Fish and Wildlife Working Group Meeting Notes
February 2nd, 2022
9:00–1:40

Attending
Audubon Minnesota: Jeff Butler

Iowa Department of Natural Resources: Scott Gritters, Kirk Hanson (FWWG Representative), Ryan Hupfeld,

Lake Pepin Legacy Alliance: Rylee Main

Minnesota Department of Natural Resources: Neil Rude (FWWG Representative), Nick Schlesser, Lucas Youngma,

Upper Mississippi River Basin Association: Andrew Stephenson,

U.S. Fish and Wildlife Service: Sharonne Baylor, Megan Bradley, Stephanie Edeler, Jennifer Froehly, Cheryl Groom, Neal Jackson, Heidi Keuler, Tim Miller, Rebecca Neeley, Kendra Pednault, Billy Reiter-Marolf, Steve Winter (FWWG Chair), Wendy Woyczik, Tim Yager

U.S. Geological Survey: Jennifer Dieck, Tony Francis, Teresa Newton, Jason Rohweder, Jennie Sauer, Jayme Strange,

U.S. Army Corps of Engineers: Alyssa Calomeni, Steve Clark (FWWG Representative), Dan Devaney, Karen Hagerty, Jon Hendrickson, Dan Kelner, Paul Machajewski, Harley McAlexander, Aaron McFarlane, Dave Potter, Elliott Stefanik, Chuck Theiling,

Wisconsin Department of Natural Resources: David Heath, Jeff Janvrin, Brenda Kelly, Scott Roepke, Sara Strassman, Jordan Weeks (FWWG Representative)

NESP update (Elliott Stefanik, USACE)
From a January 19th email from Andrew Goodall (USACE): "*The Navigation and Ecosystem Sustainability Program (NESP) received a construction new start AND construction appropriations of $732.1M for the Lock 25 1200' Lock and $97M for the Lock 22 Fish Passage projects respectively*."

These appropriations are relevant to the Rock Island District (Lock 22 Fish Passage) and St. Louis District (Lock 25 1200' Lock) and won't affect the current status of NESP projects in the St. Paul District

The earliest it could be assumed the St. Paul District could get funds would be with a FY2023 work plan.

Andrew noted that members of the Fish Passage Science Panel will be involved in the Lock and Dam 22 Fish Passage project.

Chuck asked if the NESP Science Panel will be convened again. Elliott said he wasn't sure.

Alternative methods to manage chronic shoaling and dredging in St. Paul District (Chuck Theiling USACE)

From Teresa via chat: Hi Chuck. So what are the size of the grates on that bedload contraption? Looks like it might do a good job of sucking in mussels.

Chuck: grate could be adjustable – that grate would suck in small mussels – there's a snail shell in there. Baby mussels would fall in there – big ones would not but could get impinged.

From Nick via chat: How does it deal with eventual blockage by sediment just a bit too big to be taken in?

Chuck: like a big rock or log – not sure what kind of maintenance schedule would be needed for large debris. Think it would be uniform sand in the areas where this would be installed – but would likely need an annual maintenance schedule to ensure it is working.

From Dan Kelner via chat: Looking at 4 Pool 13 thalweg placement sites now - 22 live species 9 Higgins eye.

From Teresa via chat: IMO, it's more complicated than "sand on sand'? Our research suggests it's more likely a function of how stable those substrates are during high flow events. Something to consider?

Chuck: Great comment Teresa. Agreed it is more complicated than that and there is more to talk about than his presentation has time to cover.

Dan: this and last week – working with MVR to plan Pool 13 HREP. Have looked at 4 thalweg placement sites – Heidi found 350 mussels across 22 species – 9 higgens eye – at thalweg placement sites.

Chuck: would like to see which sites we place material in have any type of abundance. Have repetitive sites – impact over time is minimized because impact has happened.

From Kirk via chat: When was the Buck Creek offload site created?

Paul: 2000-2002

Kirk: back to chucks slide on dredging. Historical in upper pool 11 and after 99 there was no dredging

Paul: that has to do with finishing and dredging since McMillan island creation was finished

Chuck: dredging upper pools seems to be migrating downstream a bit
When we first were trying to establish 9 ft channel and locks and dams we had to do a lot of dredging to create channels and there was some shoaling contributing to that reach.

Paul: Had been dredging and placing material on McMillan for decades, that's when we unloaded it.

Chuck: Characteristic – dredging in upper reaches has dropped off in all pools – seems to be migrating downstream a bit.

Jon: several navigation pools – dredged a lot in 1940s -60s – has now shifted to mid-pool reaches.

Steve W – explanation or that change?

Jon: When we first were trying to establish 9 ft channel and locks and dams we had to do a lot of dredging to create channels and there was some shoaling contributing to that reach.

Chuck: regulating structures put in as well.

From Sara via chat: I've noticed that in the pools as well

Paul: placed material on McMillan in 1993 – first unload in 2002 – used for a decade before unloaded.

Kirk: I'm wondering, we have a system that has been working well with McMillan – why looking at making this bigger change. What would be the other environmental impacts of losing buck creek site and doing thalweg placement instead. There are a lot of communities that use BU site – will create more quarries – communities can use that sand for free right now. Hope that is all considered before making big changes.

