

Topic: What will communities that have their livelihood do when they run out of resources to protect themselves from floodwaters

Convener: Nathan Brown

Number of people: 10

Notes (verbatim from facilitator):

Building upon resources

Higher ground

Rebuilding infrastructure FEMA

12% below 100-year floodplain Cedar Rapids, IA

Runoff from fields & parking lots

3 sections Grafton construction design FEMA

Farmers 10 inches away

Fed money

Long term goals Calhoun County, Greene County
6 floaters

27 inches ⇒ raising roads

Mark Twain Lake

Private dam inspections

Reposition drains

Addressing resilience

Retention ponds under parking lot

Dredging silt

Promote tourism

Flood insurance \$25,000 for \$100,000

FEMA isn't here for the rescue

River has to be connected to floodplain and come together -> Dredge out the lakes.

MRT 90 years old on lower river

Habitat Replacement/Enhancement Plan

Channel raising backwater

15 feet are silting in 2 ft

How to move forward with proactive

Plan H Monroe County 200,000 acres

Corps has a plan in 2011

1940s – 1980s transition of power

Plan of Action or resiliency

Flood sustainability

Topic: Who gets to make decisions re: Mississippi River Management & should stakeholders have more say in the process?

Convener: Dan Engemann

Number of people: 16

Notes (verbatim from facilitator):

Dru Buntin - How do we work together to create more of a plan to make improvements?

Example of the Missouri River Recovery Implementation Committee Model on Missouri River

Another example – MRT for lower river → good model for the time

Previous model/effort for comprehensive plan didn't address everyone's concerns

Conflicting goal structures – every mile of the river is different

MSR Commission – need similar for the upper Miss

Lower Salt River Basin Association:

Example: Salt River/Mark Twain stakeholder efforts by USACE

- Complicated reservoir because of hydropower

- Annual op meetings → get upstream & downstream interest together

“Say” isn't as important as communication → info is important in terms of flood fighting

Salt River/Mark Twain effort could broadened out

Virginia - Godfrey/IL/Sierra Club – Events like this, UMRBA are important for understanding

Would Maramec river project have helped STL, Lower Mississippi River Flooding?

A: No → Dave Bussey, no single thing that can point to

Carlyle Lake – kept 4 feet of water off MSR

River jumping 6-7-8 feet in 3 days, have to start in MN

- spread it out & slow it down

Need more upland impoundments

Get all partners @ the table, build a coalition

→ neighbors across the river are opposing each other

If levees are over the limits, what does Corps do?

A: 408 for Federal projects

- In STL District, if they find these, tell them to lower
- If they don't follow this, can go to court
- NO LD's have been inactive because levee is too high
 - o is an option

We should come together to protect human life, property

Smart levee design to where water comes in on lower end of Levee Districts

Improve levee systems as such.

Who are the right people to be part of the plan

Build plan/build trust

Build in municipalities

Concern with super levees in STL area

We have opportunity after this flood event to figure out who needs to be @ table

Upper Basin Governors need to agree on path forward that doesn't hurt each other's constituents

St. Louis Corps District hosts Greater MSR Flood Forecasting

Similar event for stakeholders?

Meetings could provide valuable input to policy makers

Topic: Disaster Response

Convener: Todd Hildreth

Number of people: 4

Notes (verbatim from facilitator):

Flood will happen

Getting to people

Disease

Costs of Response

Where to put people

Potable water

Dept. of Health vaccinations

Now people have to go to medical instead of going to levee

DNR Missouri

Hazard Mitigation Plan

- Where shelters

IL EPA Plan

MO Regional Plan

Coordination between Fire/Police/EMS is better.

