

**UMRR Analysis Team Meeting October 3, 2017  
Camp Pepin, Stockholm, WI**

Attendance: (\* indicates phone attendance)

A-Team Reps:

Shawn Giblin - WI  
Scott Gritters - IA  
Nick Schlessler - MN  
Matt Vitello - MO  
Steve Winter - USFWS

Marv Hubbell\*  
Kat McCain\*

MN:

Eric Lund  
Megan Moore

USGS:

Jeff Houser  
Jennie Sauer  
Kristen Bouska\*  
Nate DeJager\*  
Jennifer Dieck\*  
KathiJo Jankowski\*  
Jim Rogala\*

WI:

Jim Fischer\*

IA:

Dave Bierman\*

IL:

Andy Casper\*  
John Chick\*  
Levi Solomon\*

USACE:

Karen Hagerty  
Dave Hoover  
Mark Cornish\*  
Jodi Creswell\*

MO:

Dave Herzog\*

**Time and place for next meeting:** Tentatively schedule for week of January 16 in La Crosse, WI as part of the 2018 UMRR LTRM Science Meeting

**Approval of April Minutes:** Correct spelling of Derek Ingvalson. Approved minutes.

**UMRR Update (Marv H.):** Budget – In May we received a plus up of \$13.17M to full authority for FY17, had only 4 months to execute. It appeared the Conway Lake HREP would have been primary project to execute large amount of funds, but project wasn't awarded in time. On short notice the science side put together a scope of work for \$8.2M (note: the amount includes the 2 SOWs to fully fund LTRM for FY18) to achieve high execution level. Big thank you to Karen, Jeff, Jennie, and the field station leaders for their quick response.

Getting ready to execute \$33.17M full authority for FY18. Knowing ahead of time allows for better planning. Not sure what FY19 is going to look like at this point.

### **FY18 Science Planning (Jeff H.):**

Planning for substantial funding for Science in Support of Restoration. This is an opportunity to conduct some larger more collaborative process that allows for looking at some lingering topics. Demonstrate what the program can do collectively when opportunities are available. We will not do the usual RFP process. Instead, we will use the UMRR Science meeting to develop the science proposals for FY18+.

What needs to happen for this to be successful? Two things:

1. Assess current research needs for understanding management and restoration of UMRS
  - a. Existing research frameworks
  - b. Sedimentation/Geomorph
  - c. Existing documentation – “Priority Questions”
    - i. Barry Johnson Survey
    - ii. Side Channel Conceptual Modeling Workshop
  - d. Needs identified by Resilience and HNA-2 projects
2. Put together specific proposals or scope of works for FY18
  - a. Small number of larger projects that collectively address a subset of priority questions.

How much has to get done before the Winter Science meeting to make that meeting as productive as possible?

### Straw Dog Process

- October – Initial synthesis of current documents to ID focal areas
- November – Webinar to present focal areas, revise and refine focal areas
- December – Select leaders for each focal area, assemble initial workgroup members
- January – Science Meeting – further develop and refine focal areas, and develop rough proposals
- February – Present to UMRR CC

Q(Scott G): Where does LTRM Strategic Plan fit in?

A(Jeff H, Karen, Marv): Most recent strategic plan does not get into specific science needs but lays out broad areas, this approach fits within those broad areas. We will explicitly reference the Strategic Plan goals or strategies the focal areas fit within. Strategic Plan has a lot of application but don't just bend things to fit into that. Resilience and HNA2 are manifestations of the Strategic Plan. It is important to have integration between science capability and restoration capability so there are some sideboards. Both should relate back to original authorities and mission of the UMRR Program.

Q(Shawn G): What are the focal areas?

A(Jeff H): There are some initial ideas but I am not here to define what they are.

Focal Areas – Broad Ideas on how to organize.

1. What will the river look like in 50, 100 years? How is the river changing? At what rates and where?

Using Resilience conceptual models:

- a. Floodplain – Inundation, Vegetation Processes,
  - b. Lentic – Sedimentation, alluvial fan formation, island erosion – consequences to depth, velocity
  - c. Lotic – Main channel borders, navigation structure modifications
2. What are implications of expected changes for the river and aquatic/floodplain biota?
    - a. Current associations between hydrogeomorphological characteristics and biota
      - i. What can we infer from existing data? How are fundamental drivers associated with biological responses we've observed in the system?
      - ii. What additional information can expand our ability to do that?
      - iii. What does this imply regarding biota changes in the river?
  3. What are the processes behind observed patterns in LTRM data?
    - a. Spatial and temporal patterns in WQ and biota in UMR and its floodplain
    - b. Data suggests hypotheses regarding dominant processes
    - c. Interpretation of data would be strengthened if we had better idea of processes behind those patterns.
    - d. There remains a need for studies that complement long term data to assess rates of critical processes

Discussion:

(Marv): Think about collective opportunities between all 6 field stations and 3 corps districts.

