob Bourgeois, LDWF, will review the update provided below on the MICRA AIS Committee.

*Summary:*

At the MICRA AIS Meeting in July 2023, Ashley Smith provided updates on efforts to gain bipartisan support from senators, a tour of the Mississippi River to educate legislators, and the need to push for co-sponsors of a bill. Additionally, the meeting discussed a video to promote the carp partnership between states, a Lacey Act presentation to explain the ongoing legislative actions, the MICRA AIS Action Plan was discussed and a MICRA Priorities document was discussed. An AIS Committee Governance document will be developed and a Sub-Committee was formed to help with that.

*Details:*

1. Ashlee Smith updated the committee and we started to discuss the DC fly-in.
2. We discussed changing our DC documents to include both AIS, vegetation issues, and native fishes so we do not just portray MICA as only concerned with carp.
3. We need to tell the Fly in delegates what are the highest AIS priorities.
4. The Committee requested an easier to edit document. The Chair of the committee is looking into that.
5. The Tennessee Pickwick Lake video was discussed. The Committee would like to develop videos like this that could be used for Congressional outreach as well as to outreach to the people of the states in the MS Basin.
6. This video is an example of the type of outreach events Ashley would like to do with Congressional staffers.
7. It was suggested to host this video on the MICA Website.
8. The hurdle to producing our own videos is expertise. Gathering the info is a longer task compared to the actual video production.
9. Thoughts were also to have three one-minute videos: an AIS video, a carp video, and a native fish video.
10. The idea is to promote the partnership between states that MICRA facilitates.
11. The Lacey Act and its current problems were presented to the committee to generate discussion on how states can address the current problems while Legislative action works its way through Congress. The overall opinion is nothing is likely to happen fast so perhaps the states need to be more proactive with their laws to protect themselves as the Lacey Act had before.
12. Iowa has a clause in its regulations that references the Federal injurious list. Iowa will provide that wording to the Committee so states can start to develop that into their regulations if possible.
13. Developing regional lists within MICRA would help avoid the dilution or loss of those species that are only found regionally or may be native in part of MICRA and invasive in other parts (ex. Red Swamp Crayfish).
14. MICRA AIS Action plan was discussed. The discussion centered around providing the MICRA Executive Board with comments and letters on proposed legislation. The committee also develop a sub-committee that can react to these legislative actions and provide quicker comment for review by the entire AIS committee before passing it on to the MICRA Executive board. The AIS committee will provide comments on this document to update its relevance.
15. MICRA Priorities Document was discussed. The group added some ideas to address bait and organisms in trade. Those comments were provided to Greg Conover for discussion by the board.
16. The AIS Committee is developing a governance document. This will be developed by a sub-committee of 5 people.
17. The AIS Committee will meet later this year to get started on the DC documents and the AIS sub-committee will meet to discuss and draft the governance document.

Executive Board Action Items:

1. Does the Executive Board want the AIS committee to develop videos similar to the TN video? Does the board think this would be a suitable DC Fly-in item?

*Discussion Notes:*

The committee members were very engaged at the meeting and seemed to value addressing AIS issues from the policy side. The TWRA Pickwick Lake outreach video was well received. There was a lot of interest in developing more videos to support MICRA and state outreach events. Specifically, the group recommended producing three one-minute videos: an AIS video, an invasive carp video, and a native fish video.

Two speakers joined the committee members to discuss the Lacey Act. There was discussion about the committee developing a regional list so that states do not have to put a native species on their prohibited list. For example, the red swamp crayfish is considered a highly problematic invasive species in many basin states, but it is a highly desirable and economically important species in Louisiana. A single basinwide list would not work for all invasive species.

The committee members discussed the state AIS fact sheets used for MICRA’s DC Fly-in. The current document is not easily edited. The committee plans to develop a new 2-page template that is more easily edited. One side of the fact sheet will be AIS and a new template will be developed for native interjurisdictional species on the other side of the fact sheet.

The board members were asked if they would like the AIS Committee to investigate developing the short outreach videos and if 1-minute videos would be useful for the DC fly-in. Videos are very valuable at state Commission meetings. They grab people’s attention and draw them in. It might be worth trying one before developing more.

Is the committee fleshing out the two new priorities related to bait and organisms-in-trade? Yes, the committee is working on developing statements about what they intend to do to address these two issues.

The AIS fact sheets do look old and need an update. There was support for including native interjurisdictional fisheries topics on the reverse side. Positive messaging would be good to have for the meetings.

USGS received a lot of positive feedback on the invasive plant presentation during the Mississippi River Science Forum earlier this year. It is important to raise awareness that there are only two chemicals registered for the control of aquatic invasive plants. The scope, scale, and expenditures related to invasive plant control grabs people’s attention.

## MRBP Update

*Discussion:*

Rob Bourgeois, LDWF, will review the update on the Mississippi River Basin Panel provided below with the Executive Board.

*Recently completed activities and projects*

* MRBP Coordination Meeting – Held in Brighton, CO on July 25-26, 2023
  + Hybrid Meeting
  + Committees
    - The Research and Risk Assessment, Prevention and Control, and Education and Outreach committees have continued to meet in advance of the coordination meetings to discuss committee business.
  + Action Items – 18 Total
    - 5 for the Research and Risk Assessment
    - 6 for the Education and Outreach Committee;
    - 3 for the Prevention and Control Committee;
    - 4 for the Executive Committee;
    - Most relevant
      * Priority pathogen list may be modified after discussion at the meeting. Two committees and the executive board all have tasks related to this item.

*Ongoing Activities*

* Priority Pathogens
  + Proposed compiling a list of top 10 priority pathogens concerning MRBP states within the live-bait trade
  + 21 of 26 states listed have responded
  + Top 4 priority pathogens
    - Viral Hemorrhagic Septicemia Virus (VHSV)
    - Spring Viremia of Carp Virus (SVCV)
    - Largemouth Bass Virus (LMBV)
    - Infectious Pancreatic Necrosis Virus (IPNV)
* Invasive Carp Genetics
  + Identify genetic population structure through genomic analyses for directed management of invasive silver carp.
  + The project is taking longer than expected. The people involved will update the Executive Committee if it looks like it can’t be completed in time.

*Planned Future Activities*

* The Education and Outreach Committee has updated the website and is seeking to update the MRBP logo and branding. They are looking into contracting someone to do this task.
* The Education and Outreach Committee is planning a Community Based Social Marketing Workshop – intended to aid state partners and other outreach professionals realize the tools and media already available for ANS/AIS outreach and education. This meeting is being proposed for early Dec.
* The panel is seeking a fish health expert to serve as a member of the panel to assist in the ongoing pathogen discussion.
* Cole Harty, TN, is the 2nd-Term Co-chair started on July 1st. Amy Kretlow, WI, will be the 1st-Term Co-chair.
* Future 2024 Panel Coordination Meeting(s) – meets every ~9 months
  + March 2024 and meeting locations in Arkansas are being explored.

*Discussion Notes:*

Does the committee have a lead on a fish health expert? A few names were mentioned, but would have to get back to you to provide them.

## Invasive Carp Advisory Committee Update

*Discussion:*

Rob Simmonds, USFWS, and Brian Schoenung, IL DNR, will provide the Executive Board with an update on the MICRA Invasive Carp Advisory Committee.

*Discussion Notes:*

Schoenung reviewed a modified version of a presentation about the MICRA ICAC that Simmonds developed for the AFS Annual Meeting. See slides below.

Clint Jones, TVA, is a new addition to the ICAC.

The Sampling Approaches Workgroup (SAW) landed on electrofishing and dozer trawl as the most useful sampling approaches for assessing populations. The Data and Analysis Workgroup (DAW) will be determining the level of sensitivity and amount of effort that will be required with these sampling approaches to make the inferences that they need from the data. The DAW will also be sending out a data call soon to all the funded projects within the partnerships to solicit background information on what data exist and are available. A centralized database is needed for compiling all the data that is being collected throughout the basin.

The sub-basin partnerships are making progress on developing sub-basin scale objectives. The partnerships are taking different approaches, but all are working toward the same end.

A Control Actions Workgroup (CAW) is in the process of being formed. At its core, are the five states that have incentive programs, but it is being broadened out to include other states. Fifteen-sixteen people have expressed interest in being part of this workgroup, including representatives from USFWS and USGS. The goal is to align the work that we are doing within the incentive programs so that they are complimentary and not competing with one another. There is some concern about lacking sufficient processing power to capitalize on the amount of money that is available in fishing incentives. There are only three processors that are moving a lot of products. This is likely to be a challenge initially and could lead to a bidding war for processing.

There is a new processor opening in Piedmont, Missouri, that intends to do their own fishing. They may be well capitalized and not looking for funding.

Schoenung feels like the group is making good progress, but it has been a challenge. It is a large group, and it has hard to have the whole group participating in each conversation. The co-chairs have to be careful to make sure all of the sub-basin’s voices are heard. It has been a challenge for the sub-basin representatives to embrace their roles representing their entire sub-basin and making sure they are connected with their partner agencies throughout the sub-basin.

In FY23, the USFWS received a $6 million increase in invasive carp funding after plans were made for allocating an initial $25 million. This resulted in approximately $4.8 million in additional funding being made available to the partnerships. The partnerships and coordinators had to move very quickly to decide how the additional funding (aka “plus-up”) would be allocated across the sub-basin partnerships outside of the normal process. There may be some flexibility in how the $4.8 million in plus-up funding is used by the partnerships in FY24 for example, repeat the process that was used for FY23, or partition equally to each of the sub-basins. Several ideas generated by the ICAC were discussed with the Executive Board members. There were no recommendations presented that represented consensus. Once we have sub-basin scale objectives, we need to step those into basinwide objectives that can be prioritized to inform how to direct funds across the basin in the most effective and meaningful way. There is interest within the ICAC for supporting basin-wide priorities, however none have been articulated yet. Similarly, there was interest in using the funding to support interjurisdictional or multiple sub-basin projects that may not be basinwide. Providing base capacity support for states to participate in the partnerships was a popular idea. Similar to the state and interstate ANS management plan model. Would this come from the “plus-up” or off the top of everyone’s invasive carp funding? Long-term potentially off the top, but for now the only funds that we may be able to influence are the plus-up funds. There may be an opportunity to influence the allocation of the other funding if a strong basinwide plan and objectives were presented to USFWS as the most effective approach. We are working towards this, but we are not close to being able to do this yet. Getting to metrics in the near term will be critical for communicating progress and success to Congress and others.

A few recommendations from the ICAC regarding allocation of the “plus-up” funding in FY24 were presented to the Executive Board for consideration and discussion. The recommendations do not represent a consensus that was reached within the ICAC and these draft recommendations have not been shared with the partnerships. The numbers presented are based on a quick discussion within the ICAC.

USFWS is open to recommendations from MICRA. Priorities from partners have helped to drive the allocations but this is always balanced this with expectations communicated from Congress.

The ICRCC has a Great Lakes Mississippi River Basin Action Plan. Is that Action Plan based on priorities, and could those priorities be used to see what has been worked on and what may need updated? The ICRCC Action Plan just covers the work that is funded by GLRI in the upper Illinois River. The MRWG has a strategic vision for the next 5-years that serves as a priorities document. No one was aware of a forward-facing priority list for the ICRCC. The decisions may be more allocation-driven. There are common priorities among the sub-basins in the Mississippi River Basin, they just have not been written up. We are close to having the sub-basin scale objectives. The ICRCC has influenced the federal partners invasive carp priorities so we should not limit our thinking to what the state partners can do. Hopefully, in a year from now we have the sub-basin scale and basinwide objectives and we are having a much different conversation. That would be good timing. The next plan for the Mississippi River Basin should be a science plan in FY25.

Although it takes time to get to where we are going with developing a basinwide strategy, we can’t get there quick enough. We are going on year 10 of invasive carp funding. We need to have metrics and better communicate success to Congress. There is data from Barkley and Kentucky lakes that indicates invasive carp removal is having a positive effect on sport fish.

The ICAC has provided the MICRA Executive Board with some recommendations to consider. The board will need to decide if they wish to make a recommendation regarding the allocation of the “plus-up” funding in FY24 to the USFWS. It would be ideal for USFWS to have FY24 targets to the partnership coordinators by the end of the federal Fiscal Year. This all assumes that the USFWS receives the plus-up funding again in FY24.

Last year, the Executive Board sent two requests for the USFWS to consider funding with the FY23 plus-up funding. Both were basinwide communications type needs. The board may have recommendations in addition to those provided by the ICAC. There may also be more work that the Executive Board would like the ICAC to address to flesh out the recommendations or to reach consensus.

* The Executive Board will consider the information provided by the ICAC regarding the potential allocation of USFWS FY23 “plus-up” funding in FY24 and determine if any recommendation will be provided by MICRA to USFWS.

Graphical user interface, website

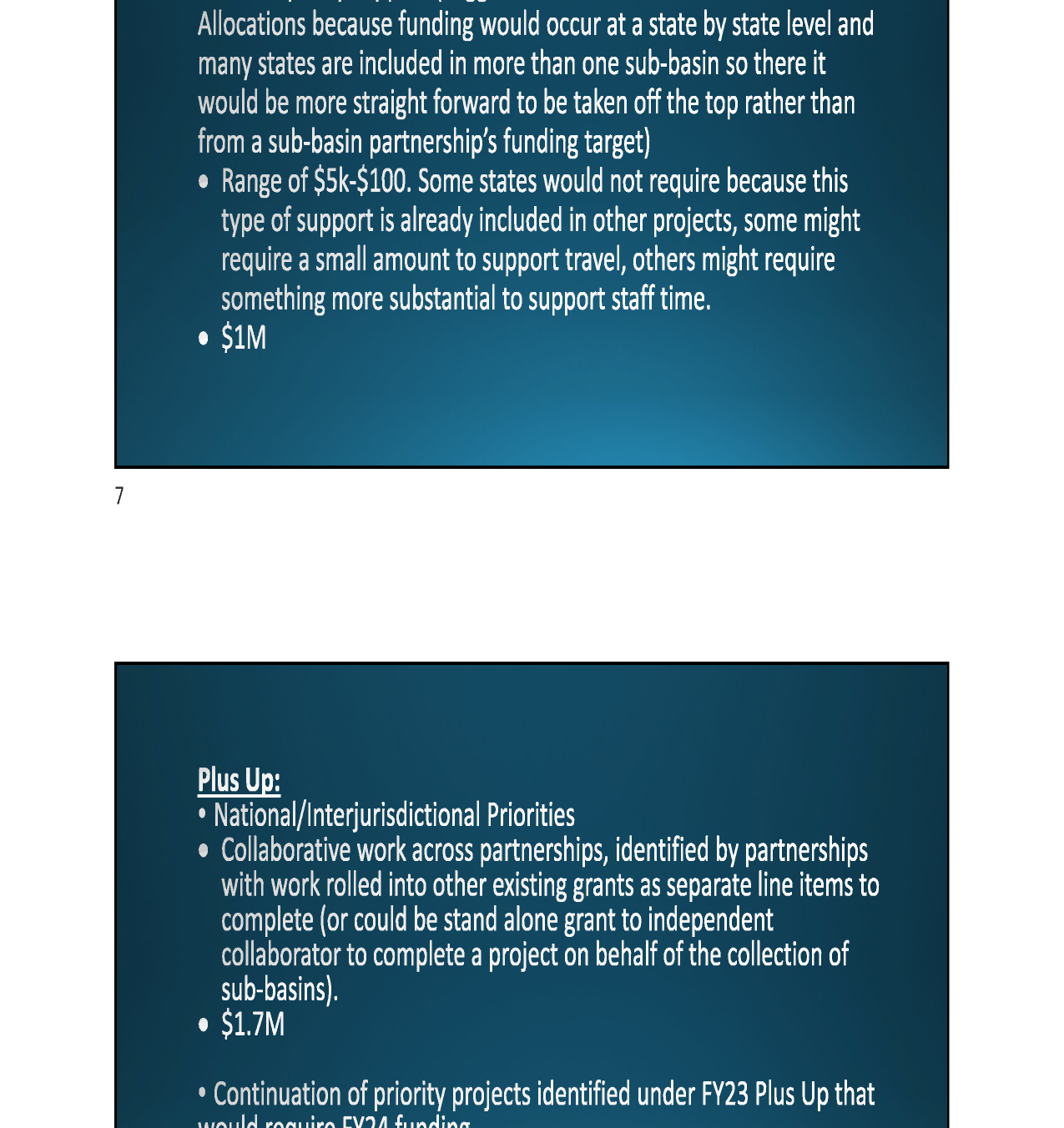
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## Sub-basin Invasive Carp Partnership Coordination Update

*Discussion:*

Neal Jackson and Caleb Aldridge, USFWS, will provide the Executive Board with an update on the MICRA sub-basin invasive carp partnerships coordination. The coordinators and Executive Board will continue to discuss several action items from the board’s August 2022 meeting discussion ([Appendix 6](#Appendix6)).

1. Executive Board members will work with the sub-basin partnership coordinators to develop a request and guidance regarding sub-basin scale objectives for invasive carp management and control.
2. The sub-basin partnership coordinators will work with their respective sub-basin partnerships to identify sub-basin scale objectives to assist the ICAC and MICRA Executive Board with basinwide planning and communications.
3. The sub-basin partnership coordinators and the ICAC co-chairs will continue to discuss how the sub-basin scale objectives should be consistently developed and will report back to the Executive Board when they have reached consensus.
4. Sub-basin partnership coordinators will discuss the Executive Boards interest in basinwide platforms for data management and analysis with the sub-basin partnerships.
5. Sub-basin partnership coordinators follow-up with their partners to determine interest and concerns in a basinwide approach to collecting and storing telemetry data.
6. The sub-basin partnership coordinators and ICAC co-chairs will provide examples of communications needs and barriers to the Executive Board.

*Discussion Notes:*

Neal Jackson, Caleb Aldridge, and Rebecca Neeley provided an update to the Executive Board. Emily Pherigo, who had been serving as the coordinator for the Missouri River (MOR) sub-basin invasive carp partnership recently moved to a new job with USFWS Ecological Services Program. Jason Goeckler, Project Leader at the Columbia, Missouri, Fish and Wildlife Conservation Office, is working to refill Emily’s former position. Jackson is working with Goeckler to keep the MOR partnership moving in their FY24 planning process.

The partnerships are in the FY24 planning process and most have had coordination meetings this summer. The Tennessee-Cumberland Rivers (TNCR) sub-basin invasive carp partnership will hold its first coordination meeting for FY24 project planning next week.

The update topics are pulled from the notes and action items from previous Executive Board meetings with the intent of organizing this as an ongoing conversation. Six topics were identified for discussion. Slides are provided below.

1. Basin wide platform for data management/analysis

The first two bullets are in response to a previous action item. The last three bullets are an update on a separate but related effort, the USFWS and USGS effort to create a database for invasive carp data across the Basin.

Is the MOU for CarpDat the same one that USGS is working on for Fishtracks? Yes.

1. Communication Needs and Barriers

The coordinators do not have the capacity to address this need, but they feel strongly that it is a high priority need for the partners to be able to concisely describe the breadth of the partnerships’ efforts and to provide a synthesis of management actions and monitoring results. The sub-basin fact sheets that the coordinators have recommended would also be very helpful for MICRA’s Congressional outreach. This is a capacity need that would be great to address ahead of the potential Congressional briefing in October.

* Conover will follow-up with the sub-basin invasive carp partnership coordinators to determine if sub-basin fact sheets can be provided prior to the Congressional briefing tentatively planned for November 8, 2023.

1. Development of Partnership Objectives

The coordinators took the letter from MICRA requesting the sub-basin partnerships to develop sub-basin scale objectives into their partnership coordination meetings this year and each has been working to fulfill this request. Variability in the approach the partnerships are taking to get sub-basin scale objectives was described. It is important that the objectives themselves is not what’s important, but for the partnerships to implement them and use them to guide decision making. Input provided by some of the partners leading into these processes was shared with the board to highlight the interest from many partners in doing a better job of understanding and making informed decisions about where we apply management and what information we need to apply management. Then, using that kind of information to inform funding decision on annual basis, to develop good process, and modifying existing to do a better job overall. There is a lot of similarities and consistency among the partnerships in the way people are thinking about things and the concerns that they have. Developing basinwide objectives and actions based on the sub-basin scale objectives may not be as difficult as some people have thought. Examples from the different sub-basins were provided. Preventing establishment in new locations, reducing abundance, and reducing distribution are common themes. Secondary effects on the resource and public resource users were also a common theme. The discussions have been useful for developing shared understanding and collaboration within the partnerships.

1. TNCR Decision Analysis

The TNCR partnership had an FY22 funded project for the USGS to walk the partners through a decision-analysis process building on a similar analysis completed in 2020 for the Tennessee River and expanding it to include the Cumberland River and Tennessee-Tombigbee Waterway.

There are two phases to this new project. The first phase considers constraints put on USACE by the Congressional language. For example, the 2022 WRDA Section 509 legislation stipulates that at least one project will be completed in the Tennessee-Tombigbee Waterway. Another key consideration is how USACE interprets Section 509 implementation and the definition of “pilot”. The USACE interpretation of the legislation is that projects must be placed in locations where carp are present to demonstrate the effectiveness. This is a constraint that affects the potential implementation of projects.

The goal of Phase I is for the partnership to develop a list of priority locations for deterrents and to provide the list to USACE for consideration in the implementation of Section 509. The last time the decision analysis was completed by the partnership, the resulting list of priority deterrent locations for the Tennessee River was communicated to TVA through MICRA. There is interest in MICRA communicating the results of the current decision analysis to USACE.

Phase II removes the constraints from the Section 509 legislation and USACE interpretation in the development of a list of priority locations for deterrents in the TNCR system. The plan is to have the results of Phase II later this fall.

At one time, weren’t there two different processes to develop a priority list for deterrent projects under Section 509? Was USACE leading a process? All discussions for this project are being led by USGS and core team. The intention of this project was 1) to develop a list of priority deterrent locations that could be used by USACE in their implementation of Section 509, and 2) to help the TNCR partnership to make better decisions and develop a strategy for how to move forward with partnership projects. The results of Phase I will be fed into the USACE Environmental Assessment (EA) process, but USACE has their own analyses that will be part of the EA process too.

Is Phase II going to be independent of USACE? USACE will be invited to participate as a partner in the project as well as the other federal partners, but it will be independent of the USACE 509 considerations.

The work that the partnership is doing in Phase I to develop a list of priority deterrent locations will be fed into the USACE EA process for consideration. Phase II informs what the partnership does going forward and nothing else.

The TNCR partnership would like the list of priority locations developed through the decision analysis process to be communicated to USACE via MICRA. Since this is a sub-basin specific issue, the draft letter to USACE would be shared with all the TNCR sub-basin delegates by Dreves, the TNCR sub-basin representative on the Executive Board. If all reply in favor of MICRA sending the draft letter on their behalf, then Dreves would provide the letter to the MICRA Chair for his signature and transmittal on behalf of the TNRC delegates. No review or approvals are needed by other delegates.

1. Transparency in project budgets

One issue that came up in a previous review of the sub-basin partnership projects by the ICAC was the need for understanding what requested dollar amounts mean in the different proposals. This has also come up in the partnership coordination meetings. It is difficult to make informed decisions about projects without better understanding the budget requests. This is a challenging topic to address. The coordinators did not have a recommendation for the board’s consideration but brought this to the board’s attention for their awareness and input. This is something that will be appropriate for the revised ICAC to consider. It is possible that connecting funding decisions to the sub-basin scale objectives that are being developed may reduce or eliminate the need for this level of transparency.

1. Capacity limitations and needs

This has come up several times during the board’s meeting in different ways. Input from the partnerships is that simply requesting more funding doesn’t help us get to where we need to be with capacity.

It is good to hear that the sub-basins are generally aligning and not moving in six different directions. We can pick-up the transparency (i.e., reproducibility) discussion at the next meeting if further discussion and input from the board is needed.

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## Executive Board Member Updates

*Discussion:*

Executive Board members will have an opportunity to bring agency or sub-basin activities, concerns, and emerging issues up for discussion.

*Discussion Notes:*

This topic was tabled due to a lack of time. No updates were provided separate from the discussions that took place throughout the meeting.

## Chairman’s Report

*Discussion:*

Brad Parsons will provide an update on the Chairman’s activities since the board’s February 2023 meeting.

* Represented MICRA during the DC Fly-in March 6-10, 2023
* Submitted a letter of support to the USACE for the Upper Mississippi River Restoration Program 2022 Report to Congress (copy provided below)
* Represented MICRA and provided a presentation as part of the USGS Science Forum
* Conducted two MICRA Delegate Policy Briefings with Ashlee Smith via Zoom in February
* Held a MICRA Executive Board virtual meeting in February to focus on MICRA communications
* Held a MICRA Executive Board virtual meeting in June
* Represented MICRA on Tennessee Wildlife Federation Invasive Carp professionals calls in February and May
* Approved MICRA Interim Performance Progress and Financial reports for FY22 USFWS grant to support the MRBP
* Coordinated an extension of the contract agreement with Ashlee Smith
* Approved a new Verizon Wireless business account for MICRA internet service

*Discussion Notes:*

Brad Parsons was not able to attend the meeting, so the report stands as submitted.

* Parsons and Smith will update the contractual agreement between MICRA and Ellis Smith Policy Solutions to reflect the 9-month extension that was approved by the Executive Board June 30, 2024.