Paul: we likely wouldn't eliminate our need to dredge there – but other side, expensive for us to manage it as we are – dredge channel, put on McMillan, then move to Buck Creek – want to reduce double handling and overall federal cost of handling materials.

Chuck: manufacturer said it should handle the level of sediment we put on this. We are putting a lot of resources into dredging – if we can replace effort there with 50HP engine to move sediment – more sustainable.

Jon: I think we'd still have to dredge here. Bed load collector – is it going to extend all the way across the channel? 500 ft across? Also, Chuck mentioned we dredged 35K CY on average per job – but an estimate of bedload in this reach was close to 400,000 CY. Are we going to capture all of that? Would imagine that there could be traditional dredging that still occurs.

Chuck: sediment transport has moved in quite a few slugs. Whether that occurs during flooding that lasts two months, not sure. Manufacturer said it is meant to manage and flush materials – if we dig a hole, sediment is drawn toward the collector – needs to be proven though.

From Sara via chat: I've noticed that in the pools as well

From Rylee via chat: I'm sure I don't understand the nuances here, but given how much sediment is coming into the system, is this just delaying dredging needs?

From Kendra via chat: Or relocating them?

From Rylee via chat: Yea, I'm thinking more delaying and relocating.

Chuck: Dredging is a function of shoaling. If we can manage the shoals and manage them consistently forever, then yes, this is no delaying dredging, but avoiding dredging altogether. Not moving it downstream to any extent.

Jon: Good question Rylee. If you can eliminate dredging at a site and keep it moving downstream – some material might be dredged elsewhere, but other also other sediment may end up in some other off channel area – like Upper Pool 11. If you keep material moving, that's a good thing.

Rylee: I'm thinking about it from Lake Pepin – dynamics and flow there are different. Maybe this works in place like McMillan. Would this ever be considered in a place like Lake Pepin – would spread

Jon: I don't know where you would do that in Lake Pepin. That material is going to deposit in Lake Pepin. That reach upstream of lake Pepin – I could think of one or two dredge cuts where it might make sense. In most cases we can't use this though. Pool 5, 8 – material isn't' going to keep moving downstream because we don't have sediment transport capacity further down tin the pool – we have to use standard techniques.

Chuck: head of lake pepin – example of where you want to remove sediment from the system. But, when you get to amount of sediment coming in and removing some – removing 10% of sediment coming in.

Kendra: does the modeling show a continuing transport of the sediment vs deposition in the side channels?

Jon: the 3 way flow split is what creates the problem here and has a deposition zone. If you go a mile downstream that flow from the west comes back into that channel and it will have more probability of keep moving down pool 10. There is one side channel armored due to bank stabilization and that is the only one that would be a concern. You'd be getting more water down into that channel. I don't think sand placed where we placed it in 2019 will move to that side of the channel and should stay on the same side of the channel anyway.

Chuck: This is a very valley constrained narrow area and the backwaters are not as abundant

Tim Yager: Would USACE purchase the bed load collector or private group?

Chuck: about $500K – think USACE would purchase and operate.

Tim Yager: put conveyors, pump lines – is that what you would propose for this?

Chuck: in lower sediment transport area – would remove and stack – but in McMillan island –

Tim Yager: that infrastructure has to come across somewhere. Most of your neighbors there are refuge lands.

Chuck: to set up this land – imagine it would be on Corps fee title property. I haven't placed this equipment in MVP – but rather in MVR mostly. Instream transport seemed amenable to MVP area.

Kirk: Bathymetry – do we have updated bathymetry showing how that sand has moved. Did we create a shoal downstream of where we're at? That sand is not in main channel, but now in main channel border. We took deeper areas in blue and covered with sand. Things that were there probably don't appreciate being covered by feet of sand.

Chuck: pool 13 (?18?) – don't have high resolution data like this – but do have a placement site downstream.

Kirk: site that has mussels – we don't thalweg place there. What's the environmental cost of doing that – not much after the first time, but what about that first time?

Chuck: suspect there is more survey data.

From Sara via chat: What do you see as the decision-making process around these structures? Would you propose a scope of studies process and ask partners to participate?

Chuck: I can think of studies I would like to do. Will let District speak to that.

Paul: for P10 DMMP – we are exploring this option. It will be identified as alternative for material management. Will be an alternative we vet through DMMP process.

Chuck: Kirk, the reason I like bed load collector as opposed to thalweg placement – different than 60,000 CY dump at one point. Bed load is collecting material at rate it comes in, putting out at same rate – not augmenting in any way – just getting it out of shoaling area and moving it downstream. Repetitive costs are low compared to hydraulic dredging – think environmental impacts are lower than others. Barge with solar panels could sit above this area to operate it so it's off the grid.

From Nick via chat: By definition doesn't that mean it is being moved from an area where it would naturally accumulate to an area where at least pre installation it would not have?

From Chuck via chat: Nick, yes we would be removing material from where it accumulates, but we are only considering main channel areas that would be dredged anyway. This is a treatment for chronic dredge cuts.