Hospital coordination for events

County response

Money

Pay for stuff

Working on levees

Transporting response

Red Cross

Quarterly meetings

Response

Head of the game now

Food: Water

This effort went smooth

St. Louis Area Response

- Coordinate county responses

- Allows resources to response faster

Donations from corporations

- Walmart

Donations from Organizations

- Red Cross

- Salvation Army

Access to people flooded

Relocation of Displaced Persons

Technology has increased since 93 flood

- Computer, communication

Personality conflict

Elections plays a role on how things are run

Topic: Emergency Access

Convener: Rip and Mary

Number of people: 8

Notes (verbatim from facilitator):

Small communities affected by floods –

Emergency road (egress)

Medical

Fire

Police

Mail

Waste management

Property values going down

Notifications of further meetings in local free newspapers

1. Jersey County Shopper
2. Advantage (Godfrey – Alton)

Long term systemic approach to reducing damage

Understanding levee systems and reservoirs

Weather news reporting

Contact officials local, state, and federal governments

Elsah/Chautauqua (Fern glen valley)

Lockhaven

Mill Creek Park

Could the levee system be used to reduce FLOOD CREST

Topic: Flood control original design for Levees and L&D

Convener: Bryce Brinkman

Number of people:

Notes (verbatim from facilitator):

- 1) Weather events making the decision on river heights
- 2) 408 permitting
- 3) Barge traffic cost
- 4) Reservoir being released at the right time
- 5) Lock and Dams are not for high water events
- 6) Different Corps manuals for Missouri reservoirs than the Mississippi reservoirs
- 7) In the Upper Miss. all reservoirs are ran individually
- 8) Lock and Dams for low water only
- 9) Rock dikes hold sediment
- 10) River flows are the same today as it was 30 years ago
- 11) Social media

Topic: Flood fighting vs. good levees

Convener: Jim Koeller

Number of people:

Notes (verbatim from facilitator):

- 1) Money is better spent on good levees
- 2) Combination of efforts needed for flood prevention
- 3) Flood fighting is failed flood control. Goal is to not need to flood fight but to manage the entire system.
- 4) Jersey County Illinois has had some success in elevating and buyout programs
- 5) Crop insurance payments for storing water should be a part of multi prong approach
- 6) Iowa has \$96 million available to reduce runoff and increase retention
- 7) Urban stormwater management is on increase but more is needed
- 8) Storage/retention is big part of long-term plan
- 9) There is a need to figure out what needs to be protected and proper compensation for those who can not and there for store water
- 10) Sediment is a big part of the flood control issue. Rainfall events are increasing in intensity which contributes to sedimentation

Topic: Flood Forecast Services

Convener: Mark Fuchs

Number of people: 8

Notes (verbatim from facilitator):

- Gaging: need a gauge below Meramec confluence
- Updates on evenings and earlier [river gauge]

Topic: Flood Risk Management vs. Flood Control

Convener: Virginia Woulfe-Beile

Number of people: 23

Notes (verbatim from facilitator):

Giving river space – mostly private property.
Property owners hold a lot of

How far back do they need to be setback

Although land is expensive levees are also very expensive

Land reclaimed can be use alternate eco tourism, wetlands, etc.

Who purchases lands – how do we pay for levee

Folks want levees for access

Trees a restriction to flow

Who funds again – buying land for setbacks

Need a long-term plan to

Zoning in the floodplains

Rural vs. municipalities

Flood risk management involves several green infrastructure methods

Build your road up the hill or you're never going to get out

Building super levees Monarch and St. Peters – did not protect people

These levees change the course of the River

Use European method of levees – small river management

There is no long-term plan for levee improvements

Raising levees isn't the problem. Make levees follow the rules – get better engineering

LONG TERM PLANNING

All playing by different rules

River channel needed for navigation

Conveyance is needed open channels

River can't handle as much water as it did before

Use fewer wing dikes

People have to have access to jobs and school medical during flooding

Old models use

Nature hasn't changed the river, people have. We need to consider everyone besides navigation

How much has field tiles contributed flooding.

Nature is not changing the flooding. The river can't hold as much water.

Levees have been around for years.

Flood risk management includes:

Multistate or watershed management with uniform policy

2019 flood came from the northern states

Don't use retention for recreation

Management efforts for retention need to be updated

Need to spread release time from retention

Never allow development in floodplain

Sny levee raised levee 3 ft in 2016 needs to come down

Money, money, money

*Levee used to be half as high and never flood now the flood all the time

*More regulation

*Consistent policy

*Flood risk management is a strategy that takes in all stakeholders and a variety of methods – there is no one solution

*Costly proposition

Form a comprehensive watershed plan

Topic: Do we have the science figured out?

