

**UMRR Analysis Team Meeting April 25, 2018  
La Crosse, WI**

Attendance:

A-Team Reps:

Shawn Giblin - WI

Scott Gritters – IA

Rob Maher – IL

Nick Schlessler - MN

Matt Vitello – MO

Stephen Winter - USFWS

Marshall Plumley

IA:

Dave Bierman

IL:

Levi Solomon

USGS:

Jeff Houser

Jennie Sauer

Jennifer Dieck

KathiJo Jankowski

Nate Dejager

MO:

Dave Herzog

Jessica Fulgoni

Molly Sobotka

Sara Tripp

WI:

Jeff Janvrin

USACE:

Karen Hagerty

Kat McCain

Kjetil Henderson

UMRBA:

Lauren Salvato

**Time and place for next meeting:** Meeting will be combined with UMRCC Water Quality Tech Section meeting October 2-3, 2018, Dubuque, IA.

**Approval of April Minutes:** Approved minutes.

**UMRR Update (Marshall P.):**

- UMRBA/UMRR CC meeting coming up October 14-15. The Mississippi River Commission will be joining us for those meetings.
- Keithsburg division HREP – recently held public meeting to discuss project. Had good turnout from public and received a lot of good feedback.
- Funding: FY18 fully funded at \$33.17 million. FY18 dollars include regional administration of the program across all three districts (\$1.1M), Regional Science and Monitoring (\$9.3M - LTRM base funding, science in support of rehabilitation and management, habitat evaluation, HNA 2), and District HREPs (\$22.8M). At the end of June (3<sup>rd</sup> Quarter) we have obligated about \$11M. In addition there are two construction contracts that have recently been awarded total around \$17M, increasing our execution rate.

- FY 19 PBUD has the program at full authorization again, the House has passed a funding bill for full authorization, Senate has not yet passed a bill. FY19 Draft plan: Region administration \$1.1M, Regional science and monitoring \$10.3M, HREPs \$21.7M. This is subject to change.
  - o Q: Can you talk more about the Habitat Evaluation line item?
    - A: Budget for each of the three districts to conduct site visits and prepare Project Evaluation Reports. Mostly labor for Corps staff, but the site visits are open for partners to attend.
- HREP Projects: 56 Projects completed by the program to date benefitting 106,000 acres.
  - o Rock Island District:
    - Projects in Planning/Feasibility: Beaver Island – Construction contract awarded, roughly \$10.3M. Rice Lake – part of the project is water level management of the area, large pump station with three electric pumps installed, will be handing over to IL DNR in September
  - o St. Louis District:
    - Piasa/Eagles Nest – Feasibility submitted to division office for approval. Harlow Island – feasibility report for review likely in September
  - o St. Paul District:
    - Conway Lake – Construction contract awarded recently. MacGregor Lake – Feasibility study in concurrent review.
- Proposed 5 new HREP proposals to Coordinating Committee (1 in St. Paul, 3 in Rock Island, 1 in St. Louis). Coordinating Committee did endorse. Began work on one of those, Pool 13 in Rock Island. Submitted fact sheet to MVD and received approval. Pool 13 HREP does include pool water level management.
- Currently in discussion with Coordinating Committee and River Team chairs as to what the process for selecting the next batch of HREPs will look like.

**LTRM Update:**

- Quarterly Products:
  - o *Developing a shared understanding of the Upper Mississippi River: the foundation of a resilience assessment.* Informally calling “system description” paper – describes the conceptual framing of the Mississippi River that we are using for the Resilience Assessment. Lotic, Lentic, and Floodplain conceptual models.
  - o *Applying concepts of general resilience to large river ecosystems: case studies from the Upper Mississippi and Illinois rivers.* General resilience indicators in final stages of review. Parts of this ended up in HNA indicators document. Large scale indicators like geomorphic diversity, water level fluctuations, etc. Will be submitted to Ecological Indicators journal.
  - o *Discontinuities and functional resilience of large river fish assemblages.* Assessing the size distributions across the system and looking for aggregations in those distributions. Found consistent set of two aggregations of smaller bodied fishes and larger bodied fishes. Combined LTRM and LTEF data. Look within the classes for diversity in the

- composition across the size classes. Also looked at the redundancy of trophic guilds across the body size groupings and how that changed across the study reach.
- *Aquatic Plant Response to Large-Scale Island Construction in the Upper Mississippi River.* Looking at how vegetation changed in a number of areas relative to the phase 3 islands. Found significant effects in areas with indirect effects but not significant effects in areas with direct effects.
  - *Ecological characteristics of floodplain forest reference sites in the Upper Mississippi River System.* Assess ecological characteristics of high quality floodplain forest sites to better understand and identify the appropriate targets for restoration.
- Resilience Assessment
    - Working on re-populating the working group. Working group members should expect a group call sometime in early October. Kristen is finishing up work on general indicators and beginning to focus on specific indicators. Thinking through what are applicable examples of regime shifts and what are the implications for how we think about the river.
      - Q: Will you be looking at submersed aquatic vegetation from the regime shift standpoint?
        - A: Yes, that is something we will try to build on previous work.

### **Proposal Ranking Criteria Sheet**

- Previous meeting had identified a need to improve the ranking sheet. During the recent rankings it was recognized that multiple methods were used to categorize proposals into “high”, “medium”, and “low” based on scores from the ranking criteria sheet. Looking for a standardized method of ranking the proposals. Suggested that we note our concerns and address during the next review of proposals when the issue is before the group.
  - Suggested methods
    - Straight ranking of the proposals.
    - Hybrid – use criteria sheet and inform the rankings based on questions on criteria sheet. Provide straight ranking.