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## Coordinator’s Report

*Discussion:*

*Financials*

* Accountant, bank, and coordinator financial records all reconcile as of 7/31/2023
  + 7/31/2023 balance on hand = $229,819.12
  + MRBP = $39,411.52
  + MICRA = $190,407.60
* Status of 2023 membership dues
  + 19 states, USGS, and TVA have paid 2023 dues
  + 2nd dues invoices will be sent in early September to Georgia, Iowa, Kansas, Nebraska, New York, North Dakota, Tennessee, and Virginia
  + $10,000 (MDC) and $5,000 (MN DNR) were received for policy coordination support
* MRBP funding
  + FY23 USFWS funding for MRBP awarded
    - Funding level remained at $50,000
    - MICRA receives $4,500 for indirect costs
    - Funds are invoiced for reimbursement and are not included in the MRBP balance above
    - Balance on hand reflects $42,910.67 in MICRA funding obligated for the MRBP minus $3,499.15 in expenditures through 07/31/23 to be reimbursed to MICRA by the USFWS grant
* New Verizon Wireless business account established
  + Transitioned from personal hot spot to business router to provide better network capability for on-line meetings

*Projects / Travel*

* Coordinated reviews and made revisions to the 2024-2028 priorities document
* Coordinated reviews and revisions to MICRA list of interjurisdictional rivers and draft MICRA Aquatic Habitat Action Plan
* Reviewed and developed recommendations for updating MICRA’s Constitution and By-laws
* Prepared a presentation for the MICRA Chairman to present as part of the USGS Science Forum; drafted and submitted approved MICRA response to USGS Science Forum survey
* Established a new Verizon Wireless business account for MICRA internet
* Drafted and submitted approved MICRA Interim Performance Progress and Financial reports for FY22 USFWS grant to support the MRBP
* Drafted Mississippi River Basin Fishery Commission presentation and talking points for the AFWA Fisheries and Water Resources Policy Committee and the Invasive Species Committee meetings and attended the meetings with Ben Batten who gave the presentations
* Updated the Mississippi River Basin Fishery Commission presentation and talking points for the Midwest Association of Fish and Wildlife Agencies Directors’ Business Meeting; attended with Brad Parsons who gave the presentation
* Attended MICRA Paddlefish and Sturgeon Committee meetings
* Assisted Ashlee Smith with coordinating a Congressional Field visit at Lock and Dam 19, Mississippi River, for May 16. After numerous calls over a several week period the tour was cancelled due to high water.
* Assisted with planning the AFS habitat symposium; presented on the MICRA draft Aquatic Habitat Action Plan
* Attended multiple virtual MRBP Executive Committee meetings
* Assisted with planning and attended the MRBP meeting
* Attended the virtual ANS Task Force meeting
* Attended monthly virtual MICRA ICAC meetings
* Coordinated and attended multiple MICRA virtual meetings: all delegate policy updates, Executive Board communications discussion, etc.
* Coordinate review and submission of MICRA’s list of 2023 Mississippi River Basin invasive carp projects to the USFWS for funding consideration
* Coordinated review and revisions to the 2022 Monitoring and Response Plan for invasive carp and posted the final document on the MICRA website
* Drafted and submitted the approved MICRA application package for FY23 USFWS grant to support the MRBP
* Attended Tennessee Wildlife Federation invasive carp professionals calls in February and April; sent reminders to MICRA delegates to include opportunities for Congressional staff to accompany agency staff conducting field work
* Attended the USACE Ohio River Basin Inspection Tour and discussed MICRA
* Assisted with planning and attended the MICRA AIS Committee meeting
* Assisted Ashlee Smith with coordinating a Congressional Field visit in La Crosse, Wisconsin, in partnership with the Upper Mississippi River Basin Association. Attended and spoke about the MICRA partnership and the Mississippi River Basin Fishery Commission initiative.
* Drafted MICRA testimony for the USACE Mississippi River Low Water Inspection Tour. Attended and presented approved testimony on behalf of MICRA Chair

*Discussion Notes:*

Conover briefly reviewed the financial information provided in the report above. He informed the board that his financial records reconcile with the accountant’s and the bank’s.

Conover has recommended updates to the MICRA Constitution and By-laws in addition to the proposed increase in state member annual dues to share with the Executive Board. The board will need to determine if they want to propose any of the updates to the delegates concurrent to the request for an increase in state member annual dues.

* Conover will make proposed updates to the MICRA By-laws and share with the MICRA Executive Board members for discussion during the October 27th meeting.

## Webpage Dashboard Demonstration

*Discussion:*

During the Executive Board’s February 2023 meeting, there was a discussion about the potential future development an interactive basin map or story board on the MICRA website. The discussion resulted in the following action item:

* The Executive Board will consider development of a storyboard for an interactive map housed on the MICRA website as a next step after the revision of MICRA’s list of interjurisdictional rivers has been finalized.

Rebecca Neeley and Ross Ruehmann, USFWS La Crosse Fish and Wildlife Conservation Office, will provide a demonstration on how a dashboard housed on the MICRA website could be used to get information out to the public or as needed by MICRA.

*Discussion Notes:*

Ruehmann, a geospatial biologist, previously met with Neeley and Conover to consider initial ideas for a dashboard for the MICRA website. Reuhmann demonstrated an ArcGIS-based web map of the Mississippi River Basin. The map can be viewed using a public URL and is dynamic, allowing user to pan and zoom. As the map is zoomed in and out, different data are displayed on the map. When zoomed out, an outline of the Mississippi River Basin was visible. When zoomed in, the MICRA sub-basin units are visible. When zoomed in further, USGS watershed HUC layers become visible. Data layers can be selected on and off for viewing in the map. Additional layers were included in the demonstration for USEPA impaired waters and US Congressional Districts.

The map is configured so that when a sub-basin unit is selected, a window pops-up displaying attribute information. For this demonstration, the pop-up windows for the sub-basins included the sub-basin unit name, states, area in acres, and area in km2. The dashboard includes widgets in the margin next to the map. The widgets are updated based on what is being viewed in the map. The widgets can also be used to view data for only one sub-basin. The dashboard is fully customizable to include data tables of desired information that can be displayed with different data layers.

Ruehmann then gave a demonstration of the [USFWS’s eDNA dashboard](https://fws.maps.arcgis.com/apps/dashboards/52b22abe9c4d4575adfe851a946f444d) that includes a lot more data and interactive functionality than the demonstration map just reviewed.

The impaired streams data layer is good information to get people’s attention. Are there other data layers built into the Mississippi River Basin map? USEPA has additional data layers that can be pulled in. The data can be aggregated. For example, the intensity of the streams can be varied based on the number of impaired streams within a Congressional district. The dashboard allows the user to interact with the data and see it update in real-time on the screen.

It would be easy to add MICRA’s list of 6th order and larger streams as a viewable data layer.

It might be useful to add locations on the map where invasive carp projects are funded. This could provide a tool for visualizing where the invasive carp funding is being utilized on the ground. You could include points of contact. It could be developed into a communication tool.

Could we integrate USGS NAS database distribution maps? It would integrate a live data query.

We can include whatever data we like with the different layers. For example, if include a layer of MICRA’s 6th order and larger streams, there could be data provided when the user selects one of those streams.

Could the dashboard be used to create static maps? Yes, links to static maps can be built into this.

This could be the center point of a geo-narrative that can stand on its own or include textual information.

Is this living within ArcGIS on-line or does USFWS have their own location for this? It is in ArcGIS on-line. Access can be fully customized. We would not want to have the final URL to include ‘U.S. Fish and Wildlife Service’. The current URL is fws.maps.arcgis.com…

Is there an option to make a digital flier? Yes, you could, but it is probably better to have the live version.

The utility of a tool like this is the ability to focus in and out to meet messaging needs, from basinwide to a single Congressional district.

What would the focus be if we developed a dashboard for MICRA? This started from a discussion with Angela Erves about the sub-basin maps for MICRA’s Aquatic Habitat Action Plan. The discussion evolved into the need for static maps for different communication uses and that led to the suggestion for a dashboard that could be used to create maps as needed.

There are lots of applications related to invasive carp work in the basin, for example, pounds of invasive carp removed from different locations. The committees or sub-basins may all have uses for this type of tool.

The only thing that needs to be done right away is to get the MICRA branding on it. This is an example of something that the states get in return for their investment in MICRA.

Is there a list of georeferenced data that can be built into this map? It’s endless. We may want to start with what is already available on-line. Everything that was included in the Mississippi River Basin web map demonstration were available on-line for free. The only thing that would have to be created is the locations of different projects (e.g., habitat or invasive carp). That may require digitizing.

Ruehmann can assist with adding more open-source data layers but will need some direction from MICRA. What is the story that MICRA wants to tell with this tool?

What is La Crosse FWCO’s availability to further develop a dashboard for MICRA? That is discussion that Neeley will need to have with the incoming La Crosse Fish Health Center Director and Regional Office.

Starting with a base model that can be added to the MICRA website would be super. The initial data layers could be the sub-basin outlines, USGS HUCs, MICRA 6th order and larger interjurisdictional rivers, and U.S. Congressional districts. That could be shared with the MICRA Delegates to solicit ideas for future development. We may want to prioritize anything that would be useful for MICRA’s DC fly-ins.

The MICRA partnerships do not align exactly with the USGS 2-digit HUCs. The Tennessee and Cumberland rivers are grouped together as a MICRA sub-basin unit. The USGS HUCs include the Cumberland River as part of the Ohio River HUC and the Tennessee River is in its own HUC. Is there flexibility within the system to modify the data so that it aligns with the MICRA sub-basin unit boundaries? Absolutely.

The Executive Board was requested to provide Neeley and Ruehmann with a list of data layers they would like included? Neeley and Ruehmann were asked if they could provide MICRA with a base map that includes the MICRA sub-basin boundaries, MICRA’s list of 6th order and larger interjurisdictional rivers, and US Congressional districts. The Executive Board will continue to think about the utility of the dashboard and prioritize additional data layers to build into the dashboard.

There have been a lot of communication tools that have been mentioned in the last two hours. This underscores the need for MICRA to have a communications plan. We need to know who our audiences are, what the message are we want to convey to each, and then how to deliver those messages. We don’t want to just go out to the states and start asking for information to populate the dashboard.

There is value in having the committees consider what data layers would be valuable for their use so that needs are driven from the bottom up rather than the Executive Board driving requests down.

We may want to consider using the dashboard to visualize and report out on how the USFWS invasive carp funding is being used throughout the basin. Not all that information is georeferenced. There is no database that can be imported with the locations where removals have been occurring. It may be sufficient to use a box to show general location rather than specific georeferenced points. Maybe report it out by pool or stretch of river. Start simple.

One layer we do use is the status of carp in different parts of the basin. A geonarrative would be very useful for linking all the different sources of information and keeping the dashboard uncluttered. We may want to highlight projects rather than including all projects.

La Crosse FWCO has the maps that have been used for the WRDA reports.

* The Executive Board will consider what a few top priority communications needs or maps might look like and the data layers that would be needed to develop them.
* Rebecca Neeley will determine the possibility of the La Crosse FWCO developing a web-based dashboard tool for MICRA that includes MICRA sub-basin group boundaries, congressional districts, MICRA’s 6th order and larger streams, and the characterization of relative abundance of bigheaded carps similar to the figure included in the USFWS-led Report to Congress.

## Appointment of New MICRA Chair-elect

*Decision:*

MICRA officers are scheduled to change 2024. Ben Batten will automatically transition to the MICRA Chair, vacating the MICRA Chair-elect position. The MICRA Constitution stipulates “A candidate for Chairperson-Elect will be nominated during odd numbered years by one of the sub-basin organizations comprising the Executive Board, or anytime the position is vacated. Responsibility for nominating a candidate for Chairperson-Elect will be rotated among the sub-basin organizations comprising the Executive Board.” The board members will identify a sub-basin to request a nomination for a chair-elect for the 2024-2025 term.

The agency and sub-basin affiliation of the past six chairmen is provided below.

|  |  |  |  |
| --- | --- | --- | --- |
| **Term** | **Chair** | **State** | **Sub-basin** |
| 2014-2015 | Bobby Wilson | Tennessee | TNCR, LMR |
| 2016-2017 | Ron Brooks | Kentucky | OHR, TNCR, LMR |
| 2018-2019 | Brian Canaday | Missouri | MOR, UMR, LMR, ARW |
| 2020 (partial term) | Larry Pugh | Mississippi | LMR |
| 2020-2021 | Brian Schoenung | Indiana | OHR |
| 2022-2023 | Brad Parsons | Minnesota | UMR |
| 2024-2025 | Ben Batten | Arkansas | LMR, ARW |

There is not a set rotation for the sub-basins. Several states are in multiple sub-basins which makes it difficult to track a rotation through the six sub-basins. The board will consider if the rotation should be based on all six sub-basins or if the LMR/ARW and OHR/TNCR should be combined so that the rotation is based on four major sub-basins. The board will also consider if a set rotation would be helpful.

*Discussion Notes:*

In January 2024, Batten will move into the MICRA Chair position, and we will need a new person to step into the vacated Chair-elect position. The key decision point is what sub-basin should we be looking to next to nominate a Chair-elect. Do we want to establish a rotation or is that necessary? The By-laws state that it will rotate among the sub-basins, but it does not specify the order.

As shown in the table above, many state delegates could represent two or more sub-basins. That can make it difficult to have a deep pool of candidates when looking to the ARW or TNCR sub-basins. Would it make more sense to work from a rotation of four sub-basins that combine the ARW and TNCR with the LMR and OHR, respectively, to reduce some of this overlap?

It is more important that we find someone that is interested and wants to be engaged, rather than twisting someone’s arm because they are in a specific part of the basin.

It is not necessary that the chair-elect be someone that is already serving on the Executive Board. Wilson, Brooks, and Canaday all joined the Executive Board as Chair-elect. The Chair-elect is a two-year position that is supposed to help someone come up to speed with the Executive Board before stepping into the Chair position.

The By-laws do not require that the Chair and Chair-elect positions be held by Delegates, however, the board has focused on keeping delegates serving in these positions. If there is a high-level administrator within an agency that is more engaged with river issues than the fish chief, then exceptions can be made. Considering MICRA’s focus on the fishery commission and engagement in the DC fly-ins, it would be best to have a state agency person serving as the MICRA Chair and Chair-elect.

Will Brad transition off the Executive Board when his term as Chair ends at the end of this year? Several years ago, the Executive Board adopted a Past Chair position as a non-voting Executive Board member to provide a way for the outgoing Chair to remain engaged with the Executive Board. This is unofficial as it is not in the By-laws and is one of the updates that is needed. It’s preferrable to keep the Past Chair as an optional, non-voting position so that it doesn’t add to the time commitment for someone stepping into the Chair-elect position. Would this be for all Past Chairs or just the immediate Past Chair? That needs to be decided. Initially, we approached it as all Past Chairs as there was interest in remaining engaged with the Executive Board. There is no reason that a Past Chair could not transition into a sub-basin representative position if they wished to stay on the board.

The LMRCC rotates alphabetically by state but allows for some flexibility. There is at least some expectation of who will be responsible for serving as the Chair next and people can anticipate. Having a set progression is nice and is common among other groups.

If we rotate among the sub-basins, then the Missouri River sub-basin would be next and the Ohio River sub-basin is on deck. If we combine sub-basins as previously suggested, then the Ohio River or Tennessee-Cumberland sub-basins would be on deck. Who is responsible for making a nomination? The sub-basin representative reaches out to the delegates or the sub-basin organization (e.g., UMRCC, LMRCC) to seek a nomination depending on how the sub-basin handles it.

* Kasey Whiteman will seek a nomination for the MICRA Chair-elect 2024-2025 term from the Missouri River sub-basin delegates.
* The Executive Board agreed to seek nominations for the MICRA Chair-elect on a “loose” rotation among the following sub-basins: ARW&LMR, MOR, OHR&TNCR, and UMR.

This will be a critical few years for MICRA so we want someone that is engaged and will be able to go to DC on occasion. John Lott (SD) participated in the DC fly-in last year.

## Develop MICRA’s 2024 Operational Budget

*Discussion:*

The Executive Board will approve an operational budget for 2024. A proposed budget for 2024 is provided on the next page. Line-item changes from 2023 are shaded light blue.

*Discussion Notes:*

Conover presented the Executive Board with a draft operational budget for MICRA in 2024 based on the previous year’s income and expenditures and any known additions for 2024.

The 2024 income projection includes two federal agencies and 22 states paying membership dues. The potential increase in membership dues is broken out into a separate line of income in the budget. We were told yesterday that USGS may no longer be able to pay dues since Ashlee is a registered lobbyist. Is there a way to firewall the USGS funds off, so they are not used to support Ashlee’s position? We already do. The problem is that there is an appearance that the federal funds could be used to support MICRA’s policy work. The projected income for 2024 could be $5,000 lower if USGS decides they can no longer pay membership dues.

Increases in 2024 expenditures include the higher monthly rate and travel budget for Ashlee Smith’s contract. $500 was added for both Paddlefish Sturgeon Committee and the AIS Committee meeting expenses. An additional $1,000 is included for the purchase of a new projector for MICRA meetings. A request was made to add $1,000 to support the ICAC and sub-basin invasive carp partnership meeting expenses.

The projections are for MICRA’s expenditures to exceed income by $20,000, possibly $25,000 if USGS is unable to pay dues. The projected 2024 year-end balance is approximately $100,000. These numbers include $33,000 in additional dues assuming the proposed increase is approved. MICRA will still have a sizable balance even if the dues increase is not approved. There are states that will provide additional funding to support the policy coordination work if the proposed increase in membership dues is not approved.

We will need to provide some context to the delegates when the proposed increase in membership dues is sent out for their approval. Specifically, reminding people that dues are voluntary, so if a state has not paid dues, they will not be impacted by the dues increase and we need their vote to reach quorum. Similarly, if a state has not budgeted for $3,000 in 2024, they will be able to continue paying at $1,500 until they are able to pay the increased rate. New invoices can be provided for $1,500 if needed. This messaging should be included in the sub-basin meetings as well.

Has MICRA considered bringing the tribes into the partnership? Yes, there were two tribes that signed the 1990 agreement. We have lost that representation over time due to retirements and the loss of personal connections. There is a lot of overlap in interjurisdictional fisheries issues. Tribal participation is built into the fishery commission.

* The Executive Board will vote electronically to approve an additional $5,000 travel budget for Ashlee Smith for the remainder of 2023.
* The Executive Board will vote electronically to approve the proposed 2024 operational budget with the addition of $1,000 to support ICAC and sub-basin invasive carp partnership meeting expenses.



## Schedule Fall Conference Call and Winter Executive Board Meeting

*Discussion:*

Executive Board members will schedule a Fall conference call and Winter Executive Board meeting.

*Discussion Notes:*

It would be good to schedule the Fall conference call before the DC briefing November 8th. We typically plan on a 2-hour call and schedule two separate calls when there is a lot of business to cover.

* The Executive Board tentatively scheduled a virtual meeting from 9am-11am Central on Friday, October 27th.

Do we want to meet north and combine with ice fishing? We can meet in Oklahoma and combine with paddlefish snagging. Should we consider meeting in conjunction with the Bassmaster Classic in Oklahoma in March? How many days does the board generally meet? 2 or 3 days, depending on if we have a field trip with the meeting. The North American will be held here in Grand Rapids in March. The board generally meets prior to the DC fly-in and early enough to be able to follow-up on anything that comes out of the meeting. Southern Division AFS meets January 31 – February 4 in Chattanooga. That is the same week as the Midwest Fish and Wildlife Conference in Sioux Falls, IA. That would work for an ice fishing trip. USGS will be participating in the Midwest and will have to determine how to cover. We need to make sure these dates work with the other Executive Board members so that we have a quorum at the next meeting.

* The Executive Board tentatively scheduled an in-person meeting January 29-30, 2024, in Chattanooga, Tennessee, prior to the Southern Division AFS meeting.

## Other New Business / Parking Lot

*Discussion:*

Executive Board members will address topics put in the parking lot during the meeting and additional business items not on the agenda that board members would like to bring up for discussion.

*Discussion Notes:*

No new business items were brought up for discussion.

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**Goals, Objectives, and Priorities**

**2024 - 2028**

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**Introduction**

MICRA works to preserve, protect, restore, and enhance interjurisdictional fishery resources and aquatic habitats in the Mississippi River Basin (Basin) through cooperative assessment and management of the basin’s aquatic resources. MICRA’s member agencies developed a comprehensive Strategic Plan in 1991 and completed an Activity Prioritization of the Plan’s 10 goals and 133 tasks in 1992.

The MICRA Executive Board established an Operational Plan for the 5-year period 2014-2018 to focus on a much smaller subset of priorities for the partnership to accomplish during the operational period through the work of member agency delegates, the Executive Board, and committees. This Operational Plan, which is updated every five years, is intended to be a guiding document that is timely and responsive to the current biological, social, and political issues that influence fishery resource management. As such, the Operational Plan is an adaptive document that will be updated as needed to remain relevant and provide for the most effective cooperative management of the fishery and aquatic resources in the basin.

MICRA developed 'A Joint Strategic Plan for Management of Mississippi River Basin Fisheries’ (Joint Strategic Plan) in February 2021. Twenty-six of the twenty-eight MICRA member state agency Directors have signed a Memorandum of Acceptance of the Joint Strategic Plan. The Joint Strategic Plan is intended to serve as a foundational document for the proposed Mississippi River Basin Fishery Commission (Fishery Commission). Based on mission statements, the following common goal statement was developed to represent the shared intent of the MICRA member agencies regarding interjurisdictional fishery resources in the Basin:

*Coordinate the conservation, development, and utilization of sustainable interjurisdictional fishery and aquatic resources in the Mississippi River Basin for the public through cooperative management among the responsible entities.*

The Joint Strategic Plan identifies four key problem areas that must be addressed to comprehensively manage interjurisdictional fishery resources now and in the future and identifies broad strategies and strategic processes necessary to collaboratively resolve these complex issues.

Problem Areas

1. Aquatic Invasive Species
2. Inadequate Resources for Research and Management of Shared Fisheries
3. Habitat Loss and Degradation
4. Limited Public and Stakeholder Involvement and Support

Strategies

1. Ecosystem Management
2. Information Management and Sharing
3. Outreach and Communication
4. Consensus
5. Accountability

Accomplishing this shared goal statement would benefit from increased diversity, equity, inclusion, and accessibility in human resources working on fisheries and aquatic resources and by providing opportunities for the public to become engaged in this effort.

MICRA drew heavily from its Joint Strategic Plan in the development of this Operational Plan for 2024-2028. However, the absence of a federal authorization and appropriations to form and support the proposed Fishery Commission constrains full implementation of the Joint Strategic Plan.

MICRA’s priorities and accomplishments for the operational period 2019-2023 are reported in Appendix 1.

**Goals and Objectives**

GOALS

1. Coordinate basin-wide management of interjurisdictional fishery resources and aquatic habitats among the responsible management entities. *[INTERNAL COMMUNICATION]*
2. Increase awareness, support, and funding for basin-wide management of interjurisdictional fishery resources and aquatic habitats. *[EXTERNAL COMMUNICATION]*

OBJECTIVES

1. Coordinate implementation of interjurisdictional fishery and aquatic resource management programs throughout the basin. *[IJ FISH]*
2. Identify priority habitat restoration needs for the Mississippi River Basin, coordinate with national and regional aquatic habitat initiatives, and provide a forum for information and technical exchange. *[AQUATIC HABITAT]*
3. Coordinate prevention and control measures for Aquatic Invasive Species (AIS) to ensure sustainable native aquatic ecosystems within the basin. *[AIS]*
4. Develop and implement a communication plan for disseminating information to target audiences. *[COMMUNICATION]*
5. Secure funding for long-term operational needs and implementation of basin-wide programs. *[FUNDING]*

**Priorities**

Objective 1: Coordinate implementation of interjurisdictional fishery and aquatic resource management programs.

Priorities:

MICRA Joint Strategic Plan Excerpt

Problem Area: Limited Public and Stakeholder Involvement and Support

Interjurisdictional management of shared fishery and aquatic resources throughout the basin would benefit from:

* Basin-wide plans that prioritize fishery management needs and identify mechanisms for the development of shared management objectives and collaborative implementation, data sharing, and evaluation of management actions.
* Improving communication, coordination, and collaboration among state and federal agencies and NGOs to identify shared priorities, interests, and opportunities to address significant problem areas affecting long-term management of self-sustaining interjurisdictional fishery resources in the basin.
* Promoting partnerships (working and funding) among governments, the public, and NGOs to promote economic and environmental security and stability along the Mississippi River and its tributaries.
* Effective non-technical communication resulting in increased public awareness and improved public perception of the economic, social, and cultural value of the basin’s natural resources.
* Effective stakeholder involvement practices to identify public concerns and values, develop consensus among affected parties, and produce efficient and effective solutions through an open, inclusive process.

1. Identify and prioritize basin-wide resource management issues of concern in the Mississippi River Basin.
   * 1. MICRA delegates meet every 3-5 years to review priorities and discuss emerging issues of concern within the basin.
     2. Standing committees review priorities and discuss emerging issues of concern within the basin every 3-5 years. Committees will report to the Executive Board at least once annually on progress of priorities identified in this document.
     3. Encourage and support the development of sub-basin management plans under the *Joint Strategic Plan for Management of Mississippi River Basin Fisheries*.
     4. Executive Board updates MICRA’s priorities document every 5 years.
   1. Use standing technical committees and temporary working groups as needed to provide for the development of coordinated strategies to address priority issues and identify basin-wide research needs to support conservation, management, and utilization of native interjurisdictional fishes and aquatic resources.
      1. Support continued efforts for coordinated basin-wide management of paddlefish and sturgeon species.
         1. The Paddlefish and Sturgeon Committee will complete a basin-wide management framework for paddlefish.
         2. Develop or update sub-basin paddlefish management plans in support of the basin-wide paddlefish management framework.
         3. The Paddlefish and Sturgeon Committee will consider the need for coordination and management of a basin-wide tag database for paddlefish in support of the basin-wide paddlefish management framework and the sub-basin management plans, and provide recommendations to the Executive Board regarding the future of the database.
         4. The Paddlefish and Sturgeon Committee will provide the Executive Board with a recommendation and cost estimate for completing sensitivity analysis of the available paddlefish age and growth data from commercial harvest states to inform priority next steps and additional research needs.
         5. The Paddlefish and Sturgeon Committee will develop a list of priority research needs to advance cooperative interjurisdictional management of paddlefish and sturgeon.
      2. Support and collaborate with the Freshwater Mollusk Conservation Society to conserve native freshwater mussels.
   2. Build consensus for compatible regulations and policies for priority interjurisdictional fishery and aquatic resources issues.
      1. Encourage and facilitate law enforcement participation in the development of collaborative management and regulatory strategies to support conservation, management, and utilization of interjurisdictional fishes and aquatic resources, including to preventing the introduction and spread of aquatic invasive species.
      2. Work with USFWS and AFWA to host a facilitated workshop or meetings for biologists and law enforcement representatives from paddlefish and sturgeon commercial harvest states to determine the need for standardized methods for documenting and reporting harvest data, developing and maintaining basin-wide commercial harvest databases including roe harvest and roe buyers, and developing a system for tracking commercially harvested roe through final sale.
   3. Determine the socio-economic value of fishery resources and related recreation in the Mississippi River Basin.
      1. Work with USFWS to provide a written economic value report for the Mississippi River Basin, including an analysis by MICRA sub-basin boundaries, using 2022 National Survey of Fishing, Hunting, and Wildlife Associated Recreation data.
      2. Work with USFWS to explore the possibility of developing a report that includes an estimated return on dollars invested to manage fishery resources in the Mississippi River Basin based on 2022 National Survey of Fishing, Hunting, and Wildlife Associated Recreation data. (Report similar to the USFWS 2011 publication ‘Net Worth: The Economic Value of Fisheries Conservation’ that focuses on contributions to the U.S. economy in terms of jobs created and conservation stimulated commerce.)

