

**Topic:** Climate change – Future Habitat

**Convener:** Marc Schultz

**Number of people:** 12

**Notes (verbatim from facilitator):**

Habitat more important – healthy can accommodate.

UMR restoration designed for static conditions  
different designs

Scale of changes – climate models – flood/drought  
average soil moisture will decline due to higher temp.

HREP projects are great places to be

When will drought happen

Too much aquatic vegetation

Marsh habitat in backwaters – less deep water  
more terrestrial plants

Temporary high water changes plant associations to aquatic

Flow goes both directions depending on river levels

Habitat for the future

Ownership – boundary rivers

Agencies & infrastructure →

Local watershed mgmt. – river community

Message

Water quality

Soil health

Mandatory vs voluntary

Local solution      public involvement

**Topic:** With Climate Change, Will Drought Return?

**Convener:** John Wetzel with Marc Schultz – Future Habitat: Vegetation & River Backwaters

**Number of people:** 12

**Notes (verbatim from facilitator):**

Habitat is even more important in future w/climate change.

- Will be changeable.

Projects on river – more diversity of habitats now – should accommodate change.

Gone up – greater evaporation & losses from soils. Predicting: MN River Valley soil moisture loss over time. July - August 4" of soil moisture now is ~1½"

Also impact to floodplain which has adapted to high water levels.

Drawdowns needed? – what are they doing? Works in certain areas.

Veg. crash in 1988-90 (w/Drought)

- Nutrients depletion in backwaters.

Island Slough

Wild celery

Pushing 30 years without a drought on the River.

Karl Korschgen - Came to river to study wild celery that was lost in the 1976-77 drought.

Lots of vegetation since ~ 1994 +

Cattail – lots lost in high water – Will shallow water restore it?

Shift in vegetation as backwater get shallower.

Going back to more cattails?

Greatest change in lower 2/3 of pools.

Rebuilding Islands where old ones were eroded.

UMRRP

Long Term Environmental Management Program.

Flush w/vegetation after Locks & Dams – the decline in the '70s. Changing vegetation – more submergents – wild celery, etc.

What will future look like.

May have greater diversity with changes in hydrology on river but ups & downs.

Is UMR “worth” enough to work at correcting habitat problems.

Need enough people to take “ownership” of River to push for change.

However, River (UMR) get more visitors than Yellowstone! Why not the interest – esp. political?

Interest from Mayors however.

Full Funding for UMRRP – 2019. ~\$30 million. Interesting. Why? - \$ thru COE & Trump didn’t understand & went to a conservation program.

UMRRP – Only on river – doesn’t go up other watersheds – So their interest just isn’t there. (But how much can be done – limits?)

UMRBA – Water Quality Comm – Need to jump to adjoining watersheds.

Water Quality Focus – Best Tool to pull people together outside of MR river.

Adapt Water Quality for local benefits.

Shift focus locally – Soil stability & health versus water quality downstream: Will get local landowners interest. Pull more farmers into conversation.

Work locally to get peoples attention.

Need a whole series of “L. Winona” problems & solutions up & down the River to get peoples attention.

Similar work on trout streams but high runoff events have overwhelmed some of this work.

Work done locally but also damage.

Work on small scale to make large scale changes.

Nutrients in wells a much better push for local change than pushing to clean up the River.

**Topic:** Can we design shipping to fit the river rather than redesigning the river for shipping?

**Convener:** Reggie McLeod

**Number of people:** 9

**Notes (verbatim from facilitator):**

We're running out of places to get dredge spoil.

Do we actually have a viable ag shipping system above the Quad Cities?

Navigation needs to change along with the ag system. Ag system faces big problems too.

Would new crops be used locally.

Many places in world need sand.

World's growing population will need more food.

How important is Midwest to feed the world.

Free markets determine what crops are grown.

Corn grown here is not eaten by humans.

Could land be shifted to growing food?

Gentrification puts pressure on riverfront industries.

There are more interests competing for riverfront property.

Big riverboats can't fit under bridges during high water.

Shoaling was bad everywhere this year, for the first time in at least 30 years.

We need to prioritize infrastructure funding.

Shipping limitations will harm farmers.

Should cities change the river to accommodate development?

Davenport has a large restored marsh, but it has also developed the riverfront. Damages to the downtown this year were very expensive.