(Shawn G.): Do you want specific ideas from us right now?

1. System wide aging
2. System wide fisheries telemetry – multiple guilds, game and non-game. Multi-season, multi-flow long term monitoring. We currently make a lot of guesses as to where the fish are.
3. Back water sediment nutrients – internal loading of backwaters

(D. Herzog): We need a better idea of forecasting to 50, 100 years. Would there be a willingness to hindcast? To help us understand what are the impacts of what we have done?

(Marv): It appears the system is continuing to degrade. To the extent hindcasting help us to understand the processes and rates and understand if we are doing the kind of restoration we need to keep up with the rate of degradation?

(Nick S.): Is our forecasting going to include our potential future human modifications?

(Jeff H): It's not reasonable to make a specific prediction of what the river is going to be. Forecasting to look at what areas do we expect to see the greatest changes, what do we expect those changes to be, which of those are most concerning and what should we be doing to address those. We need additional conversations to crystallize.

(John Chick): We're all interested in forecasting but the critical question is what information do we need to do a credible job in forecasting? Not that we are in a perfect condition right now to make a prediction but what information improves our ability to make that prediction?

(Scott G.): Are we doing a forecast and identifying what information could improve the forecast? Or are we studying how to make forecast in the future?

(Jeff H): We are not making a prediction of what the river will be in 50 years. But we get better at knowing the kinds of areas along the river that are likely to change the most and what to do about that change.

(Scott G): We have to use the information we have and get out of the loop of identifying what we need.

(Shawn G): I'm trying to figure out how this works, are we extrapolating from current rates?

(Jeff H): Could imagine different land use scenarios, different climatic scenarios. Non-stationarity is a reality.

(Scott G): What fauna is the most important? Is at most risk?

(Marv): We've been discussing a lot of things that will take 5-10 years. We can do long term SOWs but had envisioned this effort being shorter term.

(Jeff H): Right now we need to focus on what we need to do in the next 2 years to get where we need to be. Use the information we have and not focus on the information we need. Think 2-3 year timescales.

(Jim F): I want to offer support for the approach of larger more collaborative projects.

(Megan M): Tim Schlagenhaft with Audubon has suggested more research on floodplain forest area. Should floodplain forest be another LTRM component? Should we include a pilot project to develop whatever scale or level we need of floodplain forest research? Maybe it gets rolled into the veg. component?

-MN DNR would also have interests in tributary inputs.

(Jennie): UMESC is working closely with Corps forestry staff and floodplain forests will likely perk up to the top of some peoples focal areas.

(Shawn G): Is there the potential to add parameters beyond LTRM to scope?

(Jeff H): What we are talking about now is more short term, for longer term changes to parameters we would need additional conversations.

(Marv): I could envision periodic parameters for a forest inventory but an annual basis would be problematic.

(Scott G): What are you asking of the A-Team? How it fits in LTRM? Does it work with the Strategic Plan?

(Jeff H): By the end of November we need to have a good idea of focal areas. Individually you can send me ideas, my hope is there will be dominant themes. We will present those dominant focal points to the A Team for assessment.

(Karen): Keep in mind the A-team is an advisory group for the LTRM and the UMRR Program. With the A-Team's involvement in the science meeting, we hope that this would provide sufficient coordination and approval so that when the proposals that go forward for the UMRR CC to endorse in Feb, the A-Team has, in effect, endorsed them.

(Marv): This presentation is advance awareness presenting the opportunity to get people thinking about what needs to happen for FY18

**HNA II (Nate D):**

- UMESC has been working to create datasets that will be useful to inform HNA II. The Aquatic Areas Dataset and Floodplain Areas dataset are nearing completion
- Currently summarizing essential components of the river system
- Drafting document on abundance and distribution of key features. Submitted to steering committee and received back written comments. Have been incorporating those revisions and some new datasets. Latest draft will be submitted back to steering committee this Friday (October 6). This document will then be given to the river teams and managers so they can review and develop.

**Resilience Assessment Update (Jeff H):**

- The Resilience Working Group will be meeting in 3 weeks.
- System Description Manuscript was submitted on Monday with revisions to journal
- Currently working on General Resilience indicators.

**Due Outs:**

Work with your agencies to identify focal areas. Compile and send focal areas to Jeff Houser by October 20.

**Adjourn**