Objective 2: Identify priority habitat restoration needs for the Mississippi River Basin, coordinate with national and regional aquatic habitat initiatives, and provide a forum for information and technical exchange.

Priorities:

MICRA Joint Strategic Plan Excerpt

Problem Area: Habitat Loss and Degradation

Interjurisdictional management of shared fisheries habitat loss and degradation throughout the basin would benefit from the following actions:

* Strategically coordinating interstate and inter-agency actions to identify mutually beneficial (ecology, economics, human health, safety) solutions for addressing:
  + Watershed improvements to maximize benefit to interjurisdictional rivers and reservoirs,
  + Floodplain habitat improvements for interjurisdictional fishes,
  + Conflicting water uses that address interjurisdictional fish habitat needs.
* Effectively identifying the combination of measures needed to restore water quality and quantity in areas where it has the greatest impact on fish stocks and habitats.
* Coordinating actions to address past, present, and potential future sources of contamination (i.e., pharmaceuticals and plastics).

1. The Executive Board will identify and implement next steps for the MICRA Aquatic Habitat Action Plan completed in 2023.
2. Identify and support opportunities to establish regular information exchange, communication, and coordination between entities responsible for aquatic habitat management in the basin.
3. Create awareness of the needs and opportunities to increase and direct funding to implement priority habitat projects identified in the MICRA Aquatic Habitat Action Plan.

Objective 3: Coordinate prevention and control measures for Aquatic Invasive Species (AIS) to ensure sustainable aquatic ecosystems within the basin.

MICRA Joint Strategic Plan Excerpt

Problem Area: Aquatic Invasive Species

Interjurisdictional management and control of aquatic invasive species throughout the basin would benefit from:

* Coordinated delivery of basin-wide, state-based invasive carp management and control actions, in partnership with relevant federal agencies, to achieve the goals and objectives of the national *Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States*.
* Coordinated regulatory strategies and enforcement to prevent the introduction of new AIS, and the transportation and spread of existing AIS within the basin.
* Effective actions to minimize the risk of introduction of AIS from other watersheds via man-made (e.g., Great Lakes via the Chicago Area Waterway System) and natural connections.
* Coordinated planning, implementation, and evaluation of management and control actions to minimize the abundance of AIS introduced within the basin.
* Comprehensive monitoring and assessment programs to provide for the evaluation of AIS impacts on native species and ecosystems, and to inform the effective implementation of management and control actions within the basin.
* Execution of Mutual Aid and similar agreements to empower the basin states to work together to address a serious regional threat from AIS.
* Research and development of deterrents and control tools to contain and reduce the abundance of AIS in the basin.

Priorities:

1. Serve as an *ex officio* member of the national Aquatic Nuisance Species Task Force.
2. Host, coordinate, and support activities of the Mississippi River Basin Panel on Aquatic Invasive Species, a regional advisory committee to the national Aquatic Nuisance Species Task Force.
3. Support a standing technical committee on Aquatic Invasive Species for coordination of basin-wide efforts to prevent introductions, manage introduced populations, and develop recommendations regarding AIS policy concerns.
4. ~~Promote strengthening of~~Seek Congressional support to strengthen the Injurious Wildlife provisions of the Lacey Act.
5. The Aquatic Invasive Species Committee will identify needs and provide recommendations to the Executive Board to promote streamlining of the Lacey Act Injurious Wildlife Listing process.
6. The Aquatic Invasive Species Committee will identify needs and provide recommendations to the Executive Board for establishment of an efficient federal screening process to evaluate risk of non-native species prior to importation, particularly species not already in trade.
7. The Aquatic Invasive Species Committee will identify needs and provide recommendations to the Executive Board for establishment of an efficient federal screening process for organisms in trade.
8. Promote development of consistent basin-wide regulatory approaches for the management of AIS.
   1. The Executive Board will facilitate meetings and discussions with the states that allow stocking of diploid grass carp within the basin~~states~~, as needed, to establish regulatory consistency for grass carp as recommended in the February 2015 MICRA Grass Carp Report.
   2. The Mississippi River Basin Panel and Aquatic Invasive Species Committee will coordinate efforts to implement recommendations in the February 2015 MICRA Grass Carp Report.
   3. Bait trade…
   4. Contribute to the development of model regulations for organisms in trade…
9. Support efforts to prevent the exchange of AIS between the Mississippi River basin and connected watersheds such as the Great Lakes and Mobile River basins.
10. Raise awareness of the immediate need for the U.S. Army Corps of Engineers to initiate the scoping phase for a feasibility study to prevent the *two-way* transfer of AIS as the next step for the Great Lakes and Mississippi River Interbasin Study authorized by Congress in the Water Resources Development Act of 2007.
11. Support the Invasive Carp Advisory Committee for basinwide coordination to develop collaborative advice and recommendations on the development, implementation, and assessment of management and control actions across the six sub-basin partnerships to promote a unified, collaborative strategy for the Mississippi River Basin.
    1. In partnership with USFWS, coordinate the collaborative development of an annual Monitoring and Response Plan to identify highest priority management actions for invasive carps in the Mississippi River Basin.
    2. Coordinate the collaborative development, prioritization, and submission of an annual basin-wide suite of priority project proposals to USFWS for federal funding assistance to implement sub-basin Invasive Carp Control Strategy Frameworks.
    3. ~~Develop recommendations for standardized methods for collecting and reporting population data for invasive carps sufficient to monitor and evaluate management actions on a basinwide scale.~~Develop recommendations for population assessment approach(es) that most directly and effectively target and evaluate the success of management actions in reducing the abundance and/or distribution of invasive carp across the basin.
    4. Develop recommendations for coordinating invasive carp removal programs on a basin-wide scale.
12. Promote the development and support promulgation of consistent outreach materials and messages throughout the Mississippi River Basin to support AIS prevention, management, and control.
13. The Aquatic Invasive Species Committee will review and make recommendations for revising the MICRA AIS Action Plan so that it remains a relevant outreach tool.

Objective 4: Develop and implement a communication plan for disseminating information to target audiences.

Priorities:

1. Identify and implement an approach for developing a MICRA communications plan.
2. Continue to host and manage content on the MICRA website.
3. Engage in efforts to increase awareness and action of Congressional members to improve management of fishery and aquatic resources in the Mississippi River Basin.
4. Develop a 5-year report of activities, accomplishments, and remaining resource needs identified in the MICRA priorities document.
5. Host workshops and networking opportunities at national and regional professional meetings (e.g., Midwest Fish & Wildlife Conference, SEAFWA, AFS Parent Society meetings) for MICRA member agency delegates, committee members, and partners.

Objective 5: Secure funding for long-term operational needs and implementation of basin-wide programs.

Priorities:

MICRA Joint Strategic Plan Excerpt

Problem Area: Inadequate Resources for Research and Management of Shared Fisheries

Interjurisdictional management of fishery and aquatic resources throughout the basin would benefit from:

* Increasing communication of the status of these fishes, habitat needs, harvest statistics, and barriers to effective management efforts.
* Identifying the research, management, and conservation actions necessary to maintain and recover species classified as threatened, endangered, or species of concern.
* Increasing coordination and funding support for research necessary to inform management activities and provide for improved management of interjurisdictional fishery resources.
* Promoting partnerships (working and funding) among governments, the public, and non-governmental organizations (NGOs) to manage shared fishery resources.
* Facilitating effective management strategies that allow movement of native fishes while deterring invasive species.
* Implementing coordinated efforts to standardize and compile agency harvest regulations for interjurisdictional fishery resources.

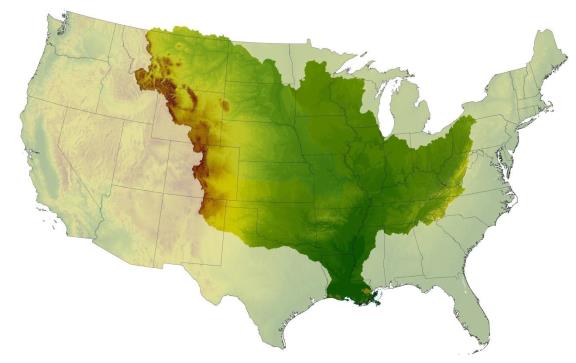
1. Pursue reliable, long-term funding sources and mechanisms for MICRA.
2. Work with MICRA member agencies, partner organizations, and stakeholder groups to pursue formation of a congressionally funded Mississippi River Basin Fishery Commission to facilitate cooperative management of interjurisdictional fishery and aquatic resources among the state, tribal, and federal management agencies; control AIS (e.g., invasive carps, mussels, and vegetation); and coordinate research to inform and evaluate fisheries management and AIS control actions.



**AQUATIC HABITAT ACTION PLAN**

**FOR NATIVE INTERJURISDICTIONAL FISH**

**OF THE MISSISSIPPI RIVER BASIN**



***Mississippi Interstate Cooperative Resource Association***

[***www.MICRArivers.org***](http://www.MICRArivers.org)

**August 2023**

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**AQUATIC HABITAT ACTION PLAN**

**FOR NATIVE INTERJURISDICTIONAL FISH**

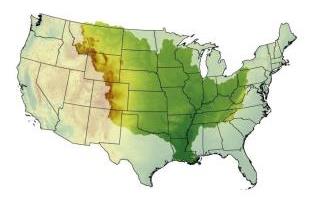
**OF THE MISSISSIPPI RIVER BASIN**

*Mississippi Interstate Cooperative Resource Association*

### **Introduction**

The waters of the Mississippi River Basin (Basin) contribute more than $19 billion of recreational fishing value annually (USFWS, unpublished data). This economic value is generated, in part, from a variety of species that, during some part of their life cycle, utilize rivers of the Basin managed by two or more governmental or tribal agencies. These species are referred to as “interjurisdictional fish” due to the cooperation necessary at multi- governmental levels to sustain their populations and habitat.

Figure 1. The Mississippi River Basin, or watershed, includes rivers and lakes from 31 states.



Interjurisdictional fish are often dependent on unique habitat types within these rivers and access to these habitats. Human actions have altered habitat quality and availability throughout the Basin due to construction of dams, impacts of sedimentation from the watershed, pollution and other factors. While many of these actions have led to losses of habitat for some species some actions have led to benefits for other species. For example, dams that create large reservoirs have been shown to negatively impact paddlefish and sturgeon populations (Cooke, D.W. and S. D. Leach 2004, Zigler et al.2004, Firehammer and Scarnecchia 2006.) while other recreational species often become abundant within the lakes created by these dams (Miranda 1999, Cameron et al. 2006). Unfortunately, there are many examples of where the reservoirs created have become less productive overtime due to sedimentation, fluctuating water levels or poor water quality (Miranda et al. 2010).

Management and protection of habitat for interjurisdictional fisheries’ resources is dependent on actions that are achieved through a variety of governmental entities. Likewise, habitat protection, enhancement and restoration require financial contributions from a variety of local, state and federal sources. Within the Basin, there are numerous examples of how the combined efforts of local, state and federal partnership projects have resulted in protection or restoration of critical habitat for interjurisdictional fish. These examples show what is possible, but cumulatively they have affected <1% of the total interjurisdictional river miles within the Basin.

More work is needed to protect existing quality habitat and to enhance/restore once productive habitats within the Basin for interjurisdictional fish. Many of the Basin’s interjurisdictional rivers have existing authorities though which work can be done if funding were increased to authorized levels. However, there are still many rivers and reservoirs where new funding sources or authorities are needed to address human caused impacts to fisheries habitat.

MICRA members continue to observe an overall decline in habitat quality throughout the basin, which will eventually lead to a reduction in populations of some interjurisdictional fish species and their associated recreational and commercial value to the economy. Additionally, many threatened and endangered species will be negatively impacted if habitat protection and restoration actions do not increase for the rivers and reservoirs.

Figure 2. Paddlefish collected from the Mississippi River Basin.



### **Goals:**

1. Conserve and protect high quality aquatic habitats in the Mississippi River Basin
2. Restore and create aquatic habitats and system functions in the basin

### **Priority Needs with Recommended Management Strategies:**

1. Maintain and enhance high quality habitats and habitat diversity
   * Avoid and minimize degradation of aquatic habitats through best management practices for watershed management, shoreline stabilization, channel training structure modifications, and acquisition of land/easements from willing private landowners.
   * Enhance and restore secondary channels, off-channel aquatic areas, and other critical habitats (e.g., crossovers; riffle pools; mussel beds; isolated wetlands; spawning, nursery, and over-winter habitat; etc.) requiring special protection or acquisition to increase habitat diversity.
2. Manage sediment transport
   * Support watershed initiatives to reduce/eliminate watershed induced degradation of aquatic habitats and ecosystem functions.
   * Promote restoration of a sediment transport regime such that transport, deposition, and erosion rates are within acceptable limits.
3. Restore main stem and tributary hydrology
   * Implement changes to dam operating procedures and water level management techniques that facilitate more natural hydrographs (i.e., reduced daily fluctuations).
   * Develop and implement watershed management actions to facilitate more natural hydrographs.
   * Restore hydraulic and habitat connectivity
4. Restore hydraulic and habitat connectivity

* Enhance lateral connectivity to the current and historic floodplain using a variety of techniques on publicly-owned properties and willing private ownerships.
* Increase longitudinal migration opportunities for fish through changes in dam operations and fish passage structures at dams and other human induced barriers.

1. Restore floodplain geomorphology/landforms

* Restore or construct floodplain landforms (e.g., islands, seed islands, chevrons, reefs, etc.) in locations where floodplain structural diversity is needed to increase variability in flow patterns, sediment composition, bathymetry, and reductions in wind fetch.
* Increase the area of naturally functioning floodplain through acquisition and restoration of bottomland hardwoods, wetlands, and other floodplain habitat.

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**Arkansas-Red-White Rivers Sub-Basin**

*Mississippi Interstate Cooperative Resource Association*

### **Geography**

The Arkansas-Red-White Rivers sub- basin of the Mississippi River Basin is an ecologically important and diverse area incorporating the Arkansas River, Red River, White River, and their corresponding tributaries within the states of Colorado, New Mexico, Kansas, Oklahoma, Texas, Missouri, Arkansas, and Louisiana. At 1,469 miles, the Arkansas River is the sixth longest river in the United States, and its drainage basin covers nearly 170,000 square miles. The White River is 722 miles long and has a watershed of nearly 28,000 square miles. The Red River is 1,360 miles long and has a watershed of almost 66,000 square miles. These three rivers, along with dozens of major and minor tributaries and reservoirs, are home to hundreds of native fish and mussel species.

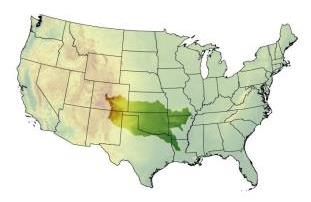


Figure 3. The Arkansas-Red-White Rivers Sub-Basin, or watershed, includes rivers and lakes from 8 states.

### **Economics**

Fishing is an important recreational activity within the Arkansas-Red-White Rivers sub-basin, with more than 1,561,807 anglers annually generating $2,270.8 in revenue. Commercial fishing and musseling are also economically significant within the sub-basin. Ten endangered fish and mussel species are found in the rivers and streams of the Arkansas-Red-White Rivers sub- basin. The Aquatic Habitat Action Plan for the Arkansas-Red-White Rivers sub-basin is designed to improve aquatic habitat for these ecologically and economically important fish and mussel species.

In 1994, five lock and dam structures were completed on the Louisiana portion of the Red River to promote transportation and associated economic development. This transformed the lower Red River into a series of five “pools.” Barge traffic on the river is light, with an average of 3.8 daily openings of Lock and Dam #2 between 2010 and 2018.

### **Problem Statement/Greatest Needs**

Habitat within the sub-basin’s rivers is often highly altered and can be limiting for aquatic species. Aquatic habitat enhancement within the Arkansas-Red-White Rivers sub-basin is critical to maintaining and restoring fish and mussel diversity and populations.

### **Existing Partnerships/Plans**

*Arkansas Stream Heritage Partnership (ASHP)*

The ASHP was established in 2017 to restore the natural free-flowing heritage of Arkansas streams, opportunistically, and efficiently. The partnership is a consortium of federal, state, and NGO partners working to foster the development of a network and process for supporting, aiding, and implementing the removal of barriers to stream connectivity, thereby restoring hydrologic, biologic, and ecologic function in an opportunistic, non-regulatory, and efficient manner. The partnership has already assisted with several barrier removals and crossing improvements, with more in the works for 2022.

*Red River Waterway Project (RRWP)*

The RRWP was authorized by Congress in 1968, and five locks and dams were completed in 1994 ensuring the navigability of the Red River from Shreveport to the Mississippi River. Three additional lock and dam structures have been proposed – one in Louisiana north of Shreveport, and two in Arkansas.

*Red River Waterway Commission (RRWC)*

The RRWC is a political subdivision of the State of Louisiana created following the 1968 authorization of the RRWP. The RRWC is tasked with fostering economic growth and recreational opportunities in the seven parishes along the Louisiana portion of the Red River. Commission members are appointed from each of the seven parishes along with four at-large commissioners.

*Red River Compact Commission (RRCC)*

Negotiations on the RRCC were authorized by Congress in 1955, and the Compact was signed by member states Oklahoma, Texas, Arkansas, and Louisiana in 1978. The purpose of the RRCC is to resolve and prevent disputes over issues regarding interstate waters. Provisions of the compacts specify how much water each member state is allowed to develop and store in the system. In recent years, water quality and pollution issues have received increased attention from member commissions. The RRCC consists of nine members -- two from each of the four states, and one federal representative appointed by the President.

*Red River Valley Association (RRVA)*

The RRVA was founded in 1925 as a non-profit member-supported organization. The RRVA works on local, state, and federal levels to promote the economic development and well-being of citizens along the Red River waterway in Oklahoma, Texas, Arkansas, and Louisiana.

### **Examples of Completed Habitat Restoration**

Past experience with restoration projects within the Arkansas-Red-White Rivers sub-basin provide examples of what can be accomplished with increased funding and both existing and new authorities. Natural flow regimes have been restored in parts of the Big Cypress Bayou downstream of Lake O’ the Pines (Smith et al. 2019). Research and evaluation of flows began in 2004. In 2011, USACE and the North East Texas Municipal Water District (NETMWD) agreed to implement the key recommendations of the stakeholders for the flow regime. They intend to release water from Lake O’ the Pines for the next five years to provide base flows and certain pulses while the stakeholders monitor the results. The pulses include flows needed for paddlefish spawning. Stakeholders include the Caddo Lake Institute, The Nature Conservancy, USACE, USFWS, NETMWD, USGS, Texas Parks and Wildlife Department, Texas Commission on Environmental Quality, Louisiana Department of Wildlife and Fisheries, Cypress Valley Navigation District, the City of Jefferson, and others.

Spawning habitat for paddlefish and other native fish has been enhanced through the construction of a 1,500-foot-long gravel shoal in the Big Cypress Bayou between Lake O’ the Pines and Caddo Lake.

Management of invasive species through herbicide or biological controls has been implemented at a variety of locations within the sub-basin. From 2015 – 2020, Louisiana and Arkansas treated a combined average of more than 18,313 acres of nuisance aquatic vegetation in the sub-basin.

### **Implementation Needs**

Currently, project funding is a critically limiting factor and a requirement to achieving the Plan’s objectives. Even with appropriate project funding, continued partnership by a suite of state and federal agencies, non-governmental organizations, and the public will be necessary for success.

The Aquatic Habitat Action Plan highlights restoration objectives, recommends management strategies, identifies potential management actions, and provides specific project examples that are necessary to maintain and restore fish and mussel diversity within the Arkansas-Red-White Rivers sub-basin. The Plan’s objectives are to:

* + 1. Maintain and enhance high quality habitat and habitat diversity,
    2. Manage sediment transport,
    3. Restore main stem and tributary hydrology,
    4. Restore hydraulic and habitat connectivity, and
    5. Restore floodplain geomorphology and landforms.

Projects focused on addressing these objectives will improve riverine aquatic habitat. Several examples of projects that could be conducted across the Arkansas-Red-White Rivers sub-basin to improve habitat are provided in the Plan.

The Plan addresses aquatic habitat needs for a variety of recreational, commercial, non-game and threatened or endangered fish and mussel species.

Table 1. Interjurisdictional rivers (6th order and larger) of the Arkansas-Red-White Rivers Sub-basin.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Rivers** | | | | | **Stream Order** | **States** | **Tribal** |
| **White (including Bull Shoals, Norfork, and Table Rock Reservoirs)** | | | | | **8** | **AR, MO** |  |
|  | **North Fork** | | | | **6** | **MO, AR** |  |
|  | **Black** | | | | **7** | **MO, AR** |  |
|  | | **Current** | | | **6** | **AR, MO** |  |
|  | | **Eleven Point** | | | **6** | **AR, MO** |  |
| **Arkansas** | | | | | **9** | **CO, KS, OK, AR** | **x** |
|  | **Salt Fork Arkansas** | | | | **7** | **OK, KS** | **x** |
|  | | **Medicine Lodge** | | | **6** | **OK, KS** |  |
|  | | **Chikaskia** | | | **6** | **OK, KS** | **x** |
|  | **Cimarron** | | | | **6** | **OK, KS, CO** | **x** |
|  | **Verdigris** | | | | **7** | **KS, OK** | **x** |
|  | | **Caney** | | | **6** | **OK, KS** | **x** |
|  | | | | **Little Caney** | **6** | **OK, KS** | **x** |
|  | **Neosho** | | | | **7** | **OK, KS** | **x** |
|  | | **Spring** | | | **6** | **MO, KS, OK** | **x** |
|  | **Illinois** | | | | **6** | **AR, OK** | **x** |
|  | **Canadian** | | | | **8** | **OK, TX, NM** | **x** |
|  | | **North Canadian1** | | | **7** | **OK** | **x** |
|  | | | | **Beaver** | **6** | **OK, TX** | **x** |
|  | **Poteau** | | | | **6** | **AR, OK** | **x** |
| **Red** | | | | | **7** | **LA, AR, OK, TX** | **x** |
|  | **North Fork Red River** | | | | **6** | **OK, TX** |  |
|  | **Washita** | | | | **6** | **OK, TX** | **x** |
|  | **Muddy Boggy Creek1** | | | | **6** | **OK** | **x** |
|  | **Kiamichi1** | | | | **6** | **OK** | **x** |
|  | **Little** | | | | **6** | **OK, AR** | **x** |
|  | | **Mountain Fork** | | | **6** | **OK, AR** | **x** |
|  | **Sulphur** | | | | **6** | **AR, TX** |  |
|  | **Twelve Mile Bayou2** | | | | **6** | **LA** |  |
|  | | | **Big Cypress (including Cypress Springs, Lake Bob Sandlin, Lake O’ the Pines, and Caddo Lake)** | | **6** | **TX, LA** |  |
|  | **Loggy Bayou2** | | | | **6** | **LA** |  |
|  | | **Bayou Dorcheat** | | | **6** | **AR, LA** |  |

1 North Canadian, Muddy Boggy Creek, and Kiamichi flow through or border tribal lands.

2 Twelve Mile Bayou and Loggy Bayou are not interjurisdictional rivers but both are formed by interjurisdictional tributaries.

Table 2. Select ecological and economic statistics for the Arkansas-Red-White Rivers Sub-basin.

|  |  |
| --- | --- |
| **Arkansas-Red-White Rivers Sub-basin** | |
| Watershed (square miles) | 248,000 |
| Number of Interjurisdictional Rivers | 13 |
| Number of States in sub-basin | 8 |
| Number of Fish/Mussel Species | 290/80 |
| Number of Endangered Fish/Mussels | 3/10 |
| Recreational Fishery Value (millions) | $2,270.8 |
| Commercial Fishery Harvest (lbs.) | 878,261 |
| 2011 Commercial Navigation (tons) | 10,600 |

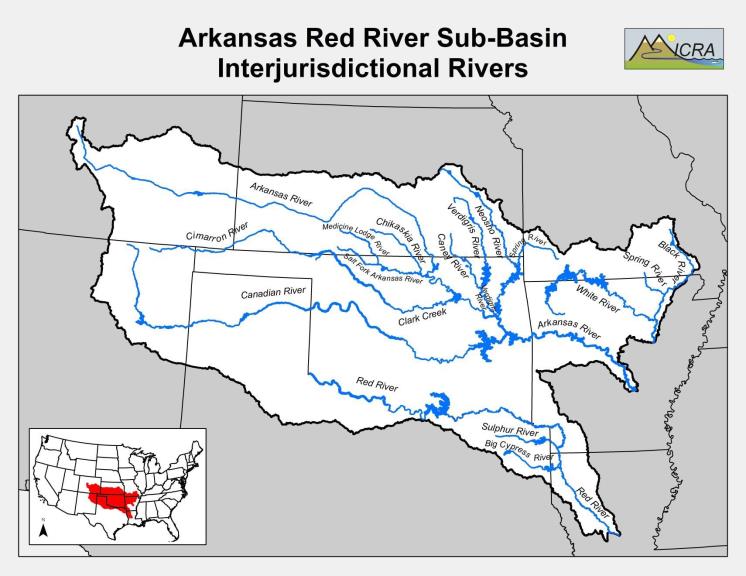


Figure 4. Select 6th order and larger interjurisdictional rivers of the Arkansas-Red-White Rivers Sub-basin.

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**Lower Mississippi River Sub-Basin**

*Mississippi Interstate Cooperative Resource Association*

**Geography**

The Lower Mississippi River (LMR) begins at the confluence of the Mississippi and Ohio Rivers in southern Illinois and flows 953.5 miles to the Head of Passes, where the river subdivides into several distributaries to the Gulf of Mexico (USACE 2013, USFWS 2013). The Lower Mississippi River Valley (LMRV) lies within the Central Gulf Coastal Plain physiographic province (Baker et al. 1991, USACE 2013). The LMRV varies in width between 40 and 110miles and includes parts of the states of Missouri, Illinois, Tennessee, Kentucky, Arkansas, Mississippi, and Louisiana.