From Dan Kelner via chat: We conducted mussel surveys in 2018 at that area where material has migrated to. Very few mussels. 3 live mussels of two common species.

Dave: working on EA for 2019 emergency dredge action – looked like we had another survey in March 2020 – in our assessment, but not our for review yet.

HREP performance evaluation reports and monitoring in support of them (Dave Potter, USACE)
Chuck asked if the rate of filling at Ambrough is typical or atypical relative to other HREPs. Aaron said at other areas they're seeing rates of filling that seem a little more than what would have been expected. Dave noted that the Rock Island District may be seeing this as well.

Chuck: Steve Gustafson has a nice study showing rate of filling. Alyssa and I reviewed Peoria Lake – filled in very rapidly.

Aaron: Looked at Big Lake in P4 and some others – interested to see if we have successes where we've dredged like this and it hasn't filled in. See if it might be related to higher flows.

Chuck offered that it might be informative to look at rates of sedimentation above and below Lake Pepin. A good site for this comparison above Lake Pepin that might be the Pierce County Islands.

Tim Yager asked if the problems identified by the Ambrough HREP Performance Evaluation Report will be the responsibility of the project sponsor (USFWS) to address?

Dave: when I look at these problems we've seen – I argue in PER that these were not anticipated when we designed project – not responsibility of sponsor to address these concerns. The peninsula thing might be one – but closing structure at black slough – we could've done better job of designing that. Not pointing at USFWS to address. Is it part of monitoring and adaptive management – we typically have those identified in project feasibility. So, for Ambro, say it would not be subject to adaptive management approach. Capoli – there was a conscious decision to build a certain way…

Jeff Janvrin asked if the rates of filling seen in some HREP dredged features was from sediment sluffing off the sides of dredge cuts as opposed to suspended sediments transported into the dredge cut from flowing water and settling there, and whether the bathymetry data was at a high enough resolution to determine that. Aaron responded that he didn't think the bathymetry data was at a sufficient resolution to truly determine if that was or was not the case.

Aaron: with Ambro -looking at how 2m deep cuts – narrower – filled in more. Between sluffing and sediment filling g- may not need to go back to dredge – but want to consider in the future if wider ones may fill in less.

Kirk asked if vegetation data was collected that could be used in analyses with the soil biota data.

Aaron: lots of vegetation data – all the trees we have in 2020 study. In relation to where soil samples were. Distance and size comparisons – also split up into 6 different quadrants – ground cover and level of ground cover – could investigate that further as well.

From Chuck via chat: Organic matter increasing over time at restoration sites was noted by foresters in all districts. Forest vigor increased with soil aging.

From Sara via chat: I might have missed this, but did your natural islands represent (relatively) undisturbed floodplain forests or were they just "non-manmade"? There was a lot of past dredged material placement on islands that might affect the site development.

Aaron responded that initial consideration of potential study sites included screening out historic dredge material placement sites and historically farmed sites so they weren't considered natural sites that would be compared to the restoration (manmade) sites with trees or the restoration (manmade) sites without trees.

Andrew notified the group that this discussion came up during the LTRM Floodplain Forest Working Group meetings and how the working group might be able to support this type of research.

Andrew asked if any avian work had been done in association with this project and Aaron replied that it had not been done. Jeff Butler responded via chat: Audubon is very involved in this bird survey discussion. Billy also responded via chat: McGregor District has a bunch of bird survey data for Pool 10

and we are coordinating with Audubon to investigate bird habitat associations. That data is available if folks wanted to utilize it.

Chuck: We're excited to be working with Jacob Berkowitz – nice to let ERDC scientists to know all work in UMR. Using HREP projects and operations projects to bring ERDC researches up there to share what they have done elsewhere – Jacob has done a lot of work that was done elsewhere – we're replicating the projects up here. He'll be putting together larger perspectives – blue carbon – how much Upper Miss is contributing to carbon sequestration. Have an outstanding statement of need in environment research program – forest bird survey monitoring component – geared around Audubon and USFWS data. Made it to highly ranked last year – invited to develop full proposal but did not achieve funding. MVP is working to increase exposer to R&D funding. Have a lot organized around forest management efforts.

From Dave via chat: Don't think I answered the question on Ambrough. Yes, there were 4 goals as identified in the 2000 Feasibility Report for backwater fish, riverine species, migratory waterfowl, and neotropical migrant, marsh, and shore birds. However, the report acknowledges a primary purpose for improving backwater habitat for fish. While there is likely data that can be tied to these other goals (e.g., extent of unbroken stands of mature forest), the PER is focused on the primary goal. A deeper analysis that considers all these goals could be done, but we didn't go that route.

