

THIS IS GOLD.

Will it stay in the field or move to a stream?

YOU DECIDE.

Fishers & Farmers
Partnership for the
Upper Mississippi
River Basin

Fishers & Farmers: Watershed Leaders Network

Heidi Keuler

Fishers & Farmers Partnership Coordinator

Fish Habitat Biologist

U.S. Fish & Wildlife Service



Midwest Fish Habitat Partnership Fish Habitat Modeling Results

Fishers and Farmers Partnership

Model Summaries 3/5/2012

- Blacknose Shiner (*Heterotis heterolepis*): Probability of Presence
- Golden Shiner (*Notemigonus crysoleucas*): Probability of Presence
- Smallmouth Bass (*Micropterus dolomieu*): Probability of Presence
- Brook Silverside (*Labidesthes sicculus*): Probability of Presence
- Species Richness

MEMORANDUM OF UNDERSTANDING

of the

FISHERS AND FARMERS PARTNERSHIP

FOR THE UPPER MISSISSIPPI RIVER BASIN

A partnership of the National Fish Habitat Action Plan

This Memorandum of Understanding is entered into by and between the parties described in the enclosed pages of this document. This Memorandum of Understanding describes the Fishers & Farmers Partnership (Partnership) for the Upper Mississippi River Basin, a group of interested non-governmental agricultural and conservation organizations, state and federal agencies working together to achieve the partnership's goals and objectives and projects that add value to farms while restoring aquatic ecosystems.

HEALTHY FISH, HEALTHY STREAMS, HEALTHY FARMS

VISION AND STRATEGIC PLAN: 2015

Midwest Fish Habitat Partnership Fish Habitat

Regional Assessment

Model Summaries 4/11/2012

- Coldwater Guild: Probability
- Coolwater Guild: Probability
- Warmwater Guild: Probability

Authors
 Jason Cingerman, Aquatic Ecologist/Monitoring Specialist
 Todd Petty, Aquatic Ecologist - West Virginia
 Fritz Boettner, Project Manager/GIS
 Sally Letsinger, GIS - West Virginia
 Jackie Strager, GIS
 Evan Hansen, Chief Scientist - Do

So you need a social monitoring plan: Now what?

Travis G. Kneib, S.L. Drake-Larson, and Lisa A. Schulte

Other mentioned a social monitoring plan is needed, where is the best place to start? There are a variety of approaches to address this question, including program evaluation, process-oriented, and program-oriented approaches. The field of social monitoring is still emerging and needs to be addressed in a more systematic way.

Fishers & Farmers Partnership for the Upper Mississippi River Basin

Interviews to Inform Strategy

10 voices speak to economic & social forces that impact farm management decisions and conservation actions in the Upper Midwest

A Social Evaluation of the Rock Creek Watershed Planning Process

A report prepared for the Iowa Soybean Association, Fishers and Farmers Partnership, and Rock Creek watershed stakeholders

by Stephanie Enloe

Project Monitoring Guidance for the Fishers and Farmers Partnership Habitat Restoration Project in the Upper Mississippi River Basin

June 2012


Fishers & Farmers Partnership



Fishers & Farmers
Partnership for the
Upper Mississippi
River Basin

Iowa Department of Natural Resources
Iowa Soybean Association
Illinois Department of Natural Resources
Minnesota Department of Natural Resources
Minnesota Corn Growers Association
Missouri Department of Conservation
Missouri Agribusiness Association
Wisconsin Department of Natural Resources*
Wallace Pasture Project –Wisconsin*

American Rivers
National Mississippi River Museum & Aquarium
Natural Resources Conservation Service
The Nature Conservancy
Trout Unlimited
Upper Mississippi River Conservation Committee
U.S. Geological Survey
U.S. Fish & Wildlife Service
U.S. Forest Service



Mississippi River
Watershed

FISHERS, FARMERS, FORESTERS, CROP
CONSULTANTS, AGRICULTURAL GROUPS,
GIS & BUSINESS/MARKETING SPECIALISTS

Upper Mississippi River Basin

State Boundaries

Focal Watersheds



0 100 200
Kilometers



Strategy 1 – Identify & protect intact , healthy waters

Strategy 2 – Restore natural variability in river and stream flows

Strategy 3 – Reconnect fragmented river, stream habitat to allow access to historic spawning, nursery/rearing grounds

Strategy 4 – Reduce /maintain sedimentation, phosphorus and nitrogen runoff to river/stream habitats

Fishers & Farmers
Partnership for the
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River Basin