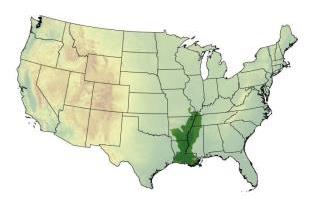


Figure 5. The Lower Mississippi River Sub-Basin, or watershed, includes rivers and lakes from 6 states.

Major tributaries to the LMR include the St. Francis River, Arkansas River, Yazoo River, and Red River. Major distributaries include the Atchafalaya River. Although the historic floodplain of the LMR has been reduced by the construction of the levee system, the system remains unimpounded and the active floodplain currently consists of 2.25 million acres and remains a vitally important ecosystem.

**Economics**

A recent study (Industrial Economics 2014) examined economic sectors associated with the Lower Mississippi River and reported annual revenues of $151.7 billion and over 585,000 jobs. Sectors examined included: harvest of natural resources, outdoor recreation, tourism, water supply, agriculture and aquaculture, mineral resources, energy, navigation and manufacturing. Of the examined sectors, tourism and outdoor recreation were associated with 11% of total annual revenues and 42% of total employment.

Annually, LMR natural resources produces revenues of $559 million, employs 13,000 individuals, and provide over 375 million cubic feet of timber products, almost 20 million pounds of freshwater fish, and over 1 billion pounds of seafood. Outdoor recreation activities, such as fishing, hunting, and wildlife watching, attract 38 million trips that generate $1.3 billion in expenditures and provide jobs for over 54,000 people. The tourist sector in the LMR corridor generates $15.5 billion in annual expenditures, making it the second largest sector after manufacturing in the region. Tourism is estimated to provide employment to 190,000 workers (Industrial Economics 2014).

**Greatest Needs/Problem Statements**

In response to the 1927 flood, the U.S. Army Corps of Engineers initiated the Mississippi River and Tributaries (MR&T) project, which consists of levees, revetments, flood storage reservoirs, and floodways to reduce flood risk, as well as dikes, and other river training structures in the channel to facilitate low-water navigation by towboats. Construction of the MR&T project, which still continues today, has resulted in one of the most highly engineered large river channels on the planet (USACE 2013).

The construction of the Mississippi River levee system has significantly altered the LMR habitat in a variety of ways. Levee construction has reduced the floodplain of the river by over 80% (Baker et al. 1991), channel meandering has been eliminated by revetments, channel cutoffs have significantly altered the energy in the system, and channel engineering for navigation has resulted in a gradual but significant loss of secondary channel habitat in the LMR.

**Existing Partnerships/Plans**

*Lower Mississippi River Conservation Committee (LMRCC)*

The Lower Mississippi River does not have a funded restoration program but has relied on unique partnerships and collaboration to accomplish species monitoring and habitat restoration projects. The LMRCC (www.LMRCC.org) was founded in 1994 and is a coalition of 12 state natural resource conservation and environmental quality agencies from the six Lower Mississippi River (LMR) states of Arkansas, Kentucky, Louisiana, Mississippi, Missouri and Tennessee. The LMRCC Executive Committee is comprised of one member from each of the 12 delegate agencies. There are also federal partners, including: U.S. Army Corps of Engineers (USACE), U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), U.S. Environmental Protection Agency (EPA), USFWS, and U.S. Geological Survey (USGS). The USFWS provides a full-time coordinator; LMRCC staff work out of the USFWS’s Lower Mississippi River Fish and Wildlife Conservation Office in Mississippi. The LMRCC focuses on habitat restoration, long-term conservation planning, and nature-based economic development.

*LMRCC Planning – Restoring America’s Greatest River*

In 2000, the LMRCC completed the Aquatic Resources Management Plan (ARMP) for the LMR. The ARMP outlines strategies for restoring aquatic resources within the 2.25-million-acre active floodplain from the confluence of the Mississippi and Ohio rivers at Cairo, Illinois, to the Gulf of Mexico. The Mississippi River Conservation Initiative (MRCI) was the implementation phase of the ARMP. From 2001-2004, the LMRCC held state-level planning meetings in each of the six member states to identify projects that would improve aquatic habitat and enhance public access to river habitats. Through these meetings, over 230 restoration projects were identified. The restoration work of the LMRCC was coined “Restoring America’s Greatest River” (RAGR) and is based on a unique partnership between the LMRCC, the USACE, and the USFWS. The focus of these proposed projects is not only to enhance LMR habitats, but to restore floodplain hydrology and connectivity between the river and its floodplain.

To better focus LMRCC restoration efforts, a ranking system for the proposed secondary channel work was completed by the USACE Engineer Research and Development Center (ERDC) by establishing a Habitat Quality Index and Economy of Restoration Index that were combined into a Priority Index (Killgore et al. 2012). Projects were ranked according to improvements to habitat quality and cost-effectiveness. This ranking system has been and will continue to be used to guide the selection of future restoration projects for secondary channels.

Implementation of the Restoring America’s Greatest River plan began in 2006. To date, the focus has been on rehabilitating secondary channels. Dikes and closure dikes are notched to provide more permanent flow between productive secondary channels and the main channel and to create new secondary channels through existing dike fields. To date, 14 projects have been completed, restoring more than 56 miles of channel habitat and thousands of surrounding acres. USACE Districts have constructed 774 dikes between river miles 212 and 953.5 (up to 2012) and 225 (29%) of these structures have been notched (USACE 2013). These notches increase bathymetric diversity, and therefore habitat, below the dikes (USACE 2013). Notching structures has also been directed to enhance secondary channels.

In addition to completing secondary channel projects, the LMRCC has worked in the river floodplain. An example is a project to restore a weir at Lake Perry Martin in Mississippi. The project permanently raised lake water levels, improved water quality, increased fish access and created better public fishing opportunities. Combining the habitat restoration accomplishments of the LMRCC, USACE and other agencies, 76 of the original projects (30%) are in some stage of completion.

*Lower Mississippi River Reforestation*

The NRCS has identified the Mississippi River basin as a top priority because of water quality concerns (i.e., nutrient loading), and subsequently implemented the Mississippi River Basin Healthy Watersheds Initiative (MRBI). As part of the MRBI, the Batture Reforestation Project was initiated in 2012 to restore wetlands and forests within the active floodplain (i.e., batture) of the LMR. The LMRCC, nonprofit Mississippi River Trust, and the NRCS work in partnership to identify flood-prone cleared land in the Lower Mississippi River active floodplain that landowners desire to reforest through Wetland Reserve Easements. Funding is provided by the NRCS, along with the Walton Family Foundation, and the U.S. Endowment for Forestry and Communities. By late 2014, 58 properties covering 12,059 acres had been enrolled in the program.

*Lower Mississippi River Resource Assessment (LMRRA)*

The Lower Mississippi River Resource Assessment (LMRRA) was authorized by the Water Resources Development Act (WRDA) of 2000 and is the region’s first comprehensive natural resources study since the Lower Mississippi Region Comprehensive Study (Lower Mississippi Region Comprehensive Study Coordinating Committee 1974). The LMRAA will identify information needed for river-related management, natural resource habitat needs, and river-related recreation and access needs. The project area includes the entire LMR, the Atchafalaya River, and extends into some of the navigable tributaries of the LMR. This project assesses available information and will make recommendations for improvement. This study began in 2012. Partners include the USACE districts in Memphis, Vicksburg, and New Orleans; LMRCC; The Nature Conservancy; National Audubon Society; Mississippi River Corridor-Tennessee; Wildlife Mississippi; Delta Wildlife; and Quapaw Canoe Company.

*Lower Mississippi River Conservation Plans*

The USFWS produced a Strategic Habitat Conservation Plan (USFWS 2012) for the Lower Mississippi river that outlined a framework for the USFWS vision, partnership and involvement in efforts to conserve endangered species and their habitats. The USACE took this information and produced a Conservation Plan for the Interior Least Tern, Pallid Sturgeon, and Fat Pocketbook Mussel in the Lower Mississippi River (USACE 2013) that addresses the Channel Improvement Program (CIP) of the Mississippi River and Tributaries Project. It identifies programmatic mechanisms by which the CIP is incorporating ecological engineering opportunities, cost-effective restoration and other conservation measures to maintain and improve habitat for the recovery of endangered species and other trust species.

**Examples of Completed Habitat Restoration**

The Lower Mississippi Conservation Committee (LMRCC), a coalition of 12 state natural resource and environment quality agencies, has been involved with 29 aquatic habitat improvement projects in the Lower Mississippi River sub-basin since 2013. These projects have collectively rehabilitated 101.75 river miles of side channel habitats. Other habitat project within the basin have included notching rock dikes and reconnecting meander cutoffs along the Mississippi River. The USACE has notched 29% of the 774 dikes between river miles 212 and 953.5 (LMRCC 2015).

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Figure 6. Dyke notching of 225 dykes has opened up additional habitat to aquatic life between river miles 212 and 953.5 on the Mississippi River. These efforts help ensure fish and other aquatic life are not stranded following high-water events when they seek flow refuges in the shelter of these structures. For some species they also provide spawning, feeding, hunting, and/or shelter habitat.

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**Implementation Needs**

A recent assessment by the U.S. Army Corps of Engineers listed multiple areas of habitat implementation needs in the LMR, including:

* + 1. Restoration of backwater areas, side channels, and floodplain lakes,
    2. Restoration of bottomland hardwood forests in the Mississippi River and tributary floodplains,
    3. Improved water quality,
    4. Restoration of in-channel habitat such as gravel bars, sand bars, and islands
    5. Preserving and rebuilding coastal wetlands, and
    6. Control of exotic invasive species (USACE 2015).

Table 3. Interjurisdictional rivers (6th order and larger) of the Lower Mississippi River Sub-basin.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | | **Stream Order** | **States** | **Tribal** | |
|  | **Mississippi** | | | | **10** | **MS, LA, TN, AR, MO, KY** |  | |
|  | **Ohio** | | | | **9** | **OH, PA, WV, KY, IN, IL** |  |
|  | **Hatchie** | | | | **6** | **TN, MS** |  |
|  | **St. Francis** | | | | **7** | **AR, MO** |  |
|  | | **Right Hand Chute Little River** | | | **6** | **MO, AR** |  |
|  | **White** | | | | **8** | **AR, MO** |  |
|  | **Arkansas** | | | | **9** | **AR, KS, CO, OK** |  |
|  | **Yazoo** | | | | **7** | **MS, LA** |  |
|  | **Red** | | | | **8** | **TX, OK, AR, LA** |  |
|  | | **Black1** | | | **7** | **LA** |  |
|  | | | **Oauchita** | | **7** | **LA, AR** |  |
|  | | | | **Bayou Bartholomew** | **6** | **LA, AR** |  |
|  | | | | **Boeuf** | **6** | **LA, AR** |  |
|  | **Amite** | | | | **7** | **MS, LA** |  |
|  | **Atchafalaya2** | | | | **8** | **LA** |  |

1 The Black River is not an interjurisdictional river, but it is formed by interjurisdictional tributaries.

2 The Atchafalaya River is not an interjurisdictional river, but it is a distributary river formed by the Mississippi and Red rivers.

Table 4. Select ecological and economic statistics for the Lower Mississippi River Sub-basin.

|  |  |
| --- | --- |
| **Lower Mississippi River Sub-basin** | |
| Watershed (square miles) | 110,600 |
| Number of Interjurisdictional Rivers | 9 |
| Number of States in sub-basin | 6 |
| Number of Fish/Mussel Species | 121/60 |
| Number of Endangered Fish/Mussels | 2/8 |
| Recreational Fishery Value (millions) | $2,576.2 |
| Commercial Fishery Value (millions) | $3.147 |
| Commercial Fish Harvest (lbs.) | 8,270,000 |
| 2011 Commercial Navigation (tons) | 530,000 |

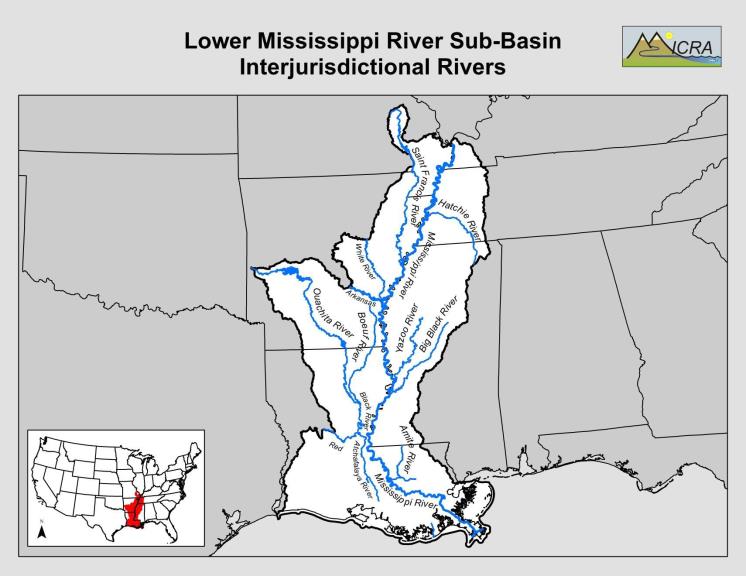


Figure 7. Select 6th order and larger interjurisdictional rivers of the Lower Mississippi River Sub-basin.

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**Missouri River Sub-Basin**

*Mississippi Interstate Cooperative Resource Association*

**Geography**

The Missouri River Basin encompasses 1/6 of the continental United States and is the second largest basin behind the Mississippi with drainage exceeding 530,000 square miles. The basin covers portions of 10 states and 2 Canadian provinces. The Missouri River is the longest river in the United States at 2,341 miles with head waters in the Bitterroot Mountains of Montana and flows into the Mississippi River near St. Louis, MO. Land use within the basin is comprised of cropland (37%), grassland (30%), shrub (13%), forested (11%), and developed areas (9%) (Galat et al. 2005).

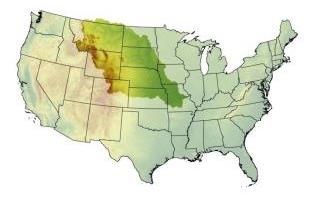


Figure 8: The Missouri River Sub-Basin, or watershed, includes rivers and lakes from 9 states.

The Pick Sloan Plan and Missouri River Navigation Project greatly impacted the Missouri River Basin. The construction of 6 main stem dams and channelization of the lower 750 miles resulted in 3 million acres of riparian habitat being altered including the loss of 522,000 acres primarily for agriculture production. The current Missouri River configuration has left 1/3 of the river impounded, 1/3 channelized, and the remaining 1/3 influenced by reservoir releases. Water Resource Development Acts (WRDA 1986, 1999, and 2007) authorized the restoration of 166,750 acres and USFWS Biological Opinion (2000, amended 2003) in response to listing of threatened and endangered species required restoration of up to 20,000 acres of shallow water habitat in the channelized portion of the Missouri River.

The Missouri River is a vital resource for the inhabitants of the basin and Congress has authorized 8 river management purposes: water quality, water supply, hydropower, flood control, irrigation, navigation, fish and wildlife, and recreation.

### **Economics**

The Missouri River provides drinking water for 3.1 million people in the basin and water intake for 25 power plants (Galat et al. 2005). In addition to those power plants, all main stem dams have hydropower plants. Operation of the main stem dams averts an estimated $414 million/year in flood damage (USACE 1998). The river provides over $12 million/year in irrigation benefits. Commercial navigation on the Missouri River has been declining since its peak in 1977 and currently averages around 5 million tons transported each year (USACE 2016) with sand and gravel being the most common material hauled and generally for very short distances, not long-haul commercial products. The net economic benefit for commercial navigation is less than 3 million dollars per year with most traffic occurring below Kansas City, MO or the lower 367.5 river miles of the channelized reach of the lower Missouri River (National Research Council 2002). In 1994, recreation benefits from Fort Peck Lake to the confluence were reported as $87.1 million. In the state of Missouri alone it was reported that there is $12 billion in economic impact from wildlife related recreation and forest products industry (DOI, et al. 2011). Jacobson et al. (2014) reported that if lateral connectivity were restored through habitat mitigation it would not only increase flood storage capacity but would benefit restoration efforts for fish and wildlife. These efforts would save tens of billions of federal expenditures for flood control/damage. This is especially important in the river reaches between large cities where opportunities to achieve this dual purpose still exist.



Figure 9: Missouri River, Montana.

**Problem Statement/Greatest Needs**

The alteration of 3 million acres of natural river habitat has resulted in 51 native fish species becoming rare, uncommon, or decreasing. Furthermore, there is little to no cottonwood reproduction, which was historically the most dominant floodplain tree, and a 70% reduction in aquatic insects (National Research Council 2002).

*Platte River*



Figure 10. North Platte River, Wyoming

The over utilization of Platte River Basin water resources significantly impacted flows in the central Platte River that is utilized by federally threatened and endangered species. Nebraska, Colorado, and Wyoming signed a cooperative agreement and with assistance from the Bureau of Reclamation, USFWS, stakeholders, and environmental groups developed the Platte River Recovery Implementation Program.

*Niobrara River*

The Nebraska Game and Parks Commission has entered a Memorandum of Understanding with the Niobrara River Basin Alliance and Nebraska Public Power District to possibly obtain Spencer Hydro-dam and water rights for $12 million dollars to improve stream flows. During the spring 2019 rain-on-snow event, which caused severe flooding across much of Nebraska including the Niobrara River basin, Spencer Dam was blown out by ice flows.

*Yellowstone River*

The Lower Yellowstone Project (Intake Dam) diverts water for irrigation in Montana and North Dakota, but it impedes upstream migration of pallid sturgeon and other native species. The diversion dam and canal have been modified with a fish passage structure to prevent entrainment and improve passage.

**Existing Partnerships/Plans**

*Missouri River Natural Resources Committee (MRNRC)*

MRNRC was formed in 1988 and is comprised of members from the seven state fish and game agencies that border the main stem Missouri River. The purpose of this committee is to provide management recommendations and technical assistance to state and federal agencies with river management responsibilities. MRNRC sponsors an annual conference to encourage information exchange (MRNRC 2016).

*Missouri River Ecosystem Recovery Plan (MRERP)*

This program was defunded following 2011 flood event. The purpose of this collaborative effort between the US Army Corps of Engineers and USFWS was to develop a plan to guide recovery efforts on the Missouri River for the next 30 to 50 years (USACE 2016).

*Missouri River Recovery Implementation Committee (MRRIC)*

MRRIC was authorized by Congress in WRDA 2007 to make recommendations and provide guidance on MRERP and MRRP. The Committee is comprised of representatives from 8 states, 18 American Indian Tribes, 15 federal agencies, and 16 non-government categories represented by 28 stakeholders (USACE 2016).

*Missouri River Recovery Program (MRRP)*

The scope for MRRP applies to the Missouri River from Fort Peck to the confluence with the Mississippi and the Yellowstone River from Intake Dam to the confluence with the Missouri. It is designed to address the BIOP and BSNP Mitigation plan (USACE 2016).

*Platte River Recovery Implementation Program (PRRIP)*

The PRRIP Final agreement was signed on January 1, 2007. In 2005, it was estimated to cost $320 million for the entire program. Habitat work will focus on the Central Platte River Basin between Lexington and Chapman Nebraska. The goal of this project is to provide ESA compliance for existing and future water related activities (PRRIP 2016).

**Examples of Completed Habitat Restoration**

About 60,000 acres of habitat has been acquired for restoration efforts in the Missouri River below Gavins Point Dam. Habitat restoration actions include construction of emergent sandbars within the designated Missouri National Recreational River in South Dakota and Nebraska, and top width widening projects, side channels, backwater complexes, and interception and rearing complexes in Iowa, Nebraska, Kansas, and Missouri (Figure 11). Biological monitoring of the areas indicates that these projects are providing vital habitats for native riverine species. However, most of these side channels and backwater complexes have been closed off as a result of the 2011 and 2019 floods and construction of new IRCs has been halted due to lack of understanding of impacts to other authorized purposes.

*Figure 11. Habitat restoration sites in the Missouri River below Gavins Point Dam. Deer Island (A) located near Tekamah, NE represents a top-width widening project, Lower Decatur revetment lowering (B) located near Decatur, NE, Deroin side channel (C) located near Indian Cave State Park, NE, and Glover’s Point backwater complex (D) located near Sloan, IA.*

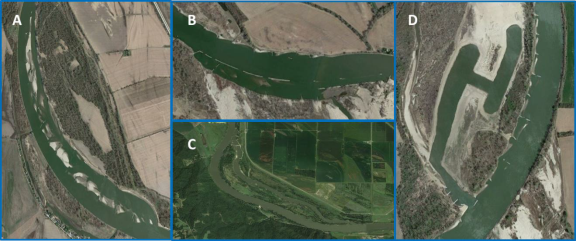


Table 5. Number and types of habitat restoration projects constructed in the Missouri River.

|  |  |
| --- | --- |
| **Missouri River Habitat Restoration** | |
| Side channels chutes | 39 |
| Backwaters | 14 |
| Revetment chutes | 20 |
| Top-width projects | 3 |
| Navigation dike modifications | 2,150 |

**Implementation Needs**

Although over 100,000 acres remains to be acquired from willing sellers and restored to meet the Corps requirements for mitigation of the Missouri River Navigation Project, the Corps has not funded this requirement for the past several years. This land acquisition is imperative for enhancing the natural form and function of the Missouri River. It would allow for reduction of flood risks due to increased channel capacity, increased recreation opportunities, and provide vital habitat for fish and wildlife.

Table 6. Interjurisdictional rivers (6th order and larger) of the Missouri River Sub-basin.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | | | | | **Stream Order** | **States** | | **Tribal** | |
|  | **Missouri** | | | | | | | **9** | **MO, NE, SD, ND, MT, IA, KS** | | **x** | |
|  | | **Madison** | | | | | | **6** | **WY, MT** | |  | |
|  | | **Gallatin** | | | | | | **6** | **WY, MT** | |  | |
|  | | **Milk2** | | | | | | **6** | **MT, AB3, SK3** | | **X** | |
|  | | **Marias2** | | | | | | **6** | **MT, SK3** | | **X** | |
|  | | **Yellowstone** | | | | | | **8** | **WY, MT, ND** | |  | |
|  | | | | **Clarks Fork** | | | | **6** | **WY, MT** | |  | |
|  | | | | **Bighorn2** | | | | **7** | **MT, WY** | | **X** | |
|  | | | | | | **Wind2** | | **7** | **WY** | | **X** | |
|  | | | | **Tongue2** | | | | **6** | **MT, WY** | | **X** | |
|  | | | | **Powder** | | | | **6** | **MT, WY** | |  | |
|  | | **Little Missouri** | | | | | | **6** | **SD, ND, WY, MT** | | **X** | |
|  | | **Grand1** | | | | | | **6** | **SD** | |  | |
|  | | | | **North Fork Grand** | | | | **6** | **ND, SD** | |  | |
|  | | **Moreau2** | | | | | | **6** | **SD** | | **X** | |
|  | | **Cheyenne** | | | | | | **7** | **WY, SD** | |  | |
|  | | | | **Belle Fourche** | | | | **6** | **WY, SD** | |  | |
|  | | **White** | | | | | | **6** | **SD, NE** | | **X** | |
|  | | **Niobrara** | | | | | | **6** | **WY, NE** | |  | |
|  | | **James** | | | | | | **7** | **ND, SD** | |  | |
|  | | **Big Sioux** | | | | | | **7** | **SD, IA** | |  | |
|  | | | | **Rock** | | | | **6** | **MN, IA** | |  | |
|  | | | **Little Sioux** | | | | | **6** | **IA, MN** | |  | |
|  | | | **Platte1** | | | | | **8** | **NE** | |  | |
|  | | | | **South Platte** | | | | **7** | **NE, CO** | |  | |
|  | | | | | | **Laramie** | | **6** | **WY, CO** | |  | |
|  | | | | **North Platte** | | | | **7** | **NE, WY, CO** | |  | |
|  | | | **Nishnabotna** | | | | | **6** | **IA, MO, NE** |  | |
|  | | | **Kansas1** | | | | | **8** | **KS** |  | |
|  | | | | | **Smoky Hill** | | | **7** | **CO, KS** |  | |
|  | | | | | **Republican** | | | **7** | **NE, KS** |  | |
|  | | | | | | | **Beaver Creek** | **6** | **WY, SD** |  | |
|  | | | | | **Big Blue** | | | **7** | **NE, KS** |  | |
|  | | | | | | | **Little Blue** | **6** | **NE, KS** |  | |
|  | | | **Grand** | | | | | **7** | **IA, MO** |  | |
|  | | | | | **Thompson** | | | **6** | **IA, MO** |  | |
|  | | | **Osage1** | | | | | **7** | **MO** |  | |
|  | | | | | **Marais des Cygne** | | | **6** | **KS, MO** |  | |

1 The Grand (SD), Platte, Kansas, and Osage rivers are not interjurisdictional rivers but are formed by interjurisdictional tributaries.

2 The Milk, Marias, Bighorn, Wind, Tongue, and Moreau rivers flow through or border tribal lands.

3 AB = Alberta Canada, SK = Saskatchewan

Table 7. Select ecological and economic statistics for the Missouri River Sub-basin.

|  |  |
| --- | --- |
| **Missouri River Sub-basin** | |
| Watershed (square miles) | 520,900 |
| Number of Interjurisdictional Rivers | 29 |
| Number of States in sub-basin | 10 |
| Number of Fish/Mussel Species | 166/44 |
| Endangered Fish/Mussel Species | 5/2 |
| Recreational Fishery Value (millions) | $3,011.8 |
| Commercial Fishery Harvest (lbs.) | 157,256 |
| 2016 Commercial Navigation (million tons) | 4.66 |

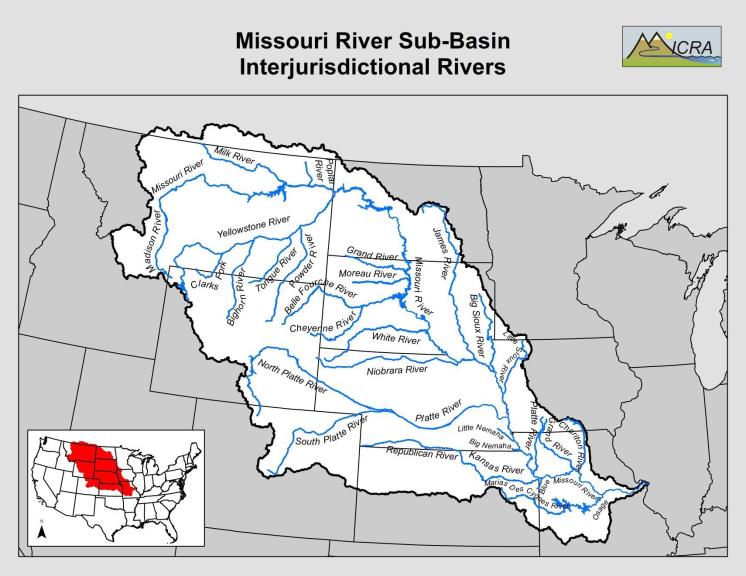


Figure 12. Select 6th order and larger interjurisdictional rivers of the Missouri River Sub-basin.