UMRNWFR need for partner assistance with generating data on refuge priority resource of concern mussels and fishes (small fishes of conservation concern, interjurisdictional migratory fishes, etc.; Steve Winter, USFWS)

From Steve Winter via chat: For the next discussion, if anyone is interested the refuge's HMP can be found at this link -https://ecos.fws.gov/ServCat/Reference/Profile/115578

The refuge wants to reinitiate discussions that have taken place previously, and they tie directly back to the refuge's HMP which was completed in 2019. The HMP process involved substantial contributions by state and federal partners to help craft and ID what the refuge should focus on for the 15-year timeframe for HMP. Secondarily, there's a need to reinitiate these discussions from the Refuge trying to make progress on things we will talk about today – in HREPs and learning about constraints involved. What I envision for time to discuss today is not to solve all the problems, but to get ideas flowing and get discussion going. Hopefully the FWWG can continue to talk about it – and the FWIC as well. Also UMRCC and LTRM A-Team. Groups agree that this is important to talk about and ideally we can make progress on it.

The refuge's HMP identified priority resources of concern. Sent out read ahead document which includes background on how priority resources of concern were selected

The refuge's priority resources of concern include four guilds

- Limnophilic native mussels (lentic)
- Limnophilic native fish (lentic)
- Native and migratory Fluvial-dependent fish (lotic)
- Fluvial-dependent native mussels (lotic)

Recreational lentic fish are important to everyone on team. Others that are not recreational but important show up in many State Wildlife Action Plans (SWAPs).

Regarding the limnophilic native fish guild, the refuge acknowledges that includes recreationally important species – but compelling reason refuge had in selecting that was for species of greatest conservation need (SGCN; as identified in the SWAPs). The HMP involved steps to score groups of species – one criteria was if a species was included in a SWAP – think of it as one preference point being awarded for each state in which a species was SGCN. The refuge took the guild approach because of the high number of species that were SGCN and important to the partners.

Priority resources of concern were also given "preference points" if they were USFWS trust species, include migratory birds, federally threatened and endangered species, and interjurisdictional migratory fish (e.g., sturgeon, paddlefish). For federal T&E species, it's clearly known which ones are T&E. For migratory birds, a complete list of all the bird species considered to be migratory birds in the USFWS Trust Species sense is available in the Code of Federal Regulations (50 CFR § 10.13 - List of Migratory Birds; **https://www.govinfo.gov/app/details/CFR-2000-title50-vol1/CFR-2000-title50-vol1-sec10-13**). For migratory fluvial-dependent native fish it's not so clear. Most everyone would probably agree this includes sturgeon and paddlefish, but what about some others? As far as I know there isn't a similar list of which fish species are considered USWFWS Trust Species. During the HMP process the list of Interjurisdictional Fishes provided by MICRA was used (Mississippi Interstate Cooperative Resource Association. 2009. Interjurisdictional Fishes of the Mississippi River Basin. Mississippi Interstate Cooperative Resource Association, Marion, IL. 3 pp. Available at: **http://www.micrarivers.org/**) but that's a very broad list that includes many species most people would think qualify as USFWS Trust Species

When we went through CCP process in 2006 and HMP in 2019 –the refuge acknowledged that it does not have staff resources, equipment, or the technical expertise to conduct inventory, monitoring, or research efforts addressing fish and mussels. Most of staff is terrestrial-oriented (i.e., Wildlife Biologists). Historically, the refuge has relied on partners for those needs, both state and federal partners. Where we came to recently, with HREP work, is trying to get pre-project and post-project monitoring completed that would inform us about whether refuge priority resources of concern benefited from the HREP (or are they being harmed).

A lot has come to light in recent discussions, and there are serious constraints. With HREP monitoring, fish monitoring tends to be done by states, and state funding mechanisms do not give them leeway to do monitoring of those fishes.

A question is whether the UMRR is able to fund these types of monitoring and inventory efforts. It would seem important to have more information about how SGCN were affected by HREPs.

The UMRCC gets at the importance of these things with UMRCC Fisheries Management Plan. How is UMRCC making progress in achieving objectives identified in that plan? Is there any way to assist to make better progress in achieving objectives? What role might the LTRM element in this monitoring? What role might the HREP element capable of playing? What role could the states play, what role could the USFWS play?

Scott put forward that a lot of folks in FWWG have a tie to the LTRM and he didn't think it would be too difficult to generate the needed information about small fishes of conservation concern or other fish species that typically aren't the focus of current HREP monitoring efforts.

From Heidi via chat: Yes we've had discussions. La Crosse FWCO can't fund monitoring of the HREPs for fish.

From Karen via chat: Not every HREP will address FWS every priority species.

Tim Yager: Scott, just because it's very fresh from last presentation, we saw there's a report out from Ambro slough regarding bass and bluegill. A good question would be, is there complimentary data for Ambro Slough for broader suite of species that we might be able to look at for that project or others? We're familiar with LTRM procedures and protocols – but not with management folks and the protocols they follow and the response of these other species to HREPs.

Scott: fair question. Can't tell you for Ambro slough. For Beaver Island, when we submit, in blurb form to team, we include non-game fishes or how many we sampled that are T&E species. Have been part of teams who have done monitoring and collected it but they may not have analyzed it.

Teresa: anytime you are talking about monitoring program, it's good to know why you want to monitor. Are you most interested in mussels and fishes as they regard to HREPs or more broadly to distribution on refuge? That would dictate what kind of monitoring would be done. Has service laid out goals and objectives for any type of monitoring program?