Goal 1: Engage farmers & ranchers

Goal 2: Support Fish Habitat Projects

Goal 3: Continue development of long-term, basin-scale strategies

Goal 4: Strengthen the organization for long-term action

Fishers & Farmers
Partnership for the
Upper Mississippi
River Basin



APPROACH CONVERSATIONS
FROM AGRONOMIC VIEWPOINT

Ravine Workshop

Tuesday, April 8, 9 AM - 3 PM

Best Western Mankato

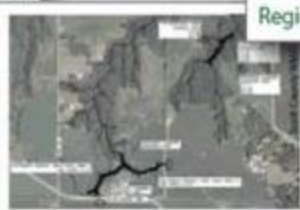
1111 Range Street, North Mankato, MN



Learn the Latest Science



Regional Case Studies



Restoration Practices



Get your questions answered

Sign up today

Everyone is welcome

Free Admission & Lunch

To Register: mnravines.org

Call: 507-389-2704

or 507-389-5307

Event fills with first 150 registrants.
This workshop is intended primarily for
landowners and local staff.

Sponsored by:



Coordinated by:



Draft Agenda

9-9:30 AM Networking & Coffee

9:30-10:15 Ravine Research - Patrick Belmont

10:15-11 Restoration Practices - Marty Melchior, Inter fluve

11-12 Regional Case Studies

12-1 PM Lunch

1 - 3 PM Workshop Sessions & Information Stations

(Learn more about grass waterway, surface inlet & berm
structures, wood-chip bioreactor and others)

Workshop Planning Committee:

MAWRC, Minnesota Department of Natural Resources, Inter-fluve Inc.,
Blue Earth County SWCD, Scott County SWCD, United Ag Tech, Nettleywynnt Farm

For more information: mnravines.org



FARMER-LANDOWNER ENGAGEMENT



Stakeholder Engagement Training



Stakeholder Participation is engaging stakeholders in problem solving or decision making and using their input to make decisions.

When engaging stakeholders it is critical to have an intentional Decision Based Plan!



www.iap2.org

www.ipmp.com/index.php/courses/detail/sdic

www.epa.gov/courses/water/teach/documents/stakeholderguide.pdf



ADAM


MIKE

Missouri Department of Conservation Instructors:
Ange Corson – Stream Program Coordinator, Ron Reitz - Survey Coordinator,
Eric Rahm – Stream Biologist

Stakeholder Engagement Training

	Inform	Consult	Involve	Collaborate	Empower
Gather Information	MDNR Park Hunters	Row croppers Ranchers	Stream Team	MDNR Pollution County University	
Establish Decision Criteria	MDNR Parks Stream Teams Hunters County		Row croppers Ranchers	MDNR Pollution University	
Develop Alternatives		MDNR Park Stream Team Hunters	Row croppers Ranchers	MDNR Pollution County University	
Evaluate Alternatives		All			
Make Decision	MDNR Parks Row Croppers Ranchers Stream Team Hunters County University			MDNR Pollution	Captain ADAM



An aerial photograph of a vast agricultural landscape, likely a prairie or farm country. The land is divided into a dense grid of rectangular fields, some appearing brown and others green. A large, fluffy white cloud is visible on the left side of the frame. The sky is blue with scattered white clouds. The text is overlaid in the lower half of the image.

“I’ve noticed a real difference in ideas or optimism depending on how closely staff work directly with landowners and particularly ag producers. The “dreamers” need to better understand the real challenges, and the “pessimists” need to be inspired and build more networks/connections/resources/ideas.”

2015 Crop Year - Projected

Farm Size (Acres) 1000.0
 FSA Base Acres 119
 FSA Program Yield 80.00
 DCP Payment rate 80.00
 Market Loss Payment 80.00