### **HNA-2**

- Nate De Jager presented on the development of the HNA-2. This included the development and analyses included in the “Indicators Report” as well as the work completed by the River Teams in assessing the current state of the indicators (red-yellow-green exercises).
  - Questions and discussion:
    - Q: Why were the aquatic functional classes (AFC1 and AFC2) lumped during the pairwise comparison exercise?
      - A: A lot of comments received were that it was difficult to distinguish between the two classes, so for the pairwise comparison it was decided to lump them.
    - Q: When will the pairwise comparisons be available?

- A: We have preliminary tallies complete but the final tallies and tables will be available next week.
    - The titles AFC1 and AFC2 are non-descriptive and created a lot of confusion. WI has made some recommendations on titles that may be more clear.
      - Those have been incorporated into an Appendix for recommendations on improving the indicators in the future, but kept as AFC1 and 2 in the document.
- The A-team was asked to provide a recommendation to the UMRR CC regarding the HNA-2 document. The recommendation would be that the A-team is comfortable with the current draft and moving the document to the final draft. Goal is to have final draft and move to publication after the October meeting.
  - Is the Steering Committee for the HNA-2 done?
    - According to the UMRR process the A-team makes recommendations to the Coordinating Committee. The Steering committee will have another chance to review following the Coordinating Committee's review.
  - WI had substantial comments on the latest draft and requested to review a draft with changes made based on comments received from the A-team review and the paired comparison results from the FWIC and FWWG included.
  - MO is comfortable with the direction the drafts have been moving and with the inclusion of the paired comparisons would be comfortable providing a recommendation to the UMRR-CC
  - IA was still reviewing but did not foresee major concerns and would be comfortable with the current direction
  - MN was comfortable with the direction of the current drafts.
  - IL was also comfortable with the direction of the current drafts.
  - USFWS was also comfortable with the direction of the current drafts.
  - It was decided to hold a recommendation until the paired comparisons and final comments were included in the draft. The A-team members would provide their recommendations electronically prior to the UMRR-CC meeting.
- Recommend also including the Conceptual Models from the Resilience Assessment in an appendix.

### **Technical Presentations – Invasive Species Impacts to the Native Fish Community**

Levi Solomon – *Invasive species impact to the native fish community: LTRM insights gained from the Illinois River*

- Problem: Beginning in 2002 begin to see increase in silver carp biomass and corresponding reduction in chlorophyll-a concentrations
- Irons et al 2007. Continuing the analyses to 2013 using LTRM and LTEF data.
  - Body Condition – trends holding
    - Gizzard shad continuing to decline (7.6%)
    - Bigmouth buffalo continuing to decline (5.8%)
  - Abundance

- Gizzard shad – significant decrease pre to post carp. In Iron 2007 it was just a reduced decline, now it is a significant decline taking the data out to 2013
    - Bigmouth buffalo – significant decreasing pre to post carp.
- IL DNR active Asian carp removal data – LTEF data to assess response of gizzard shad to removal efforts
  - In Asian carp removal reaches, carp numbers have been reduced approximately 70%. Gizzard shad body condition is rebounding in areas where Asian carp have been reduced.
  - Gizzard shad CPUE is rebounding in areas where carp have been removed
- Long term changes in entire fish community in response to Asian carp establishment – LTRM data – fish assemblages
  - Poolwide electrofishing
    - Species less common post carp – bluegill, common carp, black crappie, white bass, smallmouth buffalo
    - Species more common post carp – red shiner, shortnose gar, bullhead minnow
  - Backwater fyke netting
    - Species less common post carp – drum, yellow bullhead, bluegill, black crappie, white bass
  - Communities are significantly different pre carp to post carp
    - Analyses point to carp as being the driver of these changes, not other variables

Sara Tripp – *Invasive Species Impact to the Fish Community: The Lower Portion of the Upper River – Open River Reach and Below L&D 19*

- Open River Reach
  - Silver carp concentrations are more variable
  - Declines in native planktivores aren't as drastic in the open river but we are still seeing overall decreases in catch rates of native planktivores. Gizzard shad do see a significant decrease
- Creve Couer Lake Carp Removal
  - Do not have long term data to analyze trends. Crappie density and size structure reductions seen once Asian carp establishment. 2016 Asian Carp task force formed. 2018 removal effort removed 119.2 tons (85%) of the estimated Asian carp population.
  - Lesson learned – long term data is necessary to understand impacts of Asian carp and analyze results of removal effort
  - May be good location for fish barrier pilot study
- Invasive carp and native fish passage – L&D 19
  - Quantify native and non-native fish passage and evaluate possible future deterrents to fish passage
  - Put transmitters in native and non-native fish to monitor use in and around L&D 19.
    - Stationary receiver array throughout UMR system
    - Also conducting manual tracking

- Transmitters in a variety of native fish guilds and non-native carps – almost 600 fish
- Native fish approach and attempt to pass through lock chamber more frequently than non-native fish.
- A deterrent may prevent more native fish passage more than non-native
- Using transmitter detections of native and non-native fishes in Pool 20. Overlap of detections 80% of the time. Non-native fish can affect native fish ability to access habitats
- Seeing greater number of black carp in open river and evidence of reproduction in open river.