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**Ohio River Sub-Basin**

*Mississippi Interstate Cooperative Resource Association*

### **Geography**

The Ohio River sub-basin is a 145,000 square-mile basin that is shared by 7 states in four regions. Aquatic habitats range from cascading Appalachian headwater streams to lowland meandering rivers of the Jackson Purchase region. These unique habitats coalesce to form mainstem Ohio River; the second largest river in the United States as measured by mean annual discharge. The Ohio River is 981 miles (1582 km) long, starting at the confluence of the Allegheny and the Monongahela Rivers in Pittsburgh, Pennsylvania, and ending in Cairo, Illinois, where it flows into the Mississippi River. Average depth is 24 feet, with the widest point at 1 mile near Smithland, Kentucky. Many states share borders with the Ohio River, including West Virginia, Kentucky, Ohio, Indiana, and Illinois (ORSANCO 2014).

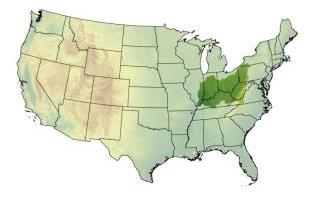


Figure 13. The Ohio River Sub-Basin, or watershed, includes rivers and lakes from 7 states.

**Economics**

Due to its westwardly flow and confluence with the Mississippi River, the Ohio River has always been a major transportation route. Early pioneers used the river for westward expansion and exploration. Currently, 20 lock-and-dams span the 981 miles of the mainstem Ohio River, providing a vital means of transporting goods throughout the entire eastern U.S. This infrastructure provides an estimated 230 million tons of cargo to be shipped annually, with the majority consisting of coal, oil, and petroleum. 49 power generating facilities are located within the basin providing a clean source of electricity. Over 35,000 people are employed by over 600 businesses that are directly tied to the Ohio River. Including major tributaries, there are approximately 358,000 jobs linked to river commerce. These businesses include barge operation and maintenance, marinas, power generating facilities, loading/unloading facilities, and commercial and recreational fishing (ORSANCO 1995).

The Ohio River sub-basin is not only home to at least 350 fish species and over 120 mussel species, but also home to more than 31.5 million U.S. citizens. An estimated 5 million people rely on the Ohio River as a source of drinking water. Of the 350 fish species in the entire basin, 140 fish species utilize the habitat of the Ohio River (Burr and Warren 1986, ORSANCO 2014). Therefore, numerous fish species play an important economic role, both through sport and commercial fisheries.

**Problem Statement/Greatest Needs**

The convenience of the Ohio River for transporting goods has influenced the loss of habitat quality and natural resources throughout the entire basin. Impacts to the river include agriculture, industrialization, urbanization, water pollution, mining, impoundments, and invasive species. Of the 800 permitted discharges into the Ohio River, 49 come from power-generating facilities, 180 from municipal wastewater discharges, and over 300 from industry (ORSANCO 2014). However, with recent environmental regulations and facility upgrades, water quality has improved in the Ohio River over the past 50 years. Even with recent improvements, aquatic habitats remain in need of protection and restoration. Forested riparian zones and island acreages have been reduced or converted by 65% and 45%, respectively (USACE 2000). With the numerous dams throughout the basin, riffle/pool complexes have been eliminated.

These impacts have reduced the available habitat for a multitude of aquatic and terrestrial species that rely on the Ohio River for survival. The protection and restoration of riparian zones, islands, and wetlands of the Ohio River is crucial for the survival of the diverse aquatic resources throughout the basin.

**Existing Partnerships/Plans**

*Ohio River Basin Alliance (ORBA)*

The ORBA is made up of over 200 representatives from over 80 state, local, and federal agencies, industry, academia, and not-for-profit organizations. Their mission is to form a successful collaboration that will recommend strategies and coordinate actions to address complex water resource challenges and priorities with a unified voice. The Alliance is voluntarily led by a Steering Committee and has four Working Groups that address specific basin issues. The ORBA is conducting a pilot study on how climate change will impact the Ohio River Basin.

*Ohio River Ecosystem Restoration Program (ORERP)*

The ORERP was developed in 2000 as part of the Corp of Engineers Ohio River Mainstem System Study. The goal of this program is to prioritize restoration efforts of the mainstem Ohio River, and ultimately restore ecosystem functions to a more natural and self-regulating system. Specifically, the ORERP has the opportunity to restore 25,000 acres of bottomland hardwood forest, 1,250 acres of aquatic habitat, 40 islands, 100 miles of riparian habitat, and 25,000acres of wetlands along the Ohio River floodplain. Authorization of this program would provide around 200 million dollars for these restoration projects, however funding has yet to be appropriated for the implementation of the ORERP.

*Ohio River Basin Fish Habitat Partnership (ORBFHP)*

In 2009, the ORBFHP was recognized by the National Fish Habitat Partnership. The OHBFHP’s mission is to protect, restore, and enhance priority habitat for fish and mussels in the watersheds of the Ohio River basin (excluding the Tennessee River sub-basin to avoid overlap with the Southeast Aquatic Resources Partnership, SARP) for the benefit of the public. The ORBFHP collaborated with SARP to complete a basin- wide stream habitat assessment in 2012 to help identify priority areas and select priority projects for funding. This assessment was used to determine threats to aquatic ecosystems in separate watersheds within the Ohio River sub-basin. The ORBFHP developed a list of specific actions designed to ultimately reverse declines in the quality and quantity of aquatic habitats and improve the overall health of fish and other aquatic organisms. Again, funding is the limiting factor; securing grants will be necessary for implementing proposed habitat restoration projects.

*Ohio River Foundation (ORF)*

The ORF is a 501(c)(3) non-profit organization founded in 2000 by a group of citizens concerned about the need for increased response to the degradation of the Ohio River. ORF's mission is to protect and restore the water quality and ecology of the Ohio River and its tributaries for the health and enjoyment of present and future generations. The ORF works with scientists, businesses, and governmental agencies to protect and improve water quality within the Ohio River watershed. In addition, they increase public involvement in development activities and initiatives affecting the Ohio River.

**Examples of Completed Habitat Restoration**

*Gravel Bed Installation*

Gravel beds were established at selected locations in Bryant Creek embayment in an attempt to create fish habitat. Selection criteria for gravel bed placement were locations with water depths 0.6-1.2 m and bottom substrate conditions sufficient to support the addition of gravel beds. Two locations were chosen within the embayment, and beds were constructed using 19.1 m3 of a combination of 10.2-20.3 cm limestone riprap and 3.8 cm smooth river rock placed using boats with modified manual dumping platforms. This yielded mixed gravel beds approximately 30.5 m long by 3.1 m wide by 0.2 m thick.

*Establishment of Aquatic Macrophytes*

Three aquatic macrophyte species were used to establish founder colonies to enhance habitat in the study area, including Broadleaf Arrowhead, American Water Willow, and American Pondweed. An initial bathymetry assessment was conducted to identify suitable locations for establishing macrophyte founder colonies. Of the identified locations, two were selected and planted with founder colonies in the embayment. Mature Broadleaf Arrowhead and American Water Willow plants were obtained from Spence Restoration Nursery (Muncie, IN). Approximately 150 individuals of each species were planted at each of the two selected locations. American Pondweed clippings were collected from sources of healthy, established colonies near West Lafayette, IN, and grown outside in 1,135 L tanks at the Aquaculture Research Laboratory at Purdue University. Clippings were cultivated in containers containing locally collected sediment for approximately 6-8 wk or until suitable size for field planting. A total of 66 pots containing American Pondweed were planted at each of the two locations.

**Implementation Needs**

During the development of the Ohio River Ecosystem Restoration Program, participants identified the greatest issues affecting natural resources of the Ohio River. Based on this information, goals were established to guide future conservation efforts. These goals included:

1. Protection and restoration of wetlands and bottomland hardwood forests,
2. Protection and restoration of islands, and
3. Improvement of aquatic, shoreline, and riparian habitat.

These broad goals were selected to benefit a wide variety of species, in addition to restoring impaired aquatic functions of the Ohio River (USACE 2000). Funding for the implementation of aquatic habitat enhancement projects on the Ohio River seems to be the limiting factor. In addition, match requirements for non-federal entities may limit the overall scale and type of projects completed. Continued coordination between federal agencies, state agencies, and private organizations is an important component to ensure that assessments and conservation goals remain current.

Table 8. Interjurisdictional rivers (6th order and larger) of the Ohio River Sub-basin.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | | | **Stream Order** | | **States** | **Tribal** |
|  | **Ohio** | | | | | **9** | | **OH, PA, WV, KY, IN, IL** |  |
|  | | **Allegheny** | | | | **8** | | **NY, PA** |  |
|  | | **Monongahela** | | | | **7** | | **PA, WV** |  |
|  | | | **Cheat** | | | **6** | | **WV, PA** |  |
|  | | | **Youghiogheny** | | | **6** | | **PA, MD** |  |
|  | **Beaver1** | | | | | **7** | | **PA** |  |
|  | | | **Mahoning** | | | **6** | | **OH, PA** |  |
|  | **Little Beaver Creek** | | | | | **6** | | **OH, PA** |  |
|  | **Kanawha1** | | | | | **6** | | **WV** |  |
|  | | | **New** | | | **6** | | **WV, VA, NC** |  |
|  | | **Big Sandy** | | | | **7** | | **WV, KY** |  |
|  | | | **Tug Fork** | | | **6** | | **KY, WV, VA** |  |
|  | | | **Levisa Fork** | | | **6** | | **VA, KY** |  |
|  | | | | | **Russell Fork** | **6** | | **KY, VA** |  |
|  | | **Wabash** | | | | | **6** | **IN, IL, OH** |  |
|  | | | | **Vermillion** | | | **6** | **IL, IN** |  |
|  | | **Cumberland** | | | | **7** | | **KY, TN** |  |
|  | | **Tennessee** | | | | **8** | | **KY, TN, MS, AL** |  |

1 The Beaver and Kanawha rivers are not interjurisdictional rivers but both are formed by interjurisdictional tributaries.

Table 9. Select ecological and economic statistics for the Ohio River Sub-basin.

|  |  |
| --- | --- |
| **Ohio River Sub-basin** | |
| Watershed (square miles) | 145,000 |
| Number of Interjurisdictional Rivers | 11 |
| Number of States in sub-basin | 7 |
| Number of Fish/Mussel Species | 161/80 |
| Number of Endangered Fish/Mussels | 0/10 |
| Recreational Fishery Value (millions) | $2,509.3 |
| Annual Commercial Fishery Harvest (lbs.) | 1,303,664 |
| 2011 Commercial Navigation (tons) | 279,000 |

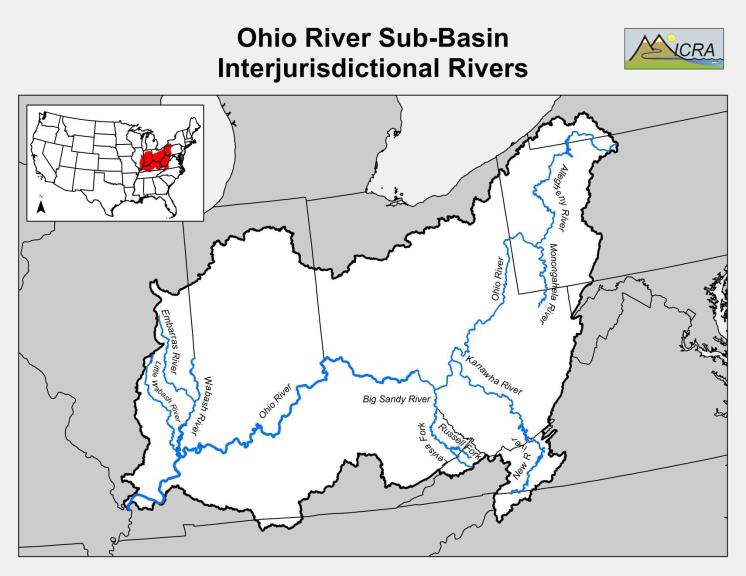


Figure 14. Select 6th order and larger interjurisdictional rivers of the Ohio River Sub-basin.

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**Tennessee-Cumberland Rivers Sub-Basin**

*Mississippi Interstate Cooperative Resource Association*

### **Geography**

Tennessee River is the largest Ohio River tributary, being approximately 652 miles (1,049 km) long, with a watershed of approximately 40,000 square miles. The watershed includes parts of eight states: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, West Virginia, and Virginia. Tennessee River is impounded by 9 mainstem dams and 23 tributary dams lie in the drainage. Cumberland River is another large tributary that discharges into the Ohio River just 10 miles upstream of the Tennessee River mouth. Length of the Cumberland River is 652 miles (1,107 km) and its watershed is over 18,000 square miles. The entire Cumberland watershed lies within the states of Kentucky and Tennessee. There are five mainstem dams on the Cumberland River and six tributary dams lie within the drainage.

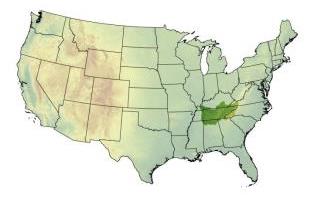


Figure 15. The Tennessee/Cumberland Rivers Sub-Basin, or watershed, includes rivers and lakes from 7 states.

Tennessee and Cumberland rivers share many faunal elements, and the region has long been recognized as a center of aquatic biodiversity on a global scale. Combined, the two drainages are home to approximately 250 fish species, just over 100 freshwater mussel species, almost 100 aquatic snail species and approximately 60 crayfish species. Within this fauna are some of the most imperiled animals in the world. Federally endangered or threatened species that occur, or historically occurred in these drainages number 56, and include fish, mussels, snails, and crustaceans. The fauna of this region has also suffered many extinctions, including 2 fish, 14 mussels, and 6 snails.

**Economics**

Tennessee and Cumberland River impounded mainstem reaches serve as major navigational waterways and sources of hydroelectric power, with the added benefits of flood control and aquatic recreation. Smaller tributary reservoirs are primarily for flood control and recreation. As navigational corridors, these rivers are responsible for 57,000 tons of goods annually. The major commodities transported on these rivers are coal and aggregates (sand and gravel), but other products include grain, petroleum products, metals, and chemicals. These have helped keep the region competitive in manufacturing and is also greatly supportive of its agriculture.

Commercial fisheries in these watersheds are economically significant in the Tennessee and Cumberland watersheds. Fish brought to market average > 1.3 million pounds annually. North American freshwater mussel shells provide the base raw material for worldwide cultured pearl production and the majority of annual exports originate from the Tennessee River. Commercial mussel harvest is cyclic in nature and has ebbed over the past two decades, but exports have exceeded $40 million annually in the recent past. Commercial fisheries in these watersheds are economically significant, but recreational angling provides an even greater economic benefit to the states and adjacent communities. According to the American Sportfishing Association, this recreational activity directly generated over $1.2 billion in 2011 in the state of Tennessee alone.

Total value of the recreational fishery in the Tennessee River Sub-basin has been estimated to provide an annual economic boost in excess of $4,192 million (USFWS 2016 unpublished data).

**Problem Statement/Greatest Needs**

The Tennessee and Cumberland River basins are two of the most biologically diverse systems in the world and elements of these faunas serve as the basis of significant commercial and recreational fisheries, yet their natural habitats have been greatly altered for navigation, hydroelectric energy, flood control, and aquatic recreation. Attending to the needs of these delicate and generally imperiled faunas while maintaining or even increasing the economic importance of these rivers will be an immense challenge. These rivers and their faunas are in great need of routine monitoring to observe changes to both habitat and populations, in order to make more informed conservation decisions. Some of the more important areas for both fisheries and imperiled species lie in reaches just downstream of dams on these rivers. Maintaining or improving water quality in these reaches should be a priority.

**Existing Partnerships/Plans**

The Tennessee and Cumberland River drainages fall under the influence of a number of conservation partnerships and agencies, many of which have developed plans on their behalf. The National Fish Habitat Partnership focuses on conservation of fish and their habitats throughout the United States. Additionally, A Tennessee River Basin Watershed Management Plan is in place to improve, protect, and maintain the river for multiple beneficial uses and water quality. The Cumberland River Compact is likewise focused on water quality improvement in that basin. All eight states that encompass parts of the Tennessee and Cumberland drainages have State Wildlife Plans with components that address the needs of aquatic habitats and species. These plans are specific to each state but share concern for numerous species and recognize many common needs. Freshwater mollusks have been documented as one of the most critically imperiled groups of organisms on earth and an interagency committee produced the “Plan for the Population Restoration and Conservation of Imperiled Freshwater Mollusks of the Cumberlandian Region” in 2010 and the document is regularly updated.

Most states that encompass the Tennessee and Cumberland basins have made major commitments to conservation of imperiled aquatic species and have facilities dedicated to captive propagation and husbandry, with at least one located in most of the states involved. These facilities and their respective agencies cooperate closely and extensively among themselves, sharing brood stock as well as progeny for population reintroductions and augmentations, as well as for studies on life history.

One unique program aimed at protection of significant aquatic habitats and their faunas is the Alabama Rivers and Streams Network, which now includes drainages that it shares with surrounding states, including the Tennessee drainage. This network is comprised of private companies, nonprofit organizations, state and federal agencies, and concerned citizens with focus on habitat protection and improvement in remaining reaches that still have significant biological resources. The focus areas are termed Strategic Habitat Units for smaller subdrainages and Strategic River Reach Units for significant reaches of mainstem habitat. Since clean water and functional habitats are beneficial to all stakeholders, a key aspect of the group is to demonstrate direct and immediate cost benefits related to such conservation efforts.

**Examples of Completed Habitat Restoration**

Habitat restoration efforts in the Tennessee and Cumberland river basins have been partnership driven with most of these projects focused on increasing aquatic connectivity and improving riparian habitat. These partnerships have resulted in dam removal projects within both the Tennessee River and Cumberland River basins, land purchases, and cooperative riparian habitat initiatives. Additional small-scale aquatic habitat improvement projects have been conducted by state, federal, and non-governmental organization programs on streams, rivers, and reservoirs.

**Cumberland River Basin**

*Roaring River Watershed*

The Roaring River State Scenic River is tributary to the Cumberland River located outside of Gainesboro, Tennessee. On-going efforts have worked to protect and restore this valuable watershed. The Tennessee Wildlife Resources Agency manages three Wildlife Management Areas along the Roaring River and its major tributary Blackburn Fork. These Wildlife Management Areas collectively protect 15-miles of shoreline within the watershed and provides hunting, fishing, and recreational access. In 2017, the Tennessee Wildlife Resources Agency, Southeast Aquatic Resources Partnership, U.S. Fish & Wildlife Service, Nature Conservancy, Army Corps of Engineers, and the Tennessee Department of Environment & Protection partnered to restore stream habitat and increase aquatic connectivity along the Roaring River which resulted in the largest dam removal project for stream restoration purposes in Tennessee. Removal of the dam restored approximately 1-mile of stream habitat that was previously impounded and connected nearly 5-miles of the lower river to its headwaters. Additional riparian restoration and shoreline stabilization projects have been completed within the watershed.



Figure 16. Roaring River, TN – Roaring River Dam Removal Project. Roaring River Dam (left) was removed in 2017. Removal of the dam increased aquatic connectivity and improved instream habitat (right).

**Tennessee River Basin**

*Duck and Elk River Watershed Forest and Buffer Initiative*

The Duck and Elk rivers are two of the highest priority watersheds in the Tennessee River basin due to their aquatic biodiversity and high number of “species of concern.” In 2020, the Tennessee Division of Forestry, American Forest Foundation, National Fish & Wildlife Federation, Tennessee Forestry Association and other partners created the Elk and Duck River Watershed Forest and Buffer Initiative to promote, maintain, and improve habitat within these priority sub-basins. The grant funded initiative engages local landowners within these two watersheds (encompassing 13 counties) and enables them to maintain healthy forests and water and improve habitat for at-risk and other species. To date, $48,000 has been approved for cost share on 424 acres for 9 landowners and adds 5.4-miles of linear riparian habitat under improved management.

**Implementation Needs**

Assessment of Tennessee and Cumberland River habitat and populations has been carried out by an assortment of state and federal agencies, generally on a small geographic scale or with a particular subject or population as the focus, and often within single agencies without cooperation with other entities. Likewise, these have been funded by a variety of state and federal monies. A unified effort to periodically assess habitats, as well as imperiled and economically significant populations, should be carried out across these two basins. Funding necessary for such an endeavor will be substantial.

Table 10. Interjurisdictional rivers (6th order and larger) of the Tennessee-Cumberland Rivers Sub-basin.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | **Stream Order** | **States** | **Tribal** |
|  | **Tennessee (including Kentucky Lake, Pickwick Lake, and Guntersville Lake)** | | | **8** | **KY, TN, MS, AL** |  |
|  | **Holston1** | | | **6** | **TN** |  |
|  | | **South Fork Holston** | | **6** | **TN, VA** |  |
|  | | | **Wautaga (including Wautaga Reservoir)** | **6** | **TN, NC** |  |
|  | **French Broad** | | | **7** | **TN, NC** |  |
|  | | **Nolichucky** | | **6** | **TN, NC** |  |
|  | **Little Tennessee (including Tellico and Calderwood Reservoirs)** | | | **6** | **TN, NC, GA** |  |
|  | **Clinch** | | | **6** | **VA, TN** |  |
|  | **Hiwassee (including Chatuge and Nottely Reservoirs)** | | | **6** | **TN, AL** |  |
|  | **Elk** | | | **7** | **TN, AL** |  |
|  | **Tennessee-Tombigbee Waterway2** | | | **N/A** | **TN, MS, AL** |  |
|  | **Cumberland (including Cordell Hull Lake and Dale Hollow Lake)** | | | **7** | **KY, TN** |  |
|  | **Red** | | | **6** | **KY, TN** |  |

1 The Holston River is not an interjurisdictional river, but it is formed by interjurisdictional tributaries.

2 The Tennessee-Tombigbee Waterway is an interjurisdictional waterway that connects the Tennessee River to the Tombigbee River in the Mobile Drainage. The manmade divide cut that connects these two rivers is not in the USGS NHD flowline database and therefore no stream order is provided in the table.

Table 11. Select ecological and economic statistics for the Tennessee-Cumberland Rivers Sub-basin.

|  |  |
| --- | --- |
| **Tennessee/Cumberland Rivers Sub-basin** | |
| Watershed (square miles) | 58,800 |
| Number of Interjurisdictional Rivers | 17 |
| Number of States in sub-basin | 7 |
| Number of Fish/Mussel Species | 164/50 |
| Number of Endangered Fish/Mussels | 10/5 |
| Recreational Fishery Value (millions) | $4,192.4 |
| Annual Commercial Fishery Harvest (lbs.) | 1,324,084 |
| 2011 Commercial Navigation (tons) | 57,000 |

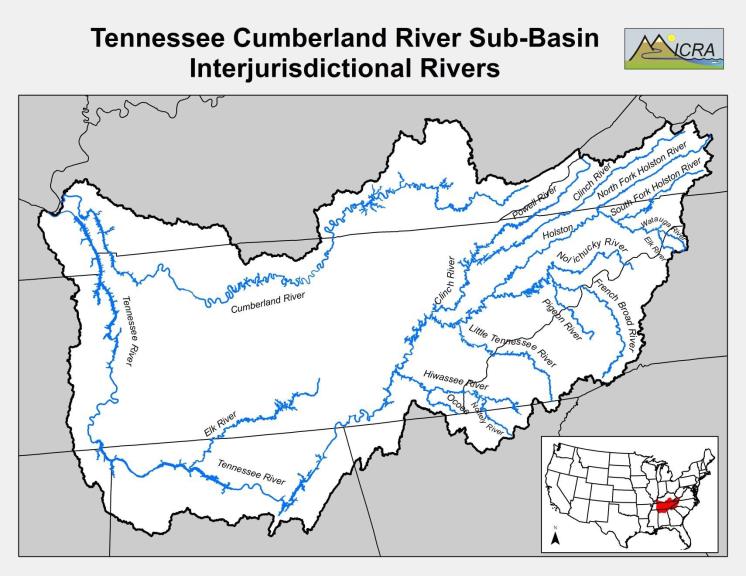


Figure 17. Select 6th order and larger interjurisdictional rivers of the Tennessee-Cumberland Rivers Sub-basin.

**Upper Mississippi River Sub-Basin**

*Mississippi Interstate Cooperative Resource Association*

### **Geography**

The Upper Mississippi River (UMR) sub-basin drains approximately 189,000 square miles from eight states. The basin’s namesake begins at Lake Itasca in northern Minnesota. The southern end of the sub-basin is the confluence of the Ohio River at the southern tip of Illinois, roughly 1,300 miles and over half of the length of the entire Mississippi River.

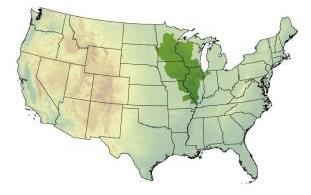


Figure 18. The Upper Mississippi River Sub-Basin, or watershed, includes rivers and lakes from 8 states.

A series of 29 commercially navigable locks and dams, most built in the 1930’s, extend about 690 miles on the Mississippi River from Minneapolis, MN to St. Louis, MO. Locks and dams are also located on the Illinois River. Collectively, commercial navigation exists on > 1,200 miles of the UMR interjurisdictional rivers, carrying in excess of 201,000 tons of cargo annually (University of Kentucky and University of Tennessee, 2014).

The UMR also supports > 285,000 acres of federal refuges within its floodplain. Partner states manage another 140,000 acres of land along the river. These public lands contribute to a UMR visitation exceeding 10 million trips annually, more than most national parks, including Yellowstone. This dual commercial navigation and environmental land base contributed to Congress recognizing the Upper Mississippi River as a “nationally significant ecosystem and a nationally significant commercial navigation system” (WRDA 1986).