Corn 525.0
 Soybean 40
 Oats 80.00
 Alfalfa 80.00

NAME Example
 DATE 10/21/14
 FARM Home

	Corn	Os Corn	Non-GMO Corn	Oats	Alfalfa	Spring Wheat	Glyphosate Soybeans	Conventional Soybeans	Sweet Corn	Canning Peas
County Loan Rate	\$1.75	\$1.75	\$3.50	\$3.00	\$190.00	\$5.50	\$5.11	\$5.11	\$75.00	\$150.00
Price Per Unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5.50	\$0.00	\$0.00	\$0.00
Loan Deficiency Payment (LDP)	\$630.00	\$577.50	\$430.00	\$270.00	\$800.00	\$275.00	\$456.00	\$472.80	\$525.00	\$525.00
Premium Per Unit	\$0.00	\$0.00	\$0.00	\$75.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Crop Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LDP Revenue	\$630.00	\$577.50	\$430.00	\$345.00	\$300.00	\$275.00	\$456.00	\$472.80	\$525.00	\$525.00
Other Income (straw, etc.)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Income Per Acre >>>>>>>	180.0	188.0	180.0	90.0	10.0	10.0	85.0	48.0	48.0	7.0
Actual Yield	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
Acres of Crop	1050.0	1050.0	1050.0	1050.0	1050.0	1050.0	1050.0	1050.0	1050.0	1050.0
Gross Expenses Per Acre	130.00	130.00	82.00	31.50	25.00	24.00	55.00	45.00	0.00	25.00
Seed	6.00	6.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Passed Acre Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seed-Insecticide Treatment	133.74	153.56	29.00	133.74	61.61	189.94	105.81	46.87	29.00	96.91
Seed-Fungicide Treatment	29.00	29.00	0.00	0.00	8.00	12.00	4.00	29.00	4.00	28.00
Fertilizer	0.00	0.00	0.00	10.00	0.00	10.00	0.00	0.00	0.00	0.00
Herbicides	25.00	12.00	25.00	10.00	40.00	0.00	35.00	19.89	8.00	0.00
Insecticides	12.00	24.00	36.00	22.00	24.57	18.59	8.00	2.00	2.00	0.00
Fungicides	24.00	33.00	55.00	16.20	15.00	2.00	5.00	6.00	6.00	0.00
Crop Insurance	36.00	55.00	28.04	8.00	2.00	5.00	6.00	6.00	6.00	0.00
Custom Hire	56.00	32.28	10.00	2.00	5.00	10.00	272.26	\$261.76	\$211.88	\$168.36
Fuel and Oil	31.84	2.00	2.00	10.00	361.51	\$242.40	\$272.26	\$261.76	\$211.88	\$168.36
Drying/bu	10.00	2.00	2.00	5.00	10.00	5.00	5.00	5.00	5.00	5.00
Repairs	2.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Optig Int.	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Utilities-Misc	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Storage @ Mo @ 2.50/Bu	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Labor Hired	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
TOTAL LISTED EXPENSES >>>>>>>	\$500.18	\$517.84	\$448.78	\$181.57	\$361.51	\$242.40	\$272.26	\$261.76	\$211.88	\$168.36
Total Gross Income Per Crop	\$180.00	\$188.00	\$180.00	\$90.00	\$10.00	\$10.00	\$85.00	\$48.00	\$48.00	\$7.00
Less: Variable Expenses Per Crop	\$130.00	\$130.00	\$82.00	\$31.50	\$25.00	\$24.00	\$55.00	\$45.00	\$0.00	\$25.00
Net Variable Income	\$50.00	\$58.00	\$98.00	\$58.50	\$-15.00	\$-14.00	\$30.00	\$3.00	\$48.00	\$-18.00
Net Income (w/ fixed costs) Per Acre	-\$210.18	-\$280.34	-\$158.78	-\$176.37	-\$176.37	-\$176.37	-\$176.37	-\$176.37	-\$176.37	-\$176.37
Total Gross Crop Income	\$500.18	\$517.84	\$448.78	\$181.57	\$361.51	\$242.40	\$272.26	\$261.76	\$211.88	\$168.36
DCP Payment	\$630.00	\$577.50	\$430.00	\$345.00	\$300.00	\$275.00	\$456.00	\$472.80	\$525.00	\$525.00
Market Loss Payment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Variable Expenses	\$500.18	\$517.84	\$448.78	\$181.57	\$361.51	\$242.40	\$272.26	\$261.76	\$211.88	\$168.36
NET OPERATING INCOME >>>>>>>	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61	\$156,710.61

Land Cost Method Comparisons:
 Actual Land Cost Per Acre = \$180.00
 Equivalent land cost if share rent is: \$154.34
 Equivalent land cost if APH is: \$252.00
 Equivalent land rent under 1/3 crop rule: \$185.49
 Equivalent land rent if 55.0 bulac is given away: \$182.80

Tenant's Share 40.0% Base Rent
 Bonus Rent 5.0%

ECONOMICS & RISK AVERSION

	500	500	500	500	500
Total Fixed Costs >>>>>>>	\$151.70	\$151.70	\$151.70	\$151.70	\$151.70
Profit Per Acre	\$-151.70	\$-151.70	\$-151.70	\$-151.70	\$-151.70
TOTAL FARM PROFIT	\$-151.70	\$-151.70	\$-151.70	\$-151.70	\$-151.70
Total Units Produced	54.67	55.30	54.39	55.79	54.67
Break-even Price Per Unit	\$285.18	\$285.18	\$285.18	\$285.18	\$285.18
Break-even Gross Income Per Acre	\$156.71	\$156.71	\$156.71	\$156.71	\$156.71



FATIGUE FROM IMPLEMENTING
WHILE NEIGHBORS DON'T



ISOLATION FROM PEERS



PEERS ARE AMONG THE MOST POWERFUL
INFLUENCERS OF SOCIAL CHANGE



SOCIAL FORCES

Ergo Days