Convener: Robert Stout

Number of people: 13

Notes (verbatim from facilitator):

Introductions: folks in the group include farmers, levee districts, Kaskaskia River Watershed Association, Corps of Engineers, Heartlands Conservancy

Room for the River report (Galloway Report, 1994) offered solutions about flooding.

Defining the problem: more floodwater. Causes: multiple e.g., changing landscapes by draining wetlands, straightening streams, removing trees, adding impervious surfaces. Now, we are in a wetter climate (more, heavier storms). We have plumbing issues.

Portage des Sioux was saved because people used to cross there. It used to be a braided stream and floodplain. The changes to get to where we are now... the locks and dams put in for navigation raised the water level 3 feet.

What we're talking about is continued livability along the river, and the taxpayers' willingness to pay. Unless we want southern Illinois to empty out... it's not just agriculture, we need to do something.

Resilience is key. There is a lot of poor planning happening. We need planning with metrics on resiliency. Needs to be more than asking for a handout – need to ask for something that makes sure flooding doesn't cause as much damage in future.

Collaboration between organizations, agencies is key.

Resiliency: not only coming back after a flood, but after any disruption like a business closing.

Corps: Silver Jackets multi-agency effort (FEMA, state, Corps) to reduce flood risk on Middle Mississippi River; started by assessing structures (buildings). They looked for data in the areas; Calhoun county didn't even have parcel data. Those people were cut off from basic supplies.

Corps: No, we don't have the science figured out. FEMA uses 1D modeling – where water moves, but not how it responds to structures, etc. 2D modeling does better, but that's not yet used in flood maps.

Prairie DuPont had erosion of levees (underseepage). Need risk management assessment to prioritize areas to drive down risk.

Valley Park Levee, built to 100-year level with 3 feet freeboard. Then there was a 97-year flood event, and water came over the top. So as we extend the period of record to include more high water events, the 100-year flood level isn't high enough.

Caution about using the word "science" – are we looking at simply having enough of the right data and analytics and models. We may have the knowledge already to make better choices.

Need a combination of science and policy. Science will always get better. Need to tie into policy.

“Do we know what we need to know to plan and implement solutions?” A better question.

The geomorphology of the river has changed.

People want a predictable system. Need to have policy the same in a multi-state area so it can be predictable. Right now, the state policies don't match up.

Everyone will have to give something to make the system manageable again – whether it's money or authority.

Can we actually make a list of solutions based on the science? There needs to be buy-in from many agencies, etc.

Who has the capacity to make changes? E.g., Corps, EPA, USDA

In April 2017, the White House announced a task force for agriculture and rural prosperity, but that hasn't been taken up, and there is frustration. Now is a good time to talk about resiliency with rural prosperity.

The Nature Conservancy has a flood assessment tool.

Water abundance and sediment need to be studied.

How to align recommendations for subwatersheds with the larger flooding issues on the river. Match policy with planning e.g., Heartlands Conservancy smaller watershed plans.

UMRBA could approach state governors to say what solutions they should support.

Why do people not share the same point of view up and down the river? Floods hit people along the river differently at different times. Hard to tie to political action.

Flood flow frequency. A 100-year flood is not what it used to be. They are increasing in frequency. We need more storage. If you breach a levee, it'll add x feet of storage... also upland storage. Dams are a big project. Floodways too, though they're different to storage- they're more like a pressure valve. But, it sends the problem downstream.

Storage like ponds – designed by NRCS.

Drainage districts do store water.

So, do we know what we need to know? We know enough. We don't have a nice plan that everyone agrees on. But we can move forward. Next step can be to work on the packaging of the solutions – the blueprints for action.

Storage. When Nutwood levee district levee breached, 12,000 acres became storage area, and the water level came down. Need to talk about where and when to store and who to compensate.

Topic: Problem solving – metrics action planning

Convener: Pat McGinnis

Number of people:

Notes (verbatim from facilitator):

Key attributes

Metrics: do we have what we need to reveal impact and encourage taxpayer and investor confidence

Solutions: data driven-trackable

Roles and responsibilities

SWOT → issue analysis → action plan

Transparency

Strategic road mapping

Goal setting

Topic: Redesigning the system to address everyone's concerns

Convener: Brian Mehrtens

Number of people: 15

Notes (verbatim from facilitator):

Want levees but not going to happen south of St. Louis

Everyman for themselves

Living and working behind levees

More development → more runoff

1940's system is not adequate

1993, flooded and lower elevation, 6 inches

70,000 acres underwater

Most damaged part of all river levee districts

Same position 6 years later

Overbuild and build pipes

St. Louis gauge of 48 any over, everyone floods.