### **Economics**

Commercial harvest of fish within the UMR sub-basin has averaged over 8.5 million pounds, resulting in an estimated value of > $2.049 million annually. The Mississippi River alone supports over 6.2 million recreational fishing trips annually within counties bordering the UMR generating over $448.6 million in estimated 2011 retail sales and $723.2 million in estimated 2011 industrial output (U.S. Fish and Wildlife Service: Division of Economics 2015).



Figure 19. Congress has designated the UMR as, “a nationally significant ecosystem and a nationally significant commercial navigation system.” (WRDA 1986).

### **Problem Statement/Greatest Needs**

The UMR is a large and dynamic ecosystem that has been greatly altered by commercial navigation, flood control, and land use throughout its watershed. The ecosystem remains under considerable stress and still faces many challenges, including sedimentation, nutrient loading, invasive species, altered hydrology and floodplain isolation. The UMR sub-basin’s connection to the Great Lake via the Chicago Sanitary and Ship Canal poses a vector for inter-basin transfer of a variety of invasive species the poses a risk to the entire Mississippi River basin.



Figure 20. Sediment from the Root River, MN, entering the Mississippi River.

Habitat quality of the large rivers in the UMR sub-basin have been degraded due to commercial navigation, levee construction, urban development, and sedimentation from agricultural runoff. The impacts are not uniform throughout the sub-basin. For example, agricultural levees, which have reduced fishery access to critical floodplain habitats, are most pronounced in the states of IA, IL, and MO. However, sedimentation and impacts from commercial navigation and its maintenance are issues in all the states.

### **Existing Partnerships/Plans**

Planning to protect and restore native fish species of the UMR sub-basin’s interjurisdictional rivers has a long history involving many state and federal agencies and the public. The first comprehensive plans were recommendations developed by the forts Great River Environmental Action Team (GREAT) (GREAT 1980) which resulted in more environmentally acceptable dredging practices that protected fish and wildlife habitat. Many more plans have followed, some of which are briefly described under the accomplishments of the various UMR partnerships. All the planning efforts have built upon the experience and knowledge gained over even a relatively short time frame in what is often referred to as an adaptive management approach.

Several inter-agency partnerships exist within the UMR. The most notable partnerships are those established for coordinated management of the Mississippi River’s ecosystem restoration and commercial navigation.

#### Upper Mississippi River Conservation Committee (UMRCC)

The UMRCC was established in 1943 with the purpose of conducting a 3-year fish survey. However, once the survey was completed, the biologists recognized the need for continuance of the organization to collectively address conservation issues. The UMRCC is comprised of UMR managers, biologists and scientists with several technical sections. In 2002, the UMRCC prepared a 50-year estimate of ecosystem restoration costs for the UMR and Illinois River (UMRCC 2002). This estimate was based on floodplain habitat needs presented in the Corps of Engineers Habitat Needs Assessment (USACE 2000) supplemented with needs identified in Environmental Pools Plans (River Resources Forum 2004) and used costs from completed projects to estimate future funding needs. The UMRCC Fisheries Technical Section developed a fisheries plan in 2010 (UMRCC 2010) to identify the needs and priorities for a healthy UMR fishery.

#### Upper Mississippi River Basin Association (UMRBA)

The UMRBA has been designated by Congress as the “caretaker of the master plan” (WRDA 1986). The master plan referred to is the Upper Mississippi River System Master Plan (Upper Mississippi River Basin Commission 1982), which provided justification that led to the authorization of the UMRR. The UMRBA is a regional interstate organization formed by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to coordinate the states' river-related programs and policies and work with federal agencies that have river responsibilities. UMRBA is involved with programs related to commercial navigation, ecosystem restoration, water quality, aquatic nuisance species, hazardous spills, flood risk management, water supply, and other water resource issues. The purpose of the Upper Mississippi River Basin Association is to facilitate dialogue and cooperative action regarding water and related land resource issues.

#### Upper Mississippi River Restoration (UMRR)

The Upper Mississippi River System Master Plan led to legislation authorizing the Upper Mississippi River System Environmental Management Program in WRDA 1986. EMP was initially authorized at $19.3 million for a period of 15 years. In 1999, EMP was reauthorized as a continuing authority with an appropriation limit of $33 million, however, since reauthorization, appropriations have averaged about $20 million per year. One third of the funding is allocated for Long Term Resource Monitoring with 2/3 allocated for Habitat Rehabilitation and Enhancement Projects on the Upper Mississippi River and Illinois Rivers. Restoration projects implemented under EMP where, and continue to be, selected by interagency teams of river managers who identify, nominate and sequence projects for implementation. Project planning and construction is led by the Corps of Engineers. Habitat projects are identified by resource managers throughout the system. The projects are sequenced through a hierarchy of interagency river teams geographically defined by the 3 Corps of Engineer Districts. The UMRR completed a Habitat Needs Assessment in 2000 to identify existing quality habitat and identify systemic needs for a variety of species (USACE 2000). An update of the Habitat Needs Assessment was initiated in 2016.

#### Corps of Engineer’s Regional Coordination

The UMR sub-basin lies within the boundaries of several Corps of Engineer Districts. Three of the districts, St. Paul, Rock Island and St. Louis, manage commercial navigation and environmental restoration on the Mississippi, Illinois, St. Croix, Kaskaskia, and Minnesota Rivers. Each of these districts has regional coordination teams established to solicit partnership expertise and input on a variety of issues.

### **Examples of Completed Habitat Restoration**

The UMR Sub-basin partnership programs have led to the development and implementation of large river fisheries habitat restoration actions on the Mississippi and Illinois Rivers. The UMRR authorization has implemented 55 Habitat Rehabilitation and Enhancement Projects since 1986, accounting for the majority of fisheries related habitat work within the UMR sub-basin. Over half of the UMRR habitat projects have directly benefited interjusridictional fish. Additional improvements in habitat have been accomplished through other federal or state programs, but to a much smaller scale and overall impact. However, even these restoration measures are not keeping up with the continued loss of habitat due to impacts of managing the UMR system for commercial navigation and impacts of sedimentation from upland sources.

The variety of techniques implemented under UMRR HREPs, and successful outcomes, provide examples of what can be done elsewhere within interjurisdictional rivers of the Mississippi River basin.

Figure 21: Restoration of habitat at Spring Lake, near Buffalo City, WI, is one example of the type of management actions implemented under authority of the Upper Mississippi River Restoration Program. Impoundment of the Mississippi River in the 1930’s created many islands within the floodplain (1954). Over time, the islands eroded away, resulting in a loss of habitat quality for a variety of fish species (1991). Islands were constructed in 2005-2006 with sediments dredged from within a 600-acre backwater to restore habitat for a variety of fish species (2015).



### **Implementation Needs**

Implementation mechanisms are in place for habitat management of aquatic resources. However, funding levels have often fallen below authorization amounts. Implementation needs for the UMR sub-basin include:

1. Full funding of the UMRR and COE channel maintenance programs would provide the ability to implement successful restoration projects at multiple scales.
2. Full funding of NRCS watershed initiatives to reduce sediment delivery to the Mississippi River and its tributaries would slow the loss of habitat and prolong the life of habitat projects under other authorities.

Partnerships that exist on the Mississippi River in this sub-basin do not have counterpart groups collectively working on the other rivers. Establishment of similar partnerships would promote greater coordination.

Table 10. Interjurisdictional rivers (6th order and larger) of the Upper Mississippi River Sub-basin.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Rivers** | | | **Stream Order** | **States** | **Tribal** |
|  | **Mississippi River** | | | **10** | **MN, WI, IA, IL, MO** |  |
|  | **Minnesota (including Big Stone Lake)** | | | **8** | **MN, SD** |  |
|  | | **Whetstone** | | **6** | **SD, MN** |  |
|  | **St. Croix** | | | **6** | **MN, WI** |  |
|  | **Chippewa1** | | | **7** | **WI** | **x** |
|  | **Black1** | | | **6** | **WI** | **x** |
|  | **Wisconsin1** | | | **6** | **WI** | **x** |
|  | **Rock** | | | **7** | **IL, WI** |  |
|  | | **Pecatonica** | | **7** | **IL, WI** |  |
|  | | | **Sugar** | **6** | **IL, WI** |  |
|  | **Iowa1** | | | **7** | **IA** | **x** |
|  | **Des Moines** | | | **7** | **IA, MN, MO** |  |
|  | **Illinois2** | | | **8** | **IL** |  |
|  | | **Kankakee** | | **6** | **IN, IL** |  |
|  | | | **Iroquois** | **6** | **IN, IL** |  |
|  | | **Fox** | | **6** | **WI, IL** |  |
|  | **Missouri** | | | **9** | **MO, NE, SD, ND, MT, IA, KS** | **x** |

1 The Chippewa, Black, Wisconsin, and Iowa rivers flow through tribal lands.

2 The Illinois River is not an interjurisdictional river, but it is formed by interjurisdictional tributaries.

Table 11. Select ecological and economic statistics for the Upper Mississippi River Sub-basin.

|  |  |
| --- | --- |
| **Upper Mississippi River Sub-basin** | |
| Watershed (square miles) | 189,000 |
| Number of Interjurisdictional Rivers | 16 |
| Number of States within Sub-basin | 8 |
| Number of Fish/Mussel Species | 150/38 |
| Number of Endangered Fish/Mussels | 1/4 |
| Value of Recreational Fishery (millions) | $5,690.1 |
| Value of Commercial Fisheries (millions) | $2.049 |
| Commercial Fisheries Harvest (lbs.) | 8,491,925 |
| 2011 Commercial Navigation (tons) | 201,000 |

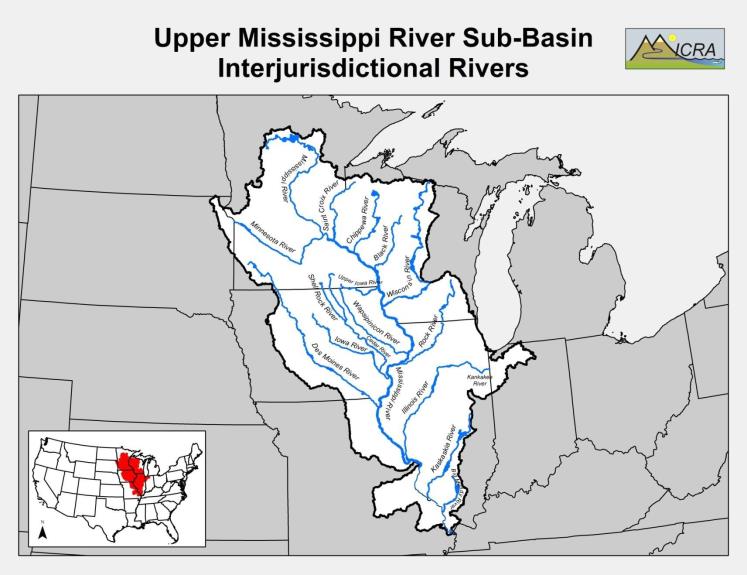


Figure 22. Select 6th order and larger interjurisdictional rivers of the Upper Mississippi River Sub-basin.

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| **Restoration Objective** | **Recommended Management Strategies** | **Potential Management Actions** | **Arkansas-Red-White Example Projects** | **Lower Mississippi River Example Projects** | **Missouri River Example Projects** | **Ohio River Example Projects** | **Tennessee-Cumberland Example Projects** | **Upper Mississippi River Example Projects** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Maintain and enhance high quality habitats and habitat diversity | * Avoid and minimize degradation of aquatic habitats through best management practices for watershed management, shoreline stabilization, channel training structure modifications, and acquisition of land/easements from willing private landowners * Enhance and restore secondary channels, off-channel aquatic areas, and other critical habitats (e.g., cross- overs; riffle pools; mussel beds; isolated wetlands; spawning, nursery, and over-winter habitat; etc.) requiring special protection or acquisition to increase habitat diversity | * Acquisition/Easements from willing landowners * Aeration channels/culverts * Aquatic vegetation/trees * Avoid and minimize impacts of dikes on sedimentation over gravel bars * Avoid closure dikes in secondary channels * Avoid impacts to tributary mouths * Bank stabilization * Closing structures * Construct chevrons * Construct hardpoints * Construct isolated wetlands * Construct/restore gravel bars * Construct/restore islands * Dechannelization * Dredging * Embankment modifications * Fluctuation zone seeding * Forest management * Improve littoral zone habitat * Levee setbacks * LUNKER structures * Modification/removal of channel training structures * Modification of dam operations * Partial closing structures * Restore secondary channels * Riffle/pool structures * Sediment traps * Seed Islands * Shoreline stabilization * Substrate modification (i.e., convert from silt to gravel) * Tree drops/woody structure * Wing dam notching | * ***AR****: Restore five oxbow lakes (Clark Creek, Tubbs Creek, Hicks, Deep Bank, and Horseshoe) in the lower White River using low- crest weirs* * ***LA****: Utilize selective herbicides to treat invasive aquatic vegetation in Red River Raft lakes to enhance fish and mussel habitat* * ***LA****: Reforest bottomland hardwoods and restore native plant communities in the Red River National Wildlife Refuge* * ***AR****: Conduct habitat enhancement projects throughout the range of the Ouachita rock pocketbook and Rabbitsfoot mussels* * ***AR****: Perform 200 dikes notches identified during the Arkansas River navigation study* * ***CO****: Improve trout habitat on Grape Creek in the Arkansas River sub-basin within 1 mile both above and below DeWeese Reservoir using boulder and log structures* * ***OK****: Notch dikes along Arkansas River Navigation System identified during the navigation study. Primarily those areas identified above L&D 17* * ***OK****: Application of specific herbicide or other treatments to eradicate alligator weed in the Arkansas River system* * ***TX:*** *Utilize herbicides and biological control to treat invasive aquatic vegetation.* * ***TX:*** *Deploy artificial fish habitat structures to improve available fish habitat in reservoirs.* | * ***AR****: Perform 200 dikes notches identified during the Arkansas River navigation study* * ***AR****: Island 25 Bend; Increase flow through Bend of Island 25 point bar to increase depth diversity and water quality (AR03)* * ***KY****: Wolf Island Secondary Channel, Restore connectivity and flow to Wolf Island secondary Channel (KY07)* * ***LA****: Wilson Point Dikes; Improve habitat diversity within the Wilson Point dikes. (LA04)* * ***MO****: Donaldson Point; Enhance flow through the dikes in the area east of Donaldson Point. (MO11)* * ***MS****: Old White River Chute; Restore flow into Old White River Chute to improve habitat diversity. (MS31)* * ***TN****: Armstrong Bar Hydrology; Restore the secondary channel behind Armstrong Bar dikes and reconnect the channel to the river. (TN27)* | * ***NE, IA, KS, MO:*** *Evaluate current side channel habitat entrance/exit structures for larval drift capture.* * ***NE, IA, KS, MO:*** *Modification of existing training structures to enhance larval drift and fish passage.* * ***MT****: Continuation of Channel Migration Easement program to pay landowners to preclude bank hardening in order to allow natural channel migration in the lower Yellowstone River. First agreement about to be signed with a landowner near Sidney, MT.* * ***NE, IA, KS, MO:*** *Renewed emphasis on 100,000 acres of mitigation habitat authorized by WRDA still owed to Missouri River Basin states.* * ***IA, NE:*** *Continuation of Revetment lowering projects such as at Lower Decatur (Missouri River Mile 687) and Three Rivers (Missouri River Mile 670)* * ***IA:*** *Continuation of channel widening projects such as Deer Island (Missouri River Mile 672).* * ***NE****: Renewed emphasis on increasing floodplain connectivity such as Highway 2 setback near Nebraska City, NE.* * ***NE:*** *reconnect chute behind Islands #4* * ***Basin Wide:*** *Educate the public on the economic benefits of a healthy Missouri River ecosystem which can return more ecosystem goods and services than the present management model and reduce repetitive federal bailouts by the U.S. taxpayer which have been running in the billions.* * ***NE, IA, KS, MO:*** *Educate the public on the outdoor recreational opportunities provided by 61,000 aces of mitigation lands open to the public in the four lower states.* | * ***OH****: ORM 373.2-372, 358.3-357, 226.2-225.5 T Dikes* * ***PA****: ORM 1.6-2.4 Brunot Island Backchannel Habitat Restoration* * ***PA****: ORM 20.0-22.0 Ohio River shallow water creation and enhancement* * ***PA****: ORM 20.0-21.0 Deepwater pool habitat enhancement* * ***WV****: ORM 288.2-287.8 Greenbottom revetments* * ***WV****: ORM 126.9 Hannibal Dam Tailwaters revetments* * ***IL****: ORM 902.3 Lusk Creek Embayment* * ***IL****: ORM 911 Barren Creek Embayment* * ***IN****: ORM 840.7 Hovey Lake restoration* * ***IN****: ORM 494.8 Tanners Creek Embayment* * ***KY****: ORM 530.3 Craigs Creek Embayment* * ***WV****: ORM 147.8 Bens Run Embayment 1 and 2* | * ***TN****: Highest priority sub- basins projects to maintain quality freshwater mollusk habitats are: Upper Duck, Upper Elk, Collins, South Fork Cumberland, Emory, Obey, Sequatchie, Stones, Holston, and Lower French Broad rivers* * ***TN****: Highest priority sub- basins projects to restore freshwater mollusk habitats from altered hydrological impacts are: Upper Clinch, Powell, North Fork Holston, Upper Duck, Upper Elk, South Fork Cumberland, Lower Tennessee, Lower Clinch, and Holston rivers* * ***TN****: Be proactive in establishing watershed organizations to foster appropriate land use and other human interaction on the landscape* * ***TN****: Design in-stream flow prescriptions for tributaries at risk of excessive water withdrawal* | * ***MN****: RM 747: Weaver Bottoms, Pool 5: restore/enhance bathymetric diversity by dredging an historic backwater lake* * ***MN****: RM 827: Grey Cloud Slough Reconnection, Pool 2: restore water flow into Grey Cloud Slough by installing a bridge to replace plugged culverts* * ***MN****: RM 798: Lower Vermillion River Water Quality and Aquatic Habitat Enhancement Project, Pool 4: improve water quality and aquatic vegetation abundance and diversity by restricting common carp access to backwater lakes through restoration of floodplain levees* * ***IA****: RM 667: Conway Lake HREP, Pool 9: restore and enhance fisheries and waterfowl habitat by enhancing bathymetric diversity by dredging.* * ***IL****: RM568: Pool 12 Overwintering HREP: restore and enhance fisheries and waterfowl habitat by enhancing bathymetric diversity by dredging.* * ***WI****: St. Croix River: installation of 200 fish cribs per year placed in colonies in Lake St. Croix* |
| Manage sediment transport | * Support watershed initiatives to reduce/eliminate watershed induced degradation of aquatic habitats and ecosystem functions * Promote restoration of a sediment transport regime such that transport, deposition, and erosion rates are within acceptable limits | * BMPs * Acquisition/easements * Buffer strips * Islands * Breakwaters * Sediment traps * Dechannelization * Restore tributary mouth * Minimize gravel dredging permits | * ***AR****: Restore the Rector Brake backwater of the Arkansas River* * ***AR****: NER Alternative F, Sediment control at the mouth of the Cache River* * ***AR****: Conduct stream bank restoration projects along the Red River near Spring Bank Ferry* | * ***AR****: Restore the Rector Brake backwater of the Arkansas River* * ***AR****: Island 88; Deepen the mouth of the oxbow channel behind Island 88 unless it will drain water from the lake. (AR57)* * ***KY****: Putney Bend Dikes; Increase flow through two Putney Bend dikes at the head of the sandbar to maintain depth diversity. (KY05)* * ***LA****: Browns Field Dikes; Increase flow through* * *Brown’s Field dikes that would maintain the slack water habitat along the main channel. (LA24)* * ***MO****: Old and New #7 Chutes; Increase depth diversity of Old #7 Chute. Reduce sedimentation into the chutes. (MO08)* * ***MS****: Rodney Lake Assessment; Restore hydrology in the lake. Reduce sedimentation and enhance depth diversity. Protect the population of Potamilus capax in the chute. (MS65)* * ***TN****: Island 35/Densford Bar Acquisition; Acquire Island 35. Restore habitat diversity in several disjunct channel between the river and levee on the AR bank. (TN20)* | * ***NE, SD****: Lewis and Clark Lake Study* * ***Basin Wide:*** *Missouri River Recovery Program efforts* * ***SD****: Support projects identified through WRDA 2000 Title IX Sedimentation Task Force. Directs and develops projects reducing or addressing sedimentation issues on the Missouri River.* * ***ND****: Support projects identified through WRDA 2000 Title VII Sedimentation Task Force. Directs and develops projects reducing or addressing sedimentation issues on the Missouri River.* * ***KS, MO:*** *Bed degradation study in the Kansas City Reach of the Missouri River.* * ***NE, SD****: Sedimentation study in the 39 mile and 59 mile reaches of the Missouri National Rec River, especially at the mouth of the Niobrara River.* * ***MT, ND, SD, NE:*** *Study Hydro-Peaking along the dams in the Missouri River to look for alternatives for more natural sediment transport.* |  | * ***TN****: Highest priority sub- basins projects to restore freshwater mollusk habitats from sediment related impacts are: Upper Clinch, Powell, North Fork Holston, Upper Duck, Upper Elk, South Fork Cumberland, Lower Tennessee, Lower Clinch, and Holston rivers* * ***TN****: Riparian restoration projects in tributaries* * ***TN****: Work with NRCS to identify and promote participation in private land conservation programs* |  |
| Restore main stem and tributary hydrology | * Implement changes to dam operating procedures and water level management techniques that facilitate more natural hydrographs and temperature regimes (i.e., reduced daily fluctuations) * Develop and implement watershed management actions to facilitate more natural hydrographs | * Pool-wide water level management * More frequent operation of gates * Tributary wetland restoration * Urban runoff retention ponds * Buffer strips * Reduction in hydro- power peaking * Minimize severe fluctuations during spawning periods * Modification of intake structures and water release regimes at coldwater tailrace releases | * ***LA****: Operate Lock and Dams 1 through 5 on the Red River to derive maximum full pool benefits* * ***AR****: Develop an instream flow agreement on the Fourche La Fave River, a tributary of the Arkansas River, to enhance alligator gar spawning habitat* * ***OK****: Treatment of phosphorous discharge from Lake Francis into Illinois River designed to reduce limits to within acceptable state standards* * ***OK****: Modification of existing water release regimes at coldwater tailraces, including the Lower Illinois River, to improve downstream water quality conditions* | * ***AR****: Basket Bar; Enhance habitat diversity below dikes. Enhance flow to side channel. (AR18)* * ***KY****: Mayfield Creek; Improve access to Mayfield Creek by removing sediment plug near the mouth of the creek. (KY01)* * ***LA****: Natchez Island Dikes; Increase flow through dike field. (LA30)* * ***MO****: Birds Point Sandbar; Enhance flow through a series of dikes near the mainland to isolate the sandbar from the mainland to benefit least tern nesting. Increase flow through a secondary channel. (MO01)* * ***MS****: Black Bayou; Assess the need to restore habitat diversity in Back Bayou Drainage Ditch. (MS36)* * ***TN****: Mouth of Hatchie River Acquisition; Install grade control structures to control headcutting that is occurring in the Hatchie River. (TN18)* | * ***MT****: Ft. Peck warm‐ water release studies* * ***MT, ND, SD, NE:*** *Study Hydro-Peaking along the dams in the Missouri River to look for alternatives for more natural sediment transport and flows.* * ***NE****: Protect instream flows on the lower Platte River and Niobrara River in Nebraska for the fish communities to include pallid sturgeon, least tern, and piping plover. Protect flows for whooping crane on the lower Niobrara. Both rivers are important tributaries to the Missouri River.* * ***NE****: Enhance connectivity of the floodplain to the river, especially on mitigation projects and increase wetlands to help absorb excessive nutrients in the river (Highway 2 setback at Nebraska City, NE).* * ***SD****: Study Hydro- Peaking below Fort Randall Dam where flows frequently go to zero in the Missouri National Recreation River 39-mile reach.* |  | * ***TN****: Highest priority sub-basins projects to restore freshwater mollusk habitats from altered hydrological impacts are: Upper Clinch, Powell, North Fork Holston, Upper Duck, Upper Elk, South Fork Cumberland, Lower Tennessee, Lower Clinch, and Holston rivers* * ***TN****: Identify and fund TNSMP projects* | ***IA****: RM 432: Blackhawk Bottoms, Pool 19: restore/increase habitat diversity (aquatic and terrestrial) through capturing the flow of a small creek for moist soil management, increasing topographic diversity and water level management within the Blackhawk Bottoms. The area will inundate from the Mississippi and the small creek to provide fish spawning areas* |
| Restore hydraulic and habitat connectivity | * Enhance lateral connectivity to the current and historic floodplain using a variety of techniques on publicly owned properties and willing private ownerships * Increase longitudinal migration opportunities for fish through changes in dam operations and fish passage structures at dams and other human induced barriers | * Fish passage structures/measures * Levee modification * Levee removal * Dechannelization * Dredging * Aeration channels/culverts * Channel formation * Change in moist soil operating plans * Modify water intake structures to reduce or eliminate entrainment and impingement | * ***AR****: Re-establish connectivity to the Coal Pile backwater, Arkansas River* * ***AR****: Install fish ladders for American eel on Dam 2 of the Arkansas River, Montgomery Point Lock and Dam on the White River, and the Huxtable pumping plant* * ***AR****: NER Alternative G, Restoring connectivity in lower portion of the Cache River* * ***AR****: Install large box culverts at road crossings along the Sulphur River, a tributary of the Red River, to improve connectivity to upstream alligator gar spawning habitat* * ***CO****: Restore connectivity of the Arkansas River in the lower Arkansas River between Pueblo and John Martin Reservoir where diversion structures create barriers to native fish movements and reproductive strategies, with a focus on Plains Minnow recovery. Prioritize barriers, and develop strategies for removal or retrofitting with fish passages structures* * ***KS****: Improve fish passage over the 21st dam in the City of Wichita, reconnecting over 150 miles of the Arkansas River upstream of Wichita to Great Bend* * ***KS****: Utilize small stream culvert passage in much of the Arkansas Basin similar to projects previously completed in the Red Hills near Medicine Lodge* * ***OK****: Study to implement methods to prevent fish stranding below dams. (Grand River below Fort Gibson, tributary to Arkansas River)* | * ***AR****: Re-establish connectivity to the Coal Pile backwater, Arkansas River* * ***AR****: Install fish ladders for American eel on Dam 2 of the Arkansas River, Montgomery Point Lock and Dam on the White River, and the Huxtable pumping plant* * ***AR****: Corona Lake; Install a weir at lower end of the lake to maintain water level. (AR10)* * ***LA****: Old River RM503; Restore hydrology and connectivity to maintain seasonal connection at Old River. (LA03)* * ***MO/KY****: Channel Behind Wolf Island; Restore flow through the small secondary channel on the MO/KY state line. (MO05/KY08)* * ***MS/LA****: Bunch’s Cutoff; Restore hydrology and connectivity to maintain seasonal river connection. Protect a least tern nesting area at RM 503. (MS44/LA02)* * ***TN****: Robert E. Everett Lake. Reconnect the lake to the river. (TN06)* | * ***IA****: Continuation of top width widening and levee setbacks such as at Deer Island and Copeland Bend* * ***MO****: Removal of Lock and Dam 1 on Osage River* * ***MO:*** *Notch Island 1 dikes for backwater flow* * ***MO****: Lake of the Ozarks barrier net* * ***MT****: Modification of Yellowstone River Intake Diversion structure* * ***IA, KS, MO, NE****: Acquire an additional 200,000 acres of high risk, flood prone meander belt/floodplain habitat to facilitate floodwater conveyance and connectivity in areas that are pinch points for flow, especially between Sioux City and Kansas City.* * ***IA, KS, MO, NE****: Identify pinch points by river mile between Sioux City, IA and Saint Louis, Mo. Educate the public on the advantages of the federal levee setback at Copeland Bend in western Iowa near Nebraska City, Nebraska.* | * ***IN****: ORM 813.1 Logsden-Stroud Branch Embayment / Frenchmans Slough* | * ***TN****: Highest priority sub-basins projects to restore freshwater mollusk habitats from altered hydrological impacts are: Upper Clinch, Powell, North Fork Holston, Upper Duck, Upper Elk, South Fork Cumberland, Lower Tennessee, Lower Clinch, and Holston rivers* * ***TN****: Low head dam inventory and prioritization for removal* | ***IA****: Rock Creek: remove two low head dams to allow upstream fish passage in the Little Cedar River watershed; a tributary to the Cedar River* |
| Restore floodplain geomorphology/landforms | * Restore or construct floodplain landforms (e.g., islands, seed islands, chevrons, reefs, etc.) in locations where floodplain structural diversity is needed to increase variability in flow patterns, sediment composition, bathymetry, and reductions in wind fetch * Increase the area of naturally functioning floodplain through acquisition and restoration of bottomland hardwoods, wetlands, and other floodplain habitats | * Acquisitions/easements from willing sellers * Bank protection * Bottomland forestry management * Bottomland vegetation management * Dredging * Island restoration/construction * Modification/removal of channel training structures * Procure batture land * Restore borrow pits * Restore lakes and backwaters * Seed islands |  | * ***AR****: Swan, Deep and Ozark Lakes; Rehabilitate habitat in the lakes. (AR39)* * ***KY****: Upper Island 1 Dikes (Backwater); Increase flow through Island 1 dikes and into a backwater. (KY02)* * ***LA****: Red River WMA Borrow Pits; Install gates/culverts in borrow pits on the Union Point Field property on the Red River to maintain water levels. (LA34)* * ***MO****: Near Little Cypress Bend; Deepen and diversify habitat in Twin Borrow Pits. Reduce siltation into the water bodies. Located on MDC property. (MO18)* * ***MS****: Yucatan Lake; Restore access to the lake from the river. Remove woody debris at the entrance, Project could include Middle Ground Island. (MS61)* * ***TN****: Shelby Forest Lakes; Opportunities near Corona Lake Complex, Island 37, and Centennial Island. Enhance a wetland complex encompassing Corona Lake and Brandywine Chute, and reconnect Brandywine Chute to the river. (TN22; see AR10 and AR11)* | * ***IA, KS, MO, NE****: Modify or remove training structures within the channel to facilitate sand bar island deposition and other lost in-channel habitats.* * ***IA, KS, MO, NE****: Construct lost wetland and backwater habitats through the WRDA authorized 100,000 Mitigation acres still owed to the basin states.* * ***IA, KS, MO, NE****: Increase flow conveyance on the floodplain between large cities to assist with flood risk reduction and the extremes of anticipated climate change such as changes in runoff patterns and more frequent flooding.* * ***Basin Wide****: The Flood of 2011 satellite photo footprint should be studied to identify high risk, flood prone lands which could be acquired through the mitigation program under existing authorities and a willing seller basis.* | * ***IL****: ORM 928.0 Cottonwood Bar least tern habitat restoration* * ***KY****: ORM 784-780 Scuffletown Bottomland Hardwood restoration* * ***KY****: ORM 396 Lewis County Bottomland restoration* * ***OH****: ORM 356.5 Scioto River Floodplain* * ***OH****: ORM 223-225 Big Bend Floodplain* | * **TN**: Highest priority sub-basins projects to restore freshwater mollusk habitats from altered hydrological impacts are: Upper Clinch, Powell, North Fork Holston, Upper Duck, Upper Elk, South Fork Cumberland, Lower Tennessee, Lower Clinch, and Holston rivers * **TN**: River channel restoration * **TN**: TSMNP projects | * ***MN****: RM 695: Lower Root River Delta Restoration Project, Pool 8: restore/enhance floodplain habitat in the Root River delta by removing levees and restoring floodplain forests and wetlands.* * ***MN****: RM 797-807: North/Sturgeon Lake HREP, Pool 3: improve habitat diversity and quality by conducting a drawdown, building islands and dredging.* * ***IA****: RM 671: Upper Iowa River re-meandering, Pool 9: restore the meander to increase habitat diversity (aquatic and terrestrial) on the lower 4 miles of the channelized part of the Upper Iowa River and improve the river delta.* * ***IA****: RM 653: Harpers Slough HREP, Pool 9: restore and enhance fisheries and waterfowl habitat by enhancing bathymetric diversity by dredging and reestablishing islands that have eroded away. This project should affect a minimum of 1,877 acres* |