Steve: A big first question would be "are HREP projects sufficiently addressing refuge priorities?" How do refuge priority resources of concern respond to HREPs. Our HMP said those are priorities, included with other priority resources such as tree roosting bats, canvasback ducks, etc. As a refuge, we need to have degree of confidence that the work we are engaging in sufficiently addresses refuge priorities. We'd like to think these projects are benefitting those species and guilds, benefitting SGCN fish and mussels, but do we know they are?

Teresa: How do you define benefitting? An increase?

Steve: at the very least, we don't want to negatively impact T&E species. In a medium approach, a population staying stable may be fine. Ideally, we'd like to increase priority resources of concerns in many situations. How do we quantify an increase, decrease, or stability? With other species we monitor catch per unit effort.

Teresa: There isn't money in HREP budgets to support long term monitoring work to get at that. Monitoring 1-2 years after an HREP is not going to answer some of these questions.

Steve: HREPs do monitor for mussels after an HREP to some degree. Example – planned monitoring for lower pool 10 includes pre-project monitoring to set baseline level of relative abundance and age structure. Then post-project monitoring to assure project did not harm mussel population. That's short-term work the HREP element is willing to do, willing to invest to some degree in. A good discussion would be whether current levels of investment are enough. Alternatively, do we need to change how we allocate resources to do this type of work?

With the Lower Pool 10 HREP, the mussel monitoring that is planned can't say if change was due to the project, there would need to be comparison sites to do that. The service wanted the Lower Pool 10 HREP to use a before-after-control-impact (BACI) study design to determine if the project impacted mussels, but it doesn't look like that will happen.

From Karen via chat: Steve, Iowa and Illinois collect fish data per LTRM methods and those data are housed in the LTRM special projects database at UMESC.

Jordan: to briefly answer Tim's question about Ambro – WI DNR fisheries is funded to work on game species. When we do work at Ambro, our mesh size is not appropriate to capture the four or five very small limnophilic native fishes identified by the HMP. We don't have metrics of those. If we were going to try to do that to get at some of these questions, we would not have funding to do so. We would also have equipment problems – we don't have that equipment. LTRM does have some of the equipment but the monitoring area has to lie in trend/key pools. However, the discussion needs to be what are the metrics we're looking to measure. Central mudminnows, pugnose – won't require same habitat necessarily. Central mudminnows would be found in the worst areas – if we made better habitat for other species, we may decrease the areas for central mudminnows. We do a really good job of sampling other native limnophilic species such as bullhead, yellow perch. It's hard to justify to WI leadership that we need to change equipment to sample for five species on a list from a partner agency.

From Neil via chat: Very well said Jordan. MN pretty much on the same page.

Tim Yager: thanks Jordan that's a good barrier to understand and it sounds like it would be a challenge to ask for additional funding up the chain. We are not experts on knowing what the gear change out might involve. We are just trying to find a way to move forward to getting some monitoring of our PROC. Maybe we could find a funding package to help with this as well. There is a ton of sensitivity on this topic, and we honor that the states have a responsibility for fisheries. We want to be a partner to help with moving forward. The refuge's soon to be completed inventory and monitoring plan is one reason for the refuge wanting to have this discussion to know what will be covered by partners instead of us, as we finalize this plan.

Steve: thanks Jordan, it's good for us to hear about the real constraints. Looking at species from the table in the material I sent out, which is from Table 3-2 in the HMP, if I had ability to rewrite that portion of the HMP I would probably rewrite it as something like "Limnophilic fish, including but not limited to, mud darter, weed shiner, etc." It's not just those five species the refuge is concerned about, those are just some examples of SGCNs that were identified in SWAPs and that have a decent distribution across the 14 pools encompassed by the refuge. That distribution was determined by consulting Pitlo et al. (1995. Distribution and Relative Abundance of Upper Mississippi River Fishes).

With HREPs, Tim Yager brought up a good approach. We know there are some limitations to current sampling that states do at HREPs, it may not provide great data on some species. But we know there is a lot of data being collected and not reported. A good start would be, if HREP monitoring could report out all the data being collected. That would be a good start to understanding this stuff.

Additionally, if state folks working on the river, and thankfully doing HREP monitoring, if there are limitations to their specific funding stream and how that funding stream can or cannot address these information needs, I think those state folks would have the best pipeline within an agency to state colleagues whose wheelhouse this may be in, but they don't currently work on the river. Maybe this could help change how agencies look at the river. It's hard to think how more state resources directed to the UMR would be a bad thing.

From Karen via chat: for HREPs to address these species, they must have been part of the objectives/features. In general, UMRR project sponsors are charged with bio monitoring.