Argument: control how it floods

Participation along the river

Relieve valve on Hardin lowlands and not having issues on lower communities

Sediment management more about control and control atmosphere

How do we pay for it?

- Bailing out bankers
- Rebuild the infrastructure

There are funds out there

- Sell them (legislators) on the plan on saving

Hypothetical = 10,000-year level

Would you flood everyone

Refuse to open the gates when told

Come up with a set of rules that taking water and holding water.

Raising infrastructure.

No levee → flood often

Proposed levee → flood occasionally

How much land is set aside

Not having to spend money on National Guard

Controlled event overbuilding

Trying to breach Grafton, Illinois issues

Natural scour → maintain and open up the whole channel

Create economics that can pay for the system.

Making a causeway off of Route 16

Private land Harrison 26 miles system

Prairie du Rocher, Illinois

Levee districts upstream implement.

How to “control” the events

Chesterfield Valley was able to rebuild

Soil might be built upon with flooding and offering preservation

Control dropout of sand

Water rushing when levee breaks

Unified plan and campaign to get it moving into the gov.

Needs to be commissioned

Lower Mississippi Commission but got turned into Association

Mississippi River Towns Initiative,

Topic: Regulations working in today's world

Convener: Robert Stout

Number of people: 10

Notes (verbatim from facilitator):

No consistent regulatory oversight.

Flood programs and FEMA.

Missouri does not do regulations.

Flood insurance participation

Single claim authority.

Illinois DNR, Missouri SEMA

Only programs but no oversight!

Where do we go from here?

Watershed authority, authority reexamined and how to go about it.

Elevation changing and taking so much water, problem with need to take the same amount of water.

Should not make someone else's problem of a reality.

Randolph County, Illinois 15 relief wells

Regulations cost the levee districts

Doubled assessments

Prairie du Rocher trying to satisfy Illinois EMA, FEMA, and having the Corps spent 80 million and unsustainable.

Protections are not there, only have 2 years to up with a plan.

Consistent transparency of floodplain management

There are all sorts of programs to help with flood minimization

Like to see the governors have a comprehensive solution

Watersheds is where everything's at.

Coherent approach water districts with watershed and partners with USDA.
Have to get the implementation partners together to get resources

Distributed economic actors and over extend environmental.

Good infiltration on farmland

Constraints on economic activity

Cycles 1930's → dry

Wet cycle and how to survive

State leadership it's bad in Missouri

National Industrial policy and national water policy under one department
Big money

Nonprofits and multistate interest for the people

Return to the "American values" reasonable solutions for normal citizens

Topic: Stormwater Retention

Convener: Blake Roderick, Jonathan Roper

Number of people: 11

Notes (verbatim from facilitator):

Bluffs and water
Prairie areas
Design and implement 404 permits
Watershed issues
Bring together necessary resources

Keep water at the sources

Issues:

1980 and before big push for water control on land upstream.
Structures built are now filling up and contributing to flooding.
Channeling out of urbanized areas to other areas.

1973 farm land, now rapidly developing more impervious areas. Farmland downhill. Now ponding on farms.

Locks on levee shuts when Mississippi River is high, water running downhill. Cannot farm with that much water.

Dirty and sediment water springing from bluffs.

Trying to cram homes, as many as possible.

Interior flooding from the backside.

Regulatory is uneven.

Commercial projects of certain size require detention. Smaller residential development do not usually.

No common purpose, not an individual solution.

Uplands have responsibility as well.

Two hundred years on the landscape, have been modifying ever since.

Not doing a good job at thinking forward.

No strategy that is being implemented.

People want to be paid for what is the right thing to do.

Uproot your livelihood to relocate during wet system.

A lot of erosion, sediment carries downstream. Loosing 4-5 rows from erosion.

Quick peak flows, too much river energy.