Ottawa bought out flood prone land, which has saved a lot of money.

Tributaries of the Mississippi are seeing the same problems.

Are Mississippi River cities going to reengineer their riverfronts?

All the layers of government should work together to change the way they plan and build things.

We need to reduce damage rather than just repair.

Changing the lock & dam system would be very expensive.

Will it be worth it to replace aging dams?

We know a lot more about restoring habitat on the river.

Hydrology change caused by climate change is occurring faster than our political system can implement change.

**Topic:** Regional Cooperative – Who is doing what and where?

**Convener:** John Howard

**Number of people:** 5

**Notes (verbatim from facilitator):**

John W shared experience of regional cooperation, when at WI DNR. Work involved states, Corps, FWS, EPA for habitat work in 1980s, 1990s. Cooperation required to get anything done.

Brian discussed how WI DNR & MN DNR cooperate on fish counts, for instance. Work together well.

UMRCC is committee of fish & wildlife folks, seem to be broad coalition that work together.

However issues arise where friction & road blocks don't get resolved.

John W discussed lawsuit in 1970s where WI sued Corps over spoils, which were being discharged along shore. Judge ruled that each party has responsibilities, and should coordinate. End result was spoil permitted in floodplain, with some going above floodplain. Genesis of many studies beyond spoil management.

A lot of acronyms...

While federal and state can set policy, a lot of important land use decisions happen locally. Habitat fully funded this year, navigation industry is supportive.

John W shared that southern part of river also doing collaboration.

John W believes cooperation on watershed level is lacking from St. Paul up and tributaries. Agencies owned River responsibilities, but, as you get inland, much more private land. Along river, most land is Corps or Refuge (state or Fed).

Corps goal/objective is 9 foot navigation channel, work with states on where to place dredge material. EPA oversees NEPA and some structural build.

UMRBA is just states, not federal agencies.

Restoration projects are phenomenal, great to see in action.

Minnesota River is case where state inaction has impact on river → filling of Lake Pepin. Travis showed confluence of Minnesota and Mississippi where Minnesota River is heavy sediment load. Minnesota River conditions maybe exist because of lack of agency involvement, non-recreation value.

John posed question about role of NGOs, enviro groups:

- Can attend Corps meetings and influence policy
- Sponsor projects
- Attend Corps River Team meetings, which involve all groups. Email list for those interested.

What about farmers? Travis believes building trust and getting grassroots together. John W sees challenge with corporate farms and absentee landowners not actively involved in land management.

Iowa HUD grant for watershed managers, seems to connect people to water quality

Question about how MN buffer law is implemented. Seems BWSR & SWCD do implementation, enforcements going well

Role for NGOs, citizens could be water monitoring, will lead to goals based on conditions. WI has program for resident monitoring, as does MN.

Question regarding Winona watersheds & monitoring

- 2 main watersheds in city for creeks, doing monitoring, and goal setting.

WI farm fertilizer rules are good, limit application.

How can there be better collaboration?

- More public involvement.
- More public interest → conflict engages people, and river use is better than ever. However, sediment will lead to outcry in not too distant future
- UMRR program – sharing good datasets on water quality.
- Educating on habitat project such as Spring Lake.

Watershed approach is standard for states along River, which is good, but chance to better tie to how River is doing.

Invasive species collaboration seems to follow similar channels, good coordination. Citizens can be involved, such as water hyacinth. Reed canary is another focus. Sometimes burying in sand is best as it is a reset.

Travis asked about whether islands are better without trees? Trees seem to cause instability when falling, compared to vegetation. Trees are great migratory bird habitat. Most islands are armored, and lasting.

**Topic:** Changing River

**Convener:** Marc Schultz

**Number of people:** 5

**Notes (verbatim from facilitator):**

New paradigm

Climate – storms - flooding

Driver is the river

Expect the unexpected – unstable

Ocean currents – jet stream

Reduced ability to predict

Infrastructure is out of design

What is normal

Duration of high flow

River dynamic change over time with climate change

Infrastructure needs to accommodate change

How do we address increased water impacts

What option to retain water

Make more room for water in landscape

No more field tile

Who pays for infrastructure costs

Ag field management inputs vs outputs

Loss of dairy, no more contour strips

Two things in conflict – rising groundwater – recharge  
flooding

Backwaters filling – changing x-section

How do agencies change in response to river change

COE – changing planning assumption – more flexibility

DNR – change is slow – work through existing partners

Move conversation to address needs

Work internally & partnership to change policy

EMP & NESP did not anticipate change in the river

Need to find non-technical language

Need to talk about climate change

Young generation wants to contribute

Landscape & land use changes

River need to wiggle & waggle

Disrupted natural process

Illinois River is interesting – different geomorphology –

River businesses were seriously hurt by high water

Buying habitats of boaters in response to more water.