**CONSTITUTION and BY-LAWS**

**of the**

**Mississippi Interstate Cooperative Resource Association**

**(Adopted 11/7/03; Revised April 2010)**

**CONSTITUTION**

**Preamble**

The conservation agencies of twenty-eight (28) states; encompassing the waters and drainages of the Mississippi River and its tributaries, the U.S. Fish and Wildlife Service, Tennessee Valley Authority, Chippewa Cree Tribe, Chickasaw Nation Agency, Bureau of Reclamation, and the U.S. Geological Survey; have entered into an agreement, the Mississippi Interstate Cooperative Resource Agreement (Agreement), to facilitate cooperative management of these resources. Parties to the Agreement formed an Association (i.e., partnership organization) that meets periodically to facilitate discussion, establishment of cooperative projects, and policy development between the states or between the states and the federal agencies and other entities. The Association is operated and controlled by representatives of state and federal government agencies acting in their official capacities.

The following Articles of this Constitution describe, define, and delineate the Association's organizational structure and functions, as well as the roles of agencies and entities signatory to the Agreement.

**Article I - Name**

The agencies and entities signatory to the Agreement shall be called the Mississippi Interstate Cooperative Resource Association, hereafter referred to as MICRA.

**Article II - Mission and Goals**

The MICRA Mission shall be to improve the conservation, development, management, productivity and utilization of interjurisdictional fishery resources (including freshwater mussels) in the Mississippi River Basin.

**Article III - Relationship to Others**

In recognition of the several existing compacts, committees, commissions, and councils coordinating activities on the Mississippi River and its tributaries, MICRA shall recognize and embrace these existing groups in a manner that will honor their long standing status and missions while at the same time, striving to join together all those agencies and entities that have jurisdiction and responsibilities for the Mississippi River Basin's fishery resources.

**Article IV - Membership, Meetings, and Dues**

1. Membership shall consist of voting and non-voting delegates.
   1. Each state and federal agency who is a signed party to the Agreement will be represented on MICRA by one voting delegate.
   2. Parties to the Agreement that are not associated with a state or federal government agency will be represented on MICRA by one non-voting delegate.
   3. New association members may be added with the approval of a 3/4 majority of MICRA voting delegates.
2. Delegates appointed by members will have a knowledge of and interest in riverine resources and authority to make decisions on behalf of the represented member agency or entity within the constraints of policies and financial limitations of the respective agency or entity.
3. Annual MICRA meetings may be held at a time and place determined by the Chairperson in consultation with the Executive Board. Special meetings may be called at the request of a majority of the members, or by the Chairperson.
4. Funding for MICRA's administration, coordination activities, and cooperative projects will be sought from a variety of sources, including voluntary membership dues. Payment of dues will not, however, be a condition of membership. An annual contribution of $1,500 by each State agency and $5,000 by each Federal agency is, however, recommended.
5. If the Association is dissolved, its assets will be distributed among the state and federal agency members who contributed annual dues. The distribution of assets will be in proportion with the members’ level and frequency of contributions to the Association.

**Article V - Officers, Executive Board, Committees and Sub Committees**

1. MICRA officers shall include a Chairperson and a Chairperson-Elect.

Officers shall be elected from among state and federal agency members to serve two-year terms by a simple majority of vote of MICRA delegates. A candidate for Chairperson-Elect will be nominated during odd numbered years by one of the sub-basin organizations comprising the Executive Board, or anytime the position is vacated. Responsibility for nominating a candidate for Chairperson-Elect will be rotated among the sub-basin organizations comprising the Executive Board. Two-year terms of office for the incoming Chairperson and Chair-Elect shall begin on January 1 of even years (e.g., January 1, 2010 through December 31, 2011). The Chairperson-Elect will automatically accede to the office of Chairperson upon completion of his/her term or to fill an unexpired vacant term of the Chairperson.

1. The Executive Board shall consist of:
   1. One State agency member from each of the following sub-basin groups:

* Upper Mississippi River Conservation Committee (UMRCC),
* Lower Mississippi River Conservation Committee (LMRCC),
* Missouri River Natural Resources Committee (MRNRC),
* Ohio River Fish Management Team (ORFMT),
* Arkansas River Conservation Committee (ARCC),
* Tennessee River Fish Management Group (TRFMG),

Sub-basin representatives shall be appointed by their six respective sub-basin groups. In the absence of a sub-basin group appointment, the respective MICRA sub-basin delegates will appoint a sub-basin representative. The Chairperson-Elect may also serve as a sub-basin representative on the Executive Board if appointed to serve in that capacity by the respective sub-basin.

* 1. Two members representing different Federal agencies.

MICRA delegates shall elect by a simple majority vote, two federal agencies to serve on the Executive Board for concurrent 5-year terms. Federal agencies may be elected to serve consecutive terms on the Executive Board. The elected agencies will be asked to appoint a representative to the Executive Board.

* 1. The MICRA Chairperson and Coordinator will serve as non-voting Executive Board members.

1. The Executive Board will advise the Chairperson and oversee MICRA's general business.The Chairperson and Chairperson-Elect shall serve the needs of the Executive Board.
2. The Executive Board will meet at least once annually at a time and place selected by the Chairman in consultation with Executive Board members.
3. The U.S. Fish and Wildlife Service will appoint a Coordinator/Executive Secretary, with approval of the Executive Board, to assist in forwarding MICRA’s goals and objectives.
4. Technical Committees may be established by a simple majority vote of MICRA delegates or by consensus of the Executive Board to carry out specific continuing assignments. Technical Committees will be terminated or considered inactive by consensus of the Executive Board.
5. The Chairperson is authorized to appoint Ad Hoc Subcommittees to carry out specific short-term assignments. The Chairperson will terminate the sub-committee upon completion of the assigned task.

**Article VI - Procedures**

1) Roberts Rules of Order shall guide the conduct of all MICRA and Executive Board meetings.

2) Motions and seconds may be made only by Delegates.

3) The presence of seventeen Delegates shall constitute a quorum at the MICRA meetings. Votes may be conducted through mail ballot, e-mail, or teleconference. Seventeen actively voting members will constitute a quorum for conducting MICRA business through mail ballot, e-mail, or teleconference. A simple majority is required for approval of general business matters. A supporting 3/4 majority of the voting members is required on resolutions, policy or position statements.

4) A quorum of an Executive Board meeting will be six (6) voting Executive Board members. The Executive Board may pass resolutions or adopt policy and position statements for MICRA only through a consensus vote of the Executive Board. The Executive Board may elevate any action item, position statement or policy position deemed appropriate to the full MICRA membership for a vote.

5) The MICRA Constitution and By-Laws may be amended by a 3/4 majority vote of all MICRA members.

6) Delegates may assign their vote to alternates by informing the Chairperson prior to any meeting of their intention to do so.

7) Resolutions, policy, and position statements must be distributed to the Executive Board and/or MICRA members at least 30 days prior to a vote.

**Article VII - Support of State Positions and Consensus Decisions**

MICRA will be supportive of State positions, or at least neutral to issues that could significantly affect a member State. MICRA will strive to operate under consensus in undertaking projects affecting resources under the jurisdiction of any member State or entity.

**BY-LAWS**

**1. Duties and Responsibilities of Officers**

a. Chairperson - The MICRA Chairperson speaks for and is responsible for MICRA business, makes appointments to MICRA Committees, and exercises such other functions as may be determined from time to time by member actions. The Chairperson shall preside at Executive Board and MICRA meetings. Upon taking office, the Chairperson shall appoint individuals to serve concurrent terms as Chairperson of each of MICRA’s Technical Committees, or as needed to fill a vacancy during the term of office. Technical Committee chairs can be re-appointed to serve concurrent terms.

b. Chairperson-Elect - The MICRA Chairperson-Elect shall assume the duties of the Chairperson in the Chairperson's absence or inability to act. The Chairperson-Elect shall be prepared to take over duties of the Chairperson when acceding to that office, or in the Chairperson's absence, including appointments to Ad-Hoc Subcommittees.

c. Coordinator/Executive Secretary - The Coordinator/ Executive Secretary shall assist the Chairperson and other officers and members in furthering MICRA goals and objectives, coordinating activities among members and with other agencies, entities and the public, as directed. The Coordinator/Executive Secretary's responsibilities shall include:

* serving as MICRA administrative secretary and conducting MICRA's day to day business;
* maintaining permanent administrative records of all MICRA activities and other publications;
* preparing a newsletter containing current information about MICRA activities and other matters of importance in furthering MICRA goals and objectives;
* facilitating development and maintenance of a comprehensive strategic plan for management of interjurisdictional fishery resources of the Mississippi River Basin, and other plans as deemed important by MICRA;
* preparing minutes of MICRA meetings;
* preparing an annual budget;
* maintaining a membership roster;
* hiring and supervising other staff, as directed by the Executive Board; and
* serving as the Chairperson's representative at meetings, conferences, hearings, and other appearances to further MICRA's purposes. Statements presented at legislative hearings must have been approved by the Executive Board or MICRA membership.

**2. Responsibilities of Delegates, the Executive Board, and Subcommittees**

* 1. Delegates - Delegates or their designates are expected to meet at least once annually to conduct MICRA business.
  2. Executive Board - The Executive Board shall oversee MICRA operations. Meetings will be called on an "as needed" basis. A full report of Executive Board actions will be made available to MICRA by the Chairperson. The Executive Board shall be responsible for supervising activities of the Coordinator/Executive Secretary, in cooperation with the U.S. Fish and Wildlife Service.
  3. Technical Committees - Technical committees shall develop technical information, develop management strategies and plans, develop research proposals, and assist in coordination and implementation of cooperative research and management projects at the direction and approval of the Executive Board. Committee chairpersons shall be responsible for guiding technical committee work and activity, including the appointment of ad hoc or subcommittees assigned to address various technical committee issues. Technical Committee chairs may be requested to attend periodic Executive Board meetings.

**3. Order of Business**

The order of business at Annual MICRA Meetings shall include, but shall not be limited to:

1. Call to order by the Chairperson
2. Roll call and determination of quorum
3. Approval of minutes of previous meeting
4. Report of Chairperson on MICRA actions
5. Report of the Coordinator/Executive Secretary
6. Reports of Technical committees and AdHoc Subcommittees
7. Other old business
8. New business
   * 1. Nominations for new officers and Executive Board members
9. Installation of new officers
10. Appointment of committees, as appropriate
11. Adjournment

**4. Audit of Financial Accounts and Records**

The Chairperson, acting on behalf of the Association, will conduct an audit of MICRA's financial accounts and records at a minimum of every five (5) years, or at the discretion of the Association.

**5. Adoption of the Constitution and By-Laws**

We the undersigned delegates of the Mississippi Interstate Cooperative Resource Association, do hereby agree to and adopt this Constitution and By-Laws (votes were tabulated via email):

Stan Cook, Alabama Department of Conservation & Natural Resources

Mark Oliver, Arkansas Game and Fish Commission

\* Greg Gerlich, Colorado Division of Wildlife

\* Wayne Probst, Georgia Department of Natural Resources

Steve Pallo, Illinois Department of Natural Resources

Bill James, Indiana Department of Natural Resources

Joe Larscheid, Iowa Department of Natural Resources

Doug Nygren, Kansas Department of Wildlife & Parks

Ron Brooks, Kentucky Department of Fish & Wildlife Resources

Gary Tilyou, Louisiana Department of Wildlife & Fish

Dirk Peterson, Minnesota Department of Natural Resources

\* Ron Garavelli, Mississippi Department of Wildlife, Fisheries, and Parks

Bill Turner, Missouri Department of Conservation

\* Bruce Rich, Montana Department of Fish, Wildlife, and Parks

Don Gabelhouse, Nebraska Game & Parks Commission

Doug Stang, New York Department of Environmental Conservation

Bob Curry, North Carolina Wildlife Resources Commission

Greg Power, North Dakota Game & Fish Department

Ray Petering, Ohio Department of Natural Resources

Barry Bolton, Oklahoma Department of Wildlife Conservation

Sue Thompson, Pennsylvania Fish and Boat Commission

John Lott, South Dakota Game, Fish & Parks Department

Bill Reeves, Tennessee Wildlife Resources Agency

Bob Betsill, Texas Parks and Wildlife Department

\* Gary Martel, Virginia Department of Game & Inland Fisheries

Chris O’Bara, West Virginia Division of Natural Resources

Mike Staggs, Wisconsin Department of Natural Resources

Mike Stone, Wyoming Game and Fish Department

Mike Jawson, U.S. Geological Survey, Biological Resources Division

Mike Weimer, U.S. Fish and Wildlife Service, Region 3 Fisheries Program

\* Did not vote on the revised By-Laws

**MICRA’s Priorities and Accomplishments 2019-2023**

**Goals and Objectives**

GOALS

1. Coordinate basin-wide management of interjurisdictional fishery resources and aquatic habitats among the responsible management entities. *[INTERNAL COMMUNICATION]*
2. Increase awareness, support, and funding for basin-wide management of interjurisdictional fishery resources and aquatic habitats. *[EXTERNAL COMMUNICATION]*

OBJECTIVES

1. Coordinate implementation of interjurisdictional fishery and aquatic resource management programs throughout the basin. *[IJ FISH]*
2. Identify priority habitat restoration needs for the Mississippi River Basin, coordinate with national and regional aquatic habitat initiatives, and provide a forum for information and technical exchange. *[AQUATIC HABITAT]*
3. Coordinate prevention and control measures for Aquatic Invasive Species (AIS) to ensure sustainable native aquatic ecosystems within the basin. *[AIS]*
4. Develop and implement a communication plan for disseminating information to target audiences. *[COMMUNICATION]*
5. Secure funding for long-term operational needs and implementation of basin-wide programs. *[FUNDING]*

Progress on addressing MICRA’s 2019-2023 priorities to address these goals and objectives is tracked on the following pages. Accomplishments during the operational period are noted under each priority in blue font. On-going actions and notes on priorities not addressed during the operational period are indicated in red font.

**Priorities**

Objective 1: Coordinate implementation of interjurisdictional fishery and aquatic resource management programs.

Priorities:

1. Identify and prioritize basin-wide resource management issues of concern in the Mississippi River Basin.
2. MICRA delegates meet every 3-5 years to review priorities and discuss emerging issues of concern within the basin.

* An in-person MICRA Delegate meeting was planned for January 2020 but had to be cancelled due to the Covid-19 pandemic.
* A virtual MICRA Delegate meeting was held in October 2020. The focus of the meeting was the draft Joint Strategic Plan, Mississippi River Basin Fishery Commission Proposal, and Congressional outreach.
* *On-going*: An in-person MICRA Delegate meeting is planned for August 2023. The agenda includes a discussion of MICRA’s draft 2024-2028 priorities document and emerging issues of concern within the basin.

1. Standing committees review priorities and discuss emerging issues of concern within the basin every 3-5 years. Committees will report to the Executive Board at least once annually on progress of priorities identified in this document.

* This did not occur until 2022 due to the board’s focus on the Joint Strategic Plan and Mississippi River Basin Fishery Commission initiative.
  + - * The Executive Board reviewed MICRA’s 2019-2023 priorities with the committee chairs in August 2022. The Committee chairs were charged with addressing the current priorities and reporting back on progress and new priorities.
    1. Executive Board updates MICRA’s priorities document every 5 years.
* *On-going*: The Executive Board has initiated work on a new priorities document for 2024-2028 that will be finalized by the end of 2023.

1. Use standing technical committees and temporary working groups as needed to provide for the development of coordinated strategies to address priority issues and identify basin-wide research needs to support conservation, management, and utilization of native interjurisdictional fishes and aquatic resources.

* The Executive Committee considered the status of all standing committees, and their alignment with the Joint Strategic Plan and Priorities Document. The Gamefish and Native Mussel committees were sunset in May 2021. The Habitat committee was sunset in August 2021.
* The Invasive Carp Advisory Committee was revised in 2021 and is now a standing committee that reports to the Executive Committee.
* A MICRA Aquatic Invasive Committee was reformed and held its first meeting in September 2022.

1. Support continued efforts for coordinated basin-wide management of paddlefish and sturgeon species.
   * + - The Paddlefish Sturgeon Committee met annually 2018 through 2023. The committee was able to meet in person each year except 2021.
       - Supported a Paddlefish Commercial Harvest States Workgroup. The workgroup provided a report to the Executive Board in 2023 that includes a suite of recommendations for advancing cooperative interagency management of Paddlefish in the Mississippi and Ohio rivers.
2. The Paddlefish and Sturgeon Committee will develop a basin-wide management plan for paddlefish.
   * + - MICRA funded a contractor to facilitate the development of a basinwide Paddlefish management framework. A workgroup was formed and began working on this project in late 2022. The Framework is expected to be completed in 2 years.
3. The Paddlefish and Sturgeon Committee will continue to coordinate and manage (e.g., regional tag coordinators) a basin-wide coded-wire tag database for paddlefish.
   * + - The committee continues to maintain the database. The basinwide framework will inform the future management of this database.
4. The Paddlefish and Sturgeon Committee will provide recommendations to the Executive Board for standardized methods for documenting and reporting harvest data for paddlefish.

* The committee will address this charge once the basinwide framework document is complete.

1. The Paddlefish and Sturgeon Committee will provide recommendations to the Executive Board for basin-wide commercial harvest databases for paddlefish and sturgeon, including roe harvest and roe buyers.
   * + - The committee will address this charge once the basinwide framework document is complete.
2. Conserve native freshwater mussels through continued support of the Freshwater Mollusk Conservation Society (FMCS).
   * + - MICRA provided $1,000 to sponsor the FMCS’s 2019 Symposium. MICRA was not requested for financial assistance in 2020-2023.
       - The MICRA Executive Board met with the President of the FMCS in August 2022. The FMCS and MICRA will continue to support each other’s native mussel conservation needs.

* *On-going*: The Board and FMCS President agreed that formal recognition that explicitly identifies the partnership between the two organizations in their governance documents would be beneficial. For example, language to clarify that the FMCS will function in the place of a Native Mussel Committee for MICRA and provide recommendations to the Executive Board as needed. Similarly, the FMCS should refer to MICRA in their guidance documents and providing an annual update to the Executive Board.

1. Native Mussel Committee will provide recommendations to the Executive Board for standardized methods for documenting conservation strategies employed in mussel conservation.
   * + - This priority was discussed with the FMCS President in August 2022. The board was informed that this priority is being addressed in other ways. It was recommended that MICRA defer to the FMCS to identify native mussel conservation priorities and then support the society as needed.
2. Native Mussel Committee will develop and maintain a Basin wide list of propagation facilities and species that are being produced at each location.
   * + - This priority was discussed with the FMCS President in August 2022. The FMCS has a committee that has been working to develop and maintain a list of mussel propagation facilities in the U.S., including information on the species and production numbers. The list is available on request of the Conservation and Restoration Technical Committee chair.
3. Build consensus for compatible regulations and policies for priority interjurisdictional fishery and aquatic resources issues.
4. Executive Board will work with the MICRA delegates to develop a Joint Strategic Plan for Management of Mississippi River Basin fisheries.
   * + - The Joint Strategic Plan was finalized in February 2021.
       - Agency directors from 26 of 28 MICRA member states have signed on to the Joint Strategic Plan through a Memorandum of Agreement. (Only Montana and Wyoming have not signed.)
5. Determine the socio-economic value of fishery resources and related recreation in the Mississippi River Basin.
6. Work with USFWS to provide a written economic value report for the Mississippi River Basin, including an analysis by MICRA sub-basin boundaries, using 2016 National Survey of Fishing, Hunting, and Wildlife Associated Recreation data.
   * + - The Executive Board met with USFWS in February 2022 to discuss the possibility of developing a new report. USFWS informed MICRA that it would not be possible to use the 2016 data and that there would be limitations with the 2021 data due to limited participation by the states.
       - USFWS agreed to work with MICRA to complete a new report once the information from the most survey is received in 2023.
7. Work with USFWS to develop a report that includes an estimated return on dollars invested to manage fishery resources in the Mississippi River Basin based on 2016 National Survey of Fishing, Hunting, and Wildlife Associated Recreation data. (Report similar to the USFWS 2011 publication ‘Net Worth: The Economic Value of Fisheries Conservation’ that focuses on contributions to the U.S. economy in terms of jobs created and conservation stimulated commerce.)
   * + - This was not addressed due to limited participation by the states in the surveys in 2016 and 2021.
8. Work with USFWS to develop methods of extracting use and socio-economic value information for fishery resources and related recreation for the MICRA sub-basin units (reported for the basin as a whole) from the USFWS 5-year national survey of fishing, hunting, and recreational use. (Similar to how information for the Great Lakes is broken out and reported now.)
   * + - This was not addressed due to limited participation by the states in the surveys in 2016 and 2021.