Tiling fields without wetlands.

Jurisdictions come first.

Currently spending money

- Many funding sources
- Corps of engineers funding levee, maintenance, repair
- MSD-piping
- SEMA funds, trying to address
- USDA-build upland lakes
- Cover crop spending
- 319 programs
- Question – are they being strategic, what is best approach?
- Put money in right place
- Each funding stream has goals but operating with individual goals

Solutions:

- Right people at the table
- Right solutions and people buy in
- Control must start a long way from river
- People need to push for lakes to be made on lots
- Large flood control lakes
- Additional flood control structures
- High degree of resilience
- Increase stream buffers
- Neighborhood level basins
- Individual solutions – flood issues on lot
- Meandering stream flows to reduce peakflow and energy
- Collaborate on solutions
- Expansion of buffers from the current identified streams to non-USGS or Corps identified streams
- Educate the general population
- Stormwater tax
- Levy tax
- Holistic tax that aims for overall basin strategy
- Water manage to address right problems
- Identify issues then jurisdictions
- Rework positions and taxes to address holistic
- Educate people with and without issues on why our watershed needs attention

Storage:

Projects elsewhere in USA.

Flood risk, reduce nutrient pollution, recreation

Master watershed: water quality, water supply learning. County sponsor, receive a grant.

Neighborhood – on individual who is responsible to maintain

Individual - I noticed stormwater increase on my property, so I need to manage.

404 permit.

Look for ways to address runoff that solves and corrects the issue.

Restore stream bank. Have streams meander, lower the energy of the water flow.

Reduce energy

Federal authority issues.

Development may add to problem or solution

New subdivision, grading, water turns brown.

Sump pump discharge, basement impacts.

Topic: Stormwater Retention

Convener: Blake Roderick

Number of people: 10

Notes (verbatim from facilitator):

Heritage –

- St. Louis municipal sewer district
 - o Channelize water – sewer
 - o Natural storm retention investors

- USDA ponds
- Urban flood retention
- Pump capacity
- Gravity flow structures
- Erosion control
- Urbanization
- Water retention
- Regulatory authority uneven
- No sense of common purpose

Shared responsibility, and concern ad cost

Watershed approach

Right suite of solutions

Controls starts from river

Private lake

Look forward

Management of flood control lakes

Construction of new flood control

Best high control of floods through resilient systems

MRT

Funding – FEMA, USDA, USACE, SRF Program, EPA

Strategic approach – puts money in right places to solve problems

Education – right thing to do.

Urban/suburban planning

Master Water Steward program (MSP)

Maintenance costs of urban/suburban water retention

404- can't avoid must mitigate

Erosion control

Use regulatory program to reduce

USDA programs that add to flood problems

Improve watershed management, buffers

Improve upland farming practices

UMRBA – delineation of programs

Authority issues – who has control

City regulations to manage stormwater

Common strategy

Holistic solution

Education

Responsibility

What authority does drainage districts have to improve upland land practices

Topic: Farming uplands to improve absorption through water infiltration.
Organic pays.

Convener: Louise Belt

Number of people: 3

Notes (verbatim from facilitator):

NRCS lost their way – focusing on pollinators and wildlife. Feds should change cost share to soil and water not so much wildlife. Cover crops will keep soil on the land, good sediment management. Cover crops have increased soil organic matter, so droughts are not so much of a problem!

Not sure agriculture is the big issue in flooding.

Urbanization is worse.

River valleys behind levees do hold back water.

Channelization brings water down faster.

Farmers can't build residences on the 100-year floodplain – Illinois state rule. Ag buildings yes but above 100-year flood.

Focus on

National Flood insurance rules – 100 years. Be above that level.

Locks and dams are filling up with sediment and takes on Mississippi River. Cover crops do hold back rain water, should be encouraged. Channelization only brings water down to main stem faster.

Topic: Upper Mississippi Lock Management

Convener:

Number of people:

Notes (verbatim from facilitator):

1. Current river management is not focused on the “common good”!
2. Need a different approach to control flood waters than levees
3. Farmers might be open along the river floodplains to use their land and be compensated for multiyear crop loss
4. We need inputs from all those affected by recurring floods. Many of the decisions made do not consider the people involved.