From Scott via chat: For example, here is a simple list of all fishes collected in Beaver Island HREP in Pool 14 with the asterisks being on Species of Greatest Conservation Need - bullhead minnow, black crappie, brook silversides*, bluegill, bowfin, carp, channel catfish, channel shiner*, emerald shiner, gizzard shad, golden shiner*, highfin carpsucker, largemouth bass, logperch*, mud darter, northern pike*, orangespotted sunfish, pumpkinseed, quillback carpsucker, River carpsucker, rock bass*, sauger, shorthead redhorse, smallmouth buffalo, spottail shiner, spotted sucker*, tadpole madtom*, warmouth, white bass, white crappie, white sucker, yellow perch.

from Karen H Hagerty to everyone: 11:48 AM - Steve, Iowa and Illinois collect fish data per LTRM methods and those data are housed in the LTRM special projects database at UMESC

Teresa: Steve mentioned HREPs where pre and post- project monitoring was done. But, given experience with mussels on river, the data is highly variable. Our ability to detect if there was a change in mussels pre and post project is very unlikely, especially when looking at species richness and abundance. An HREP would have to destroy habitat for mussels before we can detect variability in mussels. We need to ID goals for monitoring and metrics. Monitoring 1-2 years post is not realistic for that. Constraints exist, and I'm nervous when hear people say no difference in pre- and post- monitoring when that scale may not be appropriate for that metric.

From Ryan via chat: Iowa DNR Bellevue research team when sampling/monitoring HREPs does collect data on all species, including minnows and sucker spp., etc. I understand being limited to sport fishes at times due to funding via Sport Fish Restoration funds, but Iowa has not been limited by this. All that is needed is a simple justification typically. But there are some species that are not sampled effectively with these gears and would require a specific project or sampling regime.

From Jordan via chat: Step 1 would be to identify measurable objective around these species, then agree on sampling protocols every partner would use to sample. Included in that would be the gear types.

From Neil via chat: Agreed, Jordan.

Steve: Step 1 that Jordan mentioned may be good first step. The refuge does not have expertise to do that step though. I can start provocative conversations, but I can't carry them far because I don't know as much as others on this call. If the partners can't do this because of institutional constraints, then they can't do it. But the refuge is hoping we can have this discussion to make progress on it. What are measurable objectives? I'm asking the fisheries experts to help ID those measurable objectives. The refuge is not able to decide what the best measurable objective would be.

Jordan: that's fair. If we're going to be provocative - what if we say the species we already monitor also cover the others using that habitat?

Steve: there's a part of me that says that may be the case. But there's also a part of me that wants to ask for the data that backs up that assertion. Maybe the data is there, we've had lots of discussion regarding data that is available. Can someone use the data to explain that those are good surrogate species and more amenable to monitoring? Until that is done, the refuge is taking a risk in supporting

projects that occur on refuge lands and water, and taking ownership of them as project sponsors, under the unproven assumption that those projects benefit refuge priority resources of concern because recreationally important species benefit.

Speaking from a terrestrial perspective, many of us are familiar with the old adage that if you manage for the game species, the non-game species will also benefit. But we've learned through the years that's not always the case. My experience with grassland birds has taught me that you can't manage for one species of grassland bird and expect all or most of the other species of grassland birds to similarly benefit. There are documented cases where there are good surrogate species, but there are also documented cases when presumed surrogates aren't good surrogates.

Kirk: true for some fish as well. With pugnose minnow and weed shiner, we've seen a reversal in that community. Pugnose minnows have been replaced by weed shiners, it happened once vegetation came back. If we want to manage for pugnose minnows we'd have to get rid of vegetation – we don't want to manage for an unvegetated dirty water state.

Steve: but we do want the UMR to sustain and possibly increase SGCN for which the UMR is an important component of that species' range. The refuge's HMP identified species of fish, birds, and mammals, for which the refuge represents a substantial portion of the species range and for which managing for those species on the refuge makes sense. The refuge is looking for assurance that HREPs benefit these species. We know there is interest in paddlefish and sturgeon, we're hoping there's interest in expanding that interest to other SGCN species. We're not sure if anyone knows with confidence how to design HREPs to benefit some of these SGCN species.

From Sara via chat: What about a couple fisheries biologists for the Refuge directly? It would seem like this conversation helps justify the need for that additional capacity? I know that is a big lift, but it does address part of that staffing limitation.

From Megan via chat: Can you facilitate the development of teams within reaches to support plan outlines, or contract out to USGS for plan development for team review?

From Karen via chat: Is the FWS not able to fund information needs that address their own priorities?

Steve: the refuge is in fact funding information needs that address its priorities, and we're stretched to the limit funding those priorities. The refuge is nearing completion of its inventory and monitoring plans and those plans identify I&M activities that are mostly addressing refuge priority resources of concern. But it is inventory and monitoring of terrestrial wildlife because that's what the refuge staff have technical aptitude in.

From Jordan via chat: Kirk just gave another example of what I was speaking at regarding the mudminnow.

Kendra: Regarding the Ambro Slough example, it had a series of 4-5 objectives. First was fish, then was aquatic veg, then maybe waterfowl. What was reported out was concentrating on those fish. The question is – what are impediments to achieving monitoring for other objectives and why isn't that happening more frequently.

Dave: WRDA 2007 guidance says what we need to include monitoring and adaptive management for ecosystem restoration in the budget for up to 10-years post-construction. We've heard we're limited to 1% of construction costs for monitoring, up to 3% for adaptive management. The reality is, to implement a scientifically rigorous sampling design to answer if definitive fisheries response would blow the budget. We've typically relied on the states partners to do that sort of monitoring.