Change navigation (boats) to navigate the river

**Topic:** Can We reduce sedimentation and nutrients inputs into the system

**Convener:** John Wetzel

**Number of people:** 4

**Notes (verbatim from facilitator):**

Where is it coming from?

- Focused too much only on floodplain & not outside inputs.
- Watersheds changing – More inputs. (Haven't addressed this scale.)
- MN River – hydrology changed so much – overpowering drainage districts
- Many districts not following Minnesota Law.
- Impacting downstream areas – Minnesota & Mississippi River – etc?

(Rattlesnakes?) – Extra water in Winona (flooding)

Farmers have gotten away from conservation farm. (Grew up on a farm.)

- 50' buffer MN, 20' in WI (Set back of field from streams.)

7 weeks in a row – rain events over 2"

- One time – 2" rain was tops.

Thus a new hydraulic regime. (How do we react?)

What can we do?

Farmer's meetings? Still having them.

Are ongoing discussions with these Ag Departments & groups with farmers. Need a bigger group of stakeholders.

- 60-70% corn to ethanol. Need it?

Better connection between watersheds & River.

Are solution – but need wide inputs from people.

Focus on Lakes (Nutrients)

Where is water coming from including drainage systems.

Nutrient Problems – algae

Community involved in water monitoring – nutrients/sediment, etc.

Are #s normal or high – variable.

A learning process.

Are some challenges going on with some of drainage districts on Minnesota River.

Some projects of reducing soil moisture 40-60% - July-Aug in future

Need better top soil.

- Break some tiles.
- Control the rapidity of run off.

Need to restore wetlands

Control flows & maintain flows through time

Need to change corn/bean system we have today.

Now farmers are fighting for a little profit.

Farms are corporate & large!

More incentives for farmers to change.

Farmers used to be a community – now they are businesses.

Need to reconnect communities of us all!

Renting out land & problems – Whose at fault? Landowner or farmer?

Absentee owners

Non-local owner – rents out land only to gain a profit.

Farm subsidies (when started) – in the 1930s only went to small landowners

Wetlands, buffers, conservation plowing, Stay back from streams & rivers

River Restoration Projects – Many were based on how river was – pre-1990s

Question: Are restoration projects adapting to new hydrologic regime?

The river projects are evolving to adjust to the new water regime on the River.

Need to look at forestry on floodplain.

What trees species will grow in water?

Bring more conservation/Agriculture Agencies/ public / etc. to talk about solutions. Have done this somewhat at times on River. Grass roots / Top Administrators of Agencies/Then need better reviews (dialogue) such of UMRCC hosts for River

Hopefully these meetings are a start.

River backwater & marshes are filling in.

Need restoration of the River marsh complexes! (Somehow – Not easy.)

Losing Habitat on River

Sedimentation/Excess Nutrients – Affects everyone from farmers to the Gulf of Mexico – Dead Zone

Some new farm ideas – plant direct into last years crop residues – no disking.

New – Inter-row planter – plant something in corn rows after corn comes up. Cover crop & better soil & nutrients.

**Topic:** Back Waters & erosion

**Convener:** Carol Paulson

**Number of people:** 4

**Notes (verbatim from facilitator):**

Sheriff Depart  
Refuge  
DNR  
County ordinance  
The law?

Staff answered all of questions we asked. Very good discussion on back waters and bank erosion. He also gave us great information on Law contacts and DNR.

Concerns

- Boat size
- Boat speed
- User conflict (silent sports, speed boats, mud boats, yachts, commercial nav.)
- Bank erosion
- Safety

Next Steps/Remedy

- Gather info
  - Talk to sheriff & conservation wardens
  - Learn laws – enforcement options
  - Education
- Find areas of no wake/electric motor (FWS Refuge)
- More no wake areas or boat size speed restrictions