Objective 2: Identify priority habitat restoration needs for the Mississippi River Basin, coordinate with national and regional aquatic habitat initiatives, and provide a forum for information and technical exchange.

Priorities:

1. The Executive Board will finalize the draft MICRA Aquatic Habitat Action Plan prepared by the Aquatic Habitat Committee.

* *Ongoing*: Work continues on developing an updated list of interjurisdictional rivers in the basin. The Action Plan is expected to be finalized by the end of 2023.

1. Support Aquatic Habitat Committee efforts to establish regular information exchange, communication, and coordination between entities responsible for aquatic habitat management in the basin.
   * + - The Aquatic Habitat Committee was sunset in August 2021 following the development of the draft Aquatic Habitat Action Plan.

* *On-going*: MICRA will host a large rivers habitat symposium at the 2023 AFS annual meeting in Grand Rapids, MI, in August 2023.

1. The Aquatic Habitat Committee will identify and make recommendations to the Executive Board for engaging with the National Fish Habitat Partnerships and coordinating priorities in the MICRA Aquatic Habitat Action Plan.
   * + - The Aquatic Habitat Committee was sunset in August 2021 following development of the Aquatic Habitat Action Plan. No action is planned for this priority.
2. Create awareness of the needs and opportunities to increase and direct funding to implement priority habitat projects identified in the MICRA Aquatic Habitat Action Plan.
   * + - The *Joint Strategic Plan for Management of Mississippi River Basin Fisheries* completed in February 2021 identifies and discusses ‘Habitat Loss and Degradation’ as one of four key problem areas that must be addressed to comprehensively manage self-sustaining interjurisdictional fishery resources in the basin.
       - *On-going*: The Aquatic Habitat Action Plan will be posted on the MICRA website after it is finalized in 2023.
       - *On-going*: Relevant talking points can be included in Congressional briefings and field visits tentatively planned for 2023 to discuss the proposed Mississippi River Basin Fishery Commission.

Objective 3: Coordinate prevention and control measures for Aquatic Invasive Species (AIS) to ensure sustainable aquatic ecosystems within the basin.

Priorities:

1. Host the Mississippi River Basin Panel (MRBP) on Aquatic Nuisance Species for coordination of basin-wide efforts to prevent introductions of AIS and manage introduced AIS populations.
   * + - MICRA continued to host the MRBP from 2019-2023.
2. Prevent, manage, and control AIS in the Mississippi River Basin by supporting the Aquatic Invasive Species Committee.
   * + - The MICRA AIS Committee was reformed to address MICRA priorities that the MRBP is not able to address as a FACA-regulated advisory panel to the ANS Task Force.
       - The AIS Committee held its first meeting in September 2022.
3. Promote strengthening of Injurious Wildlife provisions of the Lacey Act.
   * + - Discussed with AFWA on multiple occasions, no specific opportunities were identified. The Executive Board will continue to seek opportunities to advance this priority.
4. Aquatic Invasive Species committee will identify needs and provide recommendations to the Executive Board for promoting streamlining of the Lacey Act Injurious Wildlife Listing process and for establishing a federal screening process to evaluate risk of non-native species prior to importation.
   * + - *On-going*: This priority was discussed during the committee’s meeting in September 2022. The committee will further consider how to address these needs in 2023.
5. Promote development of consistent basin-wide regulatory approaches for the management of AIS.
   1. Executive Board will facilitate meetings and discussions with the diploid grass carp states, as needed, to establish regulatory consistency for grass carp as recommended in the February 2015 MICRA Grass Carp Report.
      * + The Executive Board has not organized a meeting of the diploid grass carp states since 2017.
        + Arkansas, Colorado, and Missouri changed their rules and regulations during the operational period to require triploid grass carp to be stocked.
   2. Aquatic Invasive Species Committee will coordinate efforts to implement recommendations in the February 2015 MICRA Grass Carp Report.

* *On-going*: This is on the MRBP Prevention and Control Committee’s work plan.
  + - * *On-going*: The newly formed AIS Committee has been requested to consider this priority and to coordinate with the MRBP.

1. MICRA Aquatic Invasive Species Committee will review and make recommendations for revising the MICRA AIS Action Plan so that it remains a relevant outreach tool.
   * + - *On-going*: The newly formed AIS Committee will consider this priority in 2023.
2. Support efforts to prevent the exchange of AIS between the Great Lakes and Mississippi River basins.

* MICRA submitted a comment letter in February 2019 to “support USACE’s efforts to prevent the transfer of ANS from the Mississippi River Basin to the Great Lakes River Basin when designed and implemented as a part of a comprehensive alternative of control actions and technologies to achieve the overall GLMRIS goal of preventing the transfer of ANS in both directions between the two basins”.
* MICRA participated as a member of the Chicago Area Waterway System Aquatic Invasive Species Stakeholder Group until it was dissolved in 2022. This diverse stakeholder group worked to reach consensus on a set of recommendations to elected and appointed local, state, and federal officials and to the public on short and long-term measures to prevent Asian carp and other aquatic invasive species (AIS) from moving between the Mississippi River and Great Lakes basins through the Chicago Area Waterway System.
  + - * DC Fly-in talking points (2019-2023) included a recommendation to “direct and fund USACE ($500k), through appropriations and WRDA, to complete a feasibility study to prevent two-way transfer of ANS, initiated with the Great Lakes and Mississippi River Interbasin Study (GLMRIS)”. Specifically, to initiate the scoping phase for a Feasibility Study to prevent downstream transfer of ANS.
      * DC Fly-in February 2020 included a meeting with USACE leadership to discuss (among other topics) the Mississippi River Basin states’ concern with the continued lack of action to prevent the downstream transfer of ANS from the Great Lakes to the Mississippi River Basin as directed by Congress through the GLMRIS authorization.

1. Coordinate efforts to prevent introductions, stop the continued spread, and control established populations of Asian carp in the basin.

* MICRA and the Great Lakes St. Lawrence Governors and Premiers held an Invasive Carp Summit in January 2020 to discuss regional coordination of regulatory, management, and research programs regarding invasive carp.
  1. Promote the need to expand the scope of federal agencies’ Asian carp activities to include the entire Mississippi River Basin and the need for federal funding to facilitate implementation of the Mississippi River Basin Asian Carp Control Strategy Frameworks in support of the national ‘Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States’.
     + - This topic was included as a discussion topic with Federal agencies and Congressional offices during MICRA’s 2019 Fly-in.
       - In coordination with Mississippi Senator Cindy Hyde-Smith, MICRA hosted a Congressional staff briefing in May 2019 to discuss invasive carp management and control in the Mississippi River Basin.
       - All six sub-basins were specified in the 2020 WRDA bill and all sis sub-basins have been specified in appropriations bills since FY2020.
       - USFWS funding for implementation of the national invasive carp management and control plan in the Mississippi River Basin increased from $7,000,000 for work in the Upper Mississippi River (UMR) and Ohio River (OHR) sub-basins in FY2018 to $31,000,000 for work in all six sub-basins in FY2023. In FY2018, the USFWS provided a total of $2,200,000 in financial assistance to MICRA member states in the UMR and OHR sub-basins to support framework implementation. In FY 2023, the USFWS will provide more than $18,600,000 in financial assistance to MICRA member states in all 6 sub-basins to support framework implementation.
  2. Coordinate basinwide efforts to develop sub-basin Asian Carp Control Strategy Frameworks, including Action Plans for implementation.
     + - Asian Carp Control Strategy Frameworks have been developed for all six sub-basins and are posted on the MICRA website: <http://micrarivers.org/invasive-carp-plans-and-reports/>.
       - Sub-basin partnerships have not developed action plans for implementing their respective sub-basin frameworks.
  3. In partnership with USFWS, coordinate the collaborative development of an annual Monitoring and Response Plan to identify highest priority management actions for Asian Carp in the Mississippi River Basin each year.
     + - MICRA works with the USFWS sub-basin invasive carp partnership coordinators each year to develop an annual Monitoring and Response Plan for the Mississippi River Basin and posts the document on the MICRA website.
  4. Coordinate the collaborative development, prioritization, and submission of annual recommendations to USFWS for federal funding assistance to implement sub-basin Asian Carp Control Strategy Frameworks.
     + - MICRA works with the USFWS sub-basin invasive carp partnership coordinators each year to compile project proposals from all sub-basin partnerships.
       - The compiled project proposals are reviewed by the MICRA Invasive Carp Advisory Committee and a basinwide recommendation is submitted to the USFWS by the MICRA Chairman each year for funding consideration.
  5. Aquatic Invasive Species Committee will provide recommendations to the Executive Board for standardized methods for collecting and reporting population data for Asian carp species.
     + - The AIS Committee was not asked to address this priority as it will be considered by the revised ICAC.
  6. Aquatic Invasive Species Committee will provide recommendations to the Executive Board for documenting and reporting harvest data for Asian carp species.
     + - The AIS Committee was not asked to address this priority as it will be considered by the revised ICAC.
  7. Promote consistent outreach materials and messages throughout the Mississippi River Basin.
     + - MICRA works with the USFWS sub-basin invasive carp partnership coordinators to develop similar documents each year for the Monitoring and Response Plan for basinwide consistency.
       - Annual summary reports for projects implemented under the Monitoring and Response Plan are compiled and posted on the MICRA website.
       - Documents are posted on the MICRA website to provide basinwide and national information on implementation of the national management and control plan.

Objective 4: Develop and implement a communication plan for disseminating information to target audiences.

Priorities:

1. Work with outreach specialists from member and entity agencies to draft, finalize, and implement a MICRA communications plan.

* Development of a MICRA communications plan was postponed while MICRA worked on the Joint Strategic Plan and Mississippi River Basin Fishery Commission initiative.
* *On-going*: The Executive Board began to discuss the MICRA communications plan again during their February 2023 meeting.

1. Executive Board and committees will maintain current content on the MICRA website.
   * + - MICRA continues to maintain the MICRArivers.org website.
       - The Executive Board requested all standing committees to review their respective pages on the website and develop content as needed.
2. Engage in efforts to increase awareness and action of Congressional members to improve management of fishery and aquatic resources in the Mississippi River Basin.
   * + - MICRA contracted for Policy and Government Affairs service annually from 2019-2023.
       - MICRA organized a Fly-in to Capitol Hill annually from 2019-2023. The 2021 Fly-in was conducted remotely due to the COVID-19 pandemic
       - In coordination with Senator Cindy Hyde-Smith, MICRA hosted a Congressional staff briefing on Invasive Carp Management and Control in the Mississippi River Basin in May 2019, in Washington DC.
       - MICRA participated in a Congressional staff briefing July 22, 2019, hosted by the National Marine Manufacturers Association (NMMA) and the Congressional Boating Caucus, to examine the environmental and economic problems created by aquatic invasive species.
       - MICRA hosted a Congressional field visit August 25-26, 2021, at Pickwick Dam on the Tennessee River.
       - MICRA partnered with the U.S. Army Corp of Engineers (USACE) and the Upper Mississippi River Basin Association (UMRBA) to host a Congressional field visit in conjunction with a USACE Science Team Open House at Lock and Dam 22 on the Mississippi River October 12, 2022, to discuss the significance of large-scale habitat restoration and connectivity projects; project monitoring and evaluation; and collaborative, multi-agency approaches to interjurisdictional fisheries management.

* *On-going*: MICRA Executive Board is tentatively planning to host Congressional field visits in the upper and lower Mississippi River in August 2023, and a Congressional briefing in Washington, DC.

1. Develop outreach materials, information brochures and short publications on issues of concern to fishery resource management in the Mississippi River Basin as needed.

* *On-going*: MICRA will finalize the Aquatic Habitat Action Plan in 2023.

1. Develop a 5-year report of activities, accomplishments, and remaining resource needs identified in the MICRA priorities document.

* *On-going*: This appendix is being developed to provide a summary of activities, accomplishments, and unaddressed priorities for 2019-2023.

1. Host workshops and networking opportunities at national and regional professional meeting (e.g., Midwest Fish & Wildlife Conference, SEAFWA, AFS Parent Society meetings) for MICRA member agency delegates, committee members, and partners.
   * + - An informal mixer was hosted in conjunction with a joint MICRA and Great Lakes St. Lawrence Governors and Premiers Invasive Carp Summit and MICRA Executive Board meeting in January 2020.

* *On-going*: The Executive Board is planning a networking opportunity in conjunction with the MICRA Delegates meeting schedule for August 2023 in conjunction with the AFS annual meeting in Grand Rapids, MI.
* COVID-19 limited opportunities for workshop and networking opportunities during much of this 5-year operational period.

Objective 5: Secure funding for long-term operational needs and implementation of basin-wide programs.

Priorities:

1. Pursue reliable, long-term funding sources and mechanisms for MICRA.
   * + - MICRA’s Mississippi River Basin Fishery Commission initiative is intended to result in an authorization and appropriation of Federal funding to support the states’ efforts to collaboratively manage sustainable interjurisdictional fishery resources.
       - MICRA’s sustained Congressional outreach efforts have resulted in
         * Increases in U.S. Fish and Wildlife Service (USFWS) grant funding for implementation of ANS Task Force approved state/interstate AIS management plans from $2,000,000 in FY18 to greater than $4,000,000 in FY2023.
         * WRDA 2020 language directing an expansion of the U.S. Fish and Wildlife Service led multi-agency effort from the “Upper Mississippi and Ohio River basins and tributaries” to the “Mississippi River and tributaries, including the 6 sub-basins of the River.”
         * Invasive carp funding increases to the USFWS to support states’ collaborative efforts to manage and control invasive carp populations in the Mississippi River Basin. Funding to states increased from $2,200,000 in FY2018 to more than $18,600,000 in FY2023.
         * WRDA 2020 authorizations for $25,000,000 for a pilot invasive carp deterrence program in the Tennessee and Cumberland Rivers Sub-basin. WRDA 2022 included direction for at least one deterrence project in the Tennessee-Tombigbee Waterway.
         * WRDA 2020 language authorizing of $4,000,000 for each of fiscal years 2021 through 2025 for a USFWS invasive carp eradication program to provide financial assistance to states to implement measures necessary to eradicate invasive carp. No funding for this program has been appropriated through FY2023.
2. Work with MICRA member agencies to pursue formation of a congressionally funded Mississippi River Basin Fishery Commission to coordinate fisheries research, control aquatic invasive species (e.g., Asian carps), and facilitate cooperative management of interjurisdictional fishery and aquatic resources among the state, tribal, and federal management agencies.
   * + - MICRA completed the collaborative development of ‘*A Joint Strategic Plan for Management of Mississippi River Basin Fisheries*’ in February 2021.
       - Agency Directors from 26 of MICRA’s 28 member states have signed a Memorandum of Acceptance of the Joint Strategic Plan.
       - MICRA briefed the AFWA Fisheries and Water Resources Policy Committee and the AFWA Invasive Species Committees on the MICRA Joint Strategic Plan and Mississippi River Basin Fishery Commission in September 2019 and March 2023.
       - MICRA has contracted for policy and government affairs services to assist MICRA with the Mississippi River Basin Fishery Commission.

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**August 2022 MICRA Executive Board notes from a discussion about communications with the sub-basin invasive carp coordinators**

Communications

A dynamic hub for active communication within and among the sub-basin partnerships would improve efficiency. The coordinators mentioned the idea of developing common sub-basin partnership fact sheets but also identified capacity for communications as a challenge.

There is a substantial amount of resources directed towards communications within the Great Lakes Invasive Carp Regional Coordinating Committee (ICRCC). The invasivecarp.us platform does not seem conducive to hosting a bunch of information from the rest of the nation. It’s unclear how much funding goes to support that group’s collaborative communications and how the decision was made to provide that level of support. It may be time to consider funding communication needs in the Mississippi River Basin and making information readily available through the MICRA website or another location. There are good alternatives to hosting our own information hub. Research Gates are a potential way to allow collaboration outside the MICRA member agencies.

From a policy perspective, this information has been incredibly helpful. Congressional offices frequently ask specifically how the funding is being used. It would help tremendously to bring some additional specificity to how the USFWS is supporting the states’ efforts in the basin, and how they state and federal agencies are collaborating. A coalition could help with some of these invasive carp communication needs in addition to supporting a Mississippi River Basin Fishery Commission. Prior to COVID, MICRA organized informational briefings in DC where state and federal agencies would talk about their collaborative efforts. Federal agencies are not restricted from discussing what they are doing and how they are supporting this effort.

There is likely 25% of a full-time position for someone to focus on the variety of communications needs to support the partnerships and MICRA. There have been discussions within the sub-basin partnerships about communications for years, but these have not developed into anything tangible.

Is there any interest on the Service’s part to allocate some base funding to address the communications needs in the Mississippi River Basin? If not, is there any appetite among the states for using a portion of the $14 million provided by the Service to address basinwide communication needs? This is something that the Service can consider and talk through. Does it make sense to continue to use the existing MICRA structure or should this be developed as a common project? If the states prefer that this type of support comes from the Service, then this is something that would need to be considered internally. All options are on the table. The first step would be to identify specifically what type of support is needed and then developing this into a request. We’ll be able to better consider options once we get the need clearly identified. What we want to consider is ‘Is the need strong enough to warrant potentially allocating resources towards that effort’?

You might consider working with someone to rough out a communications plan. The first thing they will ask is who are you trying to reach and what information are you trying to communicate. Having a rough communications plan will help identify the amount of resources needed. Similar to the discussion that we have been having about the sub-basin learning from the other experience and not duplicating effort, it would be helpful to start by reviewing the ICRCC’s communication plan and adapting it to the Mississippi River Basin’s needs.

The ICRCC has a communications workgroup. Perhaps we should consider a communications workgroup under the ICAC. Do the agencies have communications staff that could participate on a communications workgroup and not add to the capacity constraints of the biologists? It is important to get that collaborative messaging piece at that broader scale. Most states and agencies are good at communicating about specific projects, but very few people have a good understanding of what is going on nationally and how one project ties in with or supports other projects in different parts of the basin.

We have had discussions about a rough communications plan with Service External Affairs staff in the past. This discussion has been started a couple of times but continues to stall out. The ICRCC communications workgroup may be able to provide some perspective on what it took to get their workgroup members active.

So far, we have been talking about one-way communication but there are also needs for two-way communications between the sub-basin partnership members or the sub-basin coordinators and the partnership members. For example, providing a workspace for collaborative documents, locating SOPs, or a single location for all things carp. IL DNR has grant supported funding that goes to a subcontractor to do a lot of the heavy lifting within the ICRCC Monitoring and Response Workgroup. Tasks like assembling an annual Action Plan and getting information assembled and posted on the website. These types of tasks are not being handled by the ICRCC’s communication workgroup members. There are multiple models depending on need.

A communications workgroup could also help with keeping information current. The state fact sheets that MICRA has used for Capitol Hill briefings were very effective, however, some of the information now dates back to 2014. There was also no information about USFWS projects occurring in the different states. Those projects should be pointed out.

Is MICRA’s communications plan still active? MICRA does not have a communications plan. The Executive Board had an initial discussion about audiences and messages in 2014 but delayed developing a communications plan while focusing on the fishery commission initiative.

Is there interest in any action related to a communications workgroup? Do people think there is a deficit in the public’s understanding of what the agencies are doing to address invasive carps? Is the general public your main target audience? You might want to focus on elected officials and agency or regulatory officials, then the general public to bolster grassroots support. You want to make sure your directors are fully aware of the importance of the collaborative effort and how all the different pieces fit together. Many people support one particular element but do not have a grasp of the bigger picture.

The revised ICAC could be asked to evaluate the different communications needs for the basin and come up with a plan. Would it save a step to form a workgroup now with the agencies’ outreach and communications people and ask them to connect with the ICRCC communications workgroup? We have tried to get the agency people engaged a few times in the Ohio River Basin, but it never seemed to go anywhere. The state agency communications folks are geared more towards getting information on platforms to the general public. A lot of the needs we’ve discussed this morning are between sub-basins and different audiences than the general public. This may be a deeper dive than asking the state agency communications people to take this on. Would it make sense to put a communications workgroup in place underneath the ICAC rather than requesting the ICAC to take this on directly? We could try to identify co-chairs to get the ICAC and committee started. Do those same needs exist within MICRA itself? Is this larger than invasive carp? Yes, but invasive carp is the paramount need and the likely issue where funding might be available to move this forward. The other layers could be added on if you get a good launch on the invasive carp communications. Two co-chairs for a communications workgroup would be a good way to start.

What is needed to prevent the group from stalling out as it has in the past? It needs to be one of the top priorities for someone to make sure that it has a champion and it is being working on. Communications people generally are not in the fisheries program in some agencies, so they don’t have to do the work when they are asked. It may not be a priority for them even if it is a priority to the fisheries program. It would be interesting to get perspective from the ICRCC communications workgroup about how they are able to get the agencies to regularly participate. It may just come down to money and funding to do the work. The communications workgroup should be tasked with identifying the communication needs and not the communications themselves. We may need to contract the communications work itself out. There will still be a need for people beyond the workgroup to provide the information that needs to be communicated. This will require time and commitment on their part to support communications.

Would there be value in having a core team within the ICAC that consists of members of the ICAC, the technical workgroups, and communications experts to provide communication and coordination of the overall effort? It appears that there is a need to have people responsible for reaching out to the sub-basins and states to pull information back, coordinate and facilitate connections between the sub-basins on projects, provide connections on expertise, and provide tools for outreach to different target audience to help facilitate the overall effort. There is a nexus among those three groups to provide communication and coordination. It may be possible to contract external support or staff time so that all the work isn’t falling on those core members. Would MICRA want to recommend that a small portion of the total USFWS funding that is allocated to the individual sub-basins be allocated to the basin as a whole to support basinwide initiatives like this? It’s likely there will be more and more of these types of needs. Ideally new funds could be used in this way rather than carving out of the existing funding. This is similar to how USFWS grants are administered in the Great Lakes.

There seems to be competition among some Congressional offices for the individual sub-basins. It would be really helpful to have a basinwide summary of what is needed over the next five years to present a holistic need rather than a sub-basin by sub-basin approach. Even within the sub-basin we don’t have an outward looking forecast of where we’d like to be in five years.

Who should comprise a communications workgroup? If the state agency communications people aren’t the right group, are we tasking our biologists with this? We could contract for this support. Hired experts are still going to have to ask a lot of questions and require a considerable amount of time from the biologists. It might be worth contracting for additional support and to make sure the information is delivered correctly.

If MICRA had a place at AFWA, then the Directors would have an interest in this which would then require that the IT people care about this. The Invasive Species Committee at AFWA seems mostly focused on terrestrial issues and there is very little discussion of invasive carp despite how big of an issue this is. We are missing out on that AFWA level director buy-in that could result in more agency support outside of fisheries. Brian Canaday gave a presentation on MICRA and the fishery commission concept at the AFWA meeting in St. Paul, MN, several years back. We might want to consider getting on the agenda for an upcoming AFWA meeting. What about starting with some of the regional AFWA groups – MAFWA, SEAFWA, WAFWA? We could also continue to work with the Invasive Species Committee and the Government Affairs staff. There may not be an opportunity to have time in front of the Directors at SEAFWA.

Does the USFWS contribute monetarily to MICRA more than supporting the coordinator position? Not specifically to MICRA, but they do provide the sub-basin coordinators for invasive carp partnerships. An education, outreach, and policy committee might be an approach that would open funding from outside entities.

Rather than forming a communications workgroup, do we task the ICAC with discussing and defining communications needs and the board will continue to discuss how address those needs? Bandwidth may be a concern for the ICAC. If the ICAC is tasked with this, then they will likely not be able to work on removal or another priority beyond population assessment. If this is broader than invasive carp, is it something that the Executive Board should handle? This is the group that works directly with Ashlee, not the ICAC. MICRA’s messaging continues to emphasize that MICRA is more than just invasive carp or AIS. The communications needs are much broader than invasive carp. You might consider a communications committee under the Executive Board rather than the ICAC. This inter-basin coordination need has been brought forward through a discussion about invasive carp, but that doesn’t mean it should be addressed within the invasive carp structure. It would be helpful to see the ICRCC communications plan. They have a communications workgroup, but they do not have a communications plan. Concrete examples of barriers from the sub-basin partnerships that the MICRA Executive Board could address would be helpful. We also need to review the notes from the Executive Board’s initial discussion about a communications plan.

* Conover will share the communications planning notes from the board’s July 2014 meeting with the Executive Board members.
* Conover will add a discussion of a MICRA Communications Plan to the agenda for the board’s Winter meeting.
* The sub-basin partnership coordinators and ICAC co-chairs will provide examples of communications needs and barriers to the Executive Board.
* The Executive Board will hold a conference call specifically focused on resuming this discussion about internal and external communication needs, particularly the following considerations.
  + A dynamic hub for active communication within and among the sub-basin partnerships would improve efficiency e.g., a workspace for collaborative documents, housing SOPs, basically a single location for all things carp.
  + Focus communications on elected officials and agency or regulatory officials, then the general public to bolster grassroots support.
  + Make sure your directors are fully aware of the importance of the collaborative effort and how all the different pieces fit together.
  + Is there any interest on the Service’s part to allocate some base funding to address the communications needs in the Mississippi River Basin? The first step would be to identify specifically what type of support is needed and then developing this into a request.
  + Would MICRA want to recommend that a small portion of the total USFWS funding that is allocated to the individual sub-basins be allocated to the basin as a whole to support basinwide initiatives like this?
  + It would be helpful to have a basinwide summary of what is needed over the next five years to present a holistic need rather than a sub-basin by sub-basin approach.
  + It might be worth contracting for additional support and to make sure the information is delivered correctly.
  + We might want to consider getting on the agenda for an upcoming AFWA meeting. What about starting with some of the regional AFWA groups – MAFWA, SEAFWA, WAFWA?
  + Consider a communications committee under the Executive Board rather than the ICAC.

1. Remote attendee during a portion of the meeting

   2 Acting Chairperson [↑](#footnote-ref-1)
2. 1 Remote participants [↑](#footnote-ref-2)