Steve Clark: when we design HREPs we typically run a bluegill model. We're not running the bluegill model because we're designing the project for bluegill. We're designing the project for the type of habitat, but we know that habitat benefits a whole host of species for that habitat type. Someone needs to fund a study that tries to pull all this data together to draw relationships between this species and others that we monitor, use that approach to try to get at this issue, rather than try to capture and monitor species that are hard to monitor.

From Scott via chat: I sit and chair several state SCN committee's (mussels, fish, crayfish, management committees) but I got to be honest I rarely have had any USFWS request on these issues except hearing it at these types of meetings. We can talk for days about SCN and what we know and what we do not know but have to be asked.

From Neil via chat: Sounds like the beginning of a science support project, perhaps as a pilot, even to understand what it would take to design such a study and understand what it would cost. Seems like that would be a first step.

Tony: what you all are describing in terms of looking for surrogate species, those analyses are out there, they're built on joint species distribution models. Can also look at community-based ordination models. There are ways to get at those questions. Problems are that because they are correlated, you could see positive correlation of northern pike and smaller species whereby it could be correlation of habitat characteristics, and not a functional relationship. There have been discussions since 2012 about how useful those models are, but from a conservation standpoint, you can say that those species are correlated and you would expect to see them together more often. But how to turn that into management action to promote those species, that's harder to do. Great starting point, but consensus from that work is that you need both a direct measurement of the habitat and the organisms. It can help for certain things, but needs to be approached cautiously and conservatively, but still a useful tool. Hope it will be utilized for mussels to find rare species, but the tools exist and are simple to apply.

Steve: thanks Tony. Getting at some of the stuff in the chat – the idea of a science support proposal has been brought up in past discussions. There was also mention of the upcoming LTRM science meeting. The fisheries working group has already started a number of proposals that need to be fleshed out. This discussion shouldn't be interjected into those fisheries working group efforts this year. But future iterations of that meeting could have this type of research to answer some of these questions. The refuge would need to make an ask - can any partners form a working group in that funding platform to craft a proposal and get it written and submitted?

From Nick via chat: I think the low hanging fruit is making sure that all species encountered are reported not just documented in state files. From there using surrogate species combined with critical habitat metrics for the species of concern would be a possible approach partners may be able to manage, particularly if habitat measurements could be covered by other staff.

Neal: If the UMRR program is having a tough time funding this work, and if what you're trying to do is evaluate HREPs, then a primary place you would go is the program. If the program has limitations to funding that work, then start to establish an agreement that refuge priorities align with states and partners. Then, consider other funding mechanisms for this work. Can look to MICRA, joint strategic plan (inland fish commission), UMRCC. It is a good place to have conversation, to leverage idea that diversity of system is important to us, but options for putting conservation on the ground are not addressing needs at this time. Could look to those places to address them.

From Tim via chat: Thanks everyone for the great conversation. Appreciate your views, comments and questions to consider.

Piloting collection and telemetry methods for evaluating Yellow Perch habitat use in the Upper Mississippi River (Ryan Hupfeld, IA DNR)

From Nick via chat: Ryan, you mentioned tagging at different times. We discussed at a different time you presented this that tagging in the overwintering site may cause site fidelity to minimize other overwintering site locations being used. Is there a time when you think populations from the pool would be fully mixed for better coverage? Spawning may be one such time, but would add additional stress to tagging activities etc.

From Ryan via chat: Yes, I think spring/summer is definitely a time when the populations are most mixed but like you said, that would cause additional stress. The cooler temps seemed to work well and we had a low short term mortality so cooler water temps may be good. Given that, I think if fish were to be tagged in the fall, we could spread out in the upper, mid, and lower pools to still identify other important OW sites. Or try in the spring and investigate if mortality is different than fall/winter tagging.

From Nick via chat: I know we did a fair amount of spring sampling for a few years to monitor some of our spawning runs. Worked well, and cool water temps, but not sure about additional stress.

From Ryan via chat: Yes, I am not sure either. We did have fish leave in the spring/summer long distances from Capoli and showed back up in the winter so definitely could be some site fidelity going on and may be a good way to identify more OW areas.

Kirk: yellow perch and weed shiner go very well and LTRM we can probably consider yellow perch as a surrogate and do some of these telemetry surveys.

Steve: Agreed, that could be the case. But there are more than weed shiner that we will want to address/monitor.

FWWG Chair

The FWWG charter indicates that WI DNR (Jordan Weeks) is next in the rotation for assuming the role of FWWG Chair. Steve will get the notes from this meeting finalized, and Jordan will organize and chair the next FWWG meeting. The next meeting is scheduled for August 2nd, but Jordan has plenty of time to change the date if he thinks it should be changed.

Agency Updates

Minnesota DNR (Neil Rude):
MN DNR staff continues to work from home, but field work and other duties are being completed. Two new hires in the Lake City/ MS River office. Nicole Ward was hired as the LTRM supervisor, replacing Megan Moore as she moved to a different position. Devon Oliver has been hired (first day is today) as the MS River research scientist, taking over a lot of the work done by John Hoxmeier. MN DNR is currently developing a full-time river coordinator position, and we hope to have someone in the position 'soon'.

USACE (Steve Clark): Steve Tapp, Chief of Channels and Harbors, has retired. His replacement, Robert Stanik from the Detroit District, just started this week. We will be working on bringing him up to speed on work on the river.

UMRNWFR HQ Office (Tim Yager):
Activities

- Continuing to telework for most HQ staff. District staff are reporting to offices under strict distancing, sanitation protocols. Offices are intermittently open. Masking required in counties with substantial or high COVID transmission. Return to work was originally scheduled for January 31, but has been delayed until no earlier than February 28. Recent court ruling placed an injunction on vaccination mandate for federal employees.
- HQ working on Cardinal to Hickory Creek transmission line lawsuit as well as proposed land exchange with transmission company. Several groups suing USFWS, Rural Utilities Service and Corps over NEPA, issuance of rights-of-way, nation-wide permits, Refuge compatibility determination, etc. Recent court decision remanded the Record of Decision and found the NEPA document inadequate because it didn't evaluate alternatives and found the compatibility determination, which had already been retracted, to be arbitrary and capricious and essentially prohibited the transmission line from crossing the Refuge. Decision will be appealed … more to come.
- HQ working on building, power line and float structure trespass issue below L/D 9. Awaiting Rock Island Corps regulatory to determine compliance with existing Section 10 permit.
- Renewal of Refuge "Big Six" compatibility determinations (hunting, fishing, environmental education, interpretation, wildlife observation and photography) is underway. New on-line system (Refuge Uses System) is being deployed to serve as database for CDs nationally. New requirements (Section 508 compliant documents).
- Upper Miss, Trempealeau and Driftless working on finalizing Inventory and monitoring plans which will prioritize, survey, monitoring and research activities.
- UMRCC – 3 are signed up from HQ, however, we are currently in a mission critical only travel status. At least 2 others from Districts are signed up. These folks will attend either on-line or in-person depending on what travel is allowed in March

Staffing/Personnel

- Trempealeau – Casey Bryan has filled the Refuge Manager position.
- La Crosse District – Biologist position is vacant with Casey Bryan's move to Trempealeau
- Headquarters –
    - Jason Shell has filled the Administrative Officer position (vice Collins).

- Stephanie Edeler (Wildlife Refuge Specialist) working for HQ now after serving in temporary position at Trempealeau.
- Tim Yager is retiring from the FWS on March 31.

UMRNWFR McGregor District (Kendra Pednault):

- Kendra Pednault is the new McGregor District manager
- Hiring a seasonal bio-tech and wage grade to start in mid-May
- A bio-tech will enter the UMRCC Pool 9 Harpers Slough vegetation data collected in 2021
- Biological Surveys/Work for this summer:
  - Bird surveys in Reno Bottoms, Pool 9
  - Forest inventory - Pool 9
  - Bumblebee surveys on McGregor District and Driftless Area NWR
  - Invasive species mapping and possibly snail surveys at Driftless Area NWR
  - Bald eagle nest monitoring at HREPs
  - Mapping and treating invasive plants
- Assisting with partner surveys:
  - Gypsy moth trapping
  - UMRCC Submersed aquatic vegetation sampling
  - Tentative - seedling stocking surveys at tree planting sites
  - Tentative - acoustic bat monitoring
- Continue working on HREPS:
  - Reno Bottoms in Pool 9 -working on alternative selection
  - Conway Lake in Pool 9 - complete, will be planting trees on berm
  - Harpers Slough in Pool 9 - mostly complete, with exception of final grading and seeding/planting. Dedication planned for April 22 at Driftless Education Center
  - McGregor Lake in Pool 10 - Phase I mostly complete, Phase II -is preparing to be put out to bid
  - Lower Pool 10 - Incorporating public and agency comments, expect to finalize soon
- The McGregor District began planning of a new office to be located in Allamakee County, Iowa at the former Luster Heights Prison site. It has 26 acres on a bluff overlooking the UMR and surrounded by Yellow River State Forest. Site planning is occurring now and we hope to award a construction contract in early spring 2023.
- Two district staff will attend the UMRCC meeting virtually

Wisconsin DNR (Jordan Weeks):

- New Wildlife Supervisor is Scott Roepke
- Pierce County Islands project is currently in plans and specs with a completion date of 7/2022
- 2 Fish Technician vacancies on Mississippi River (La Crosse and Prairie du Chein)
- Fall 2021 Modified Unified Method Sampling for invasive carp completed (Spring 2022 MUM likely)
- New Water Regulations Permitting Staff person is Crystal Von Holdt
- New Office of Great Waters Habitat Restoration Engineer is Alex Chapla
- No DNR staff will be attending the UMRCC Meeting in person (we are not allowed travel at this time)

Open Discussion
From Elliott via chat: Can we get an idea of how many folks from each agency might be headed down to the UMRCC?

From Andrew via chat: The next UMRBA Board quarterly meeting is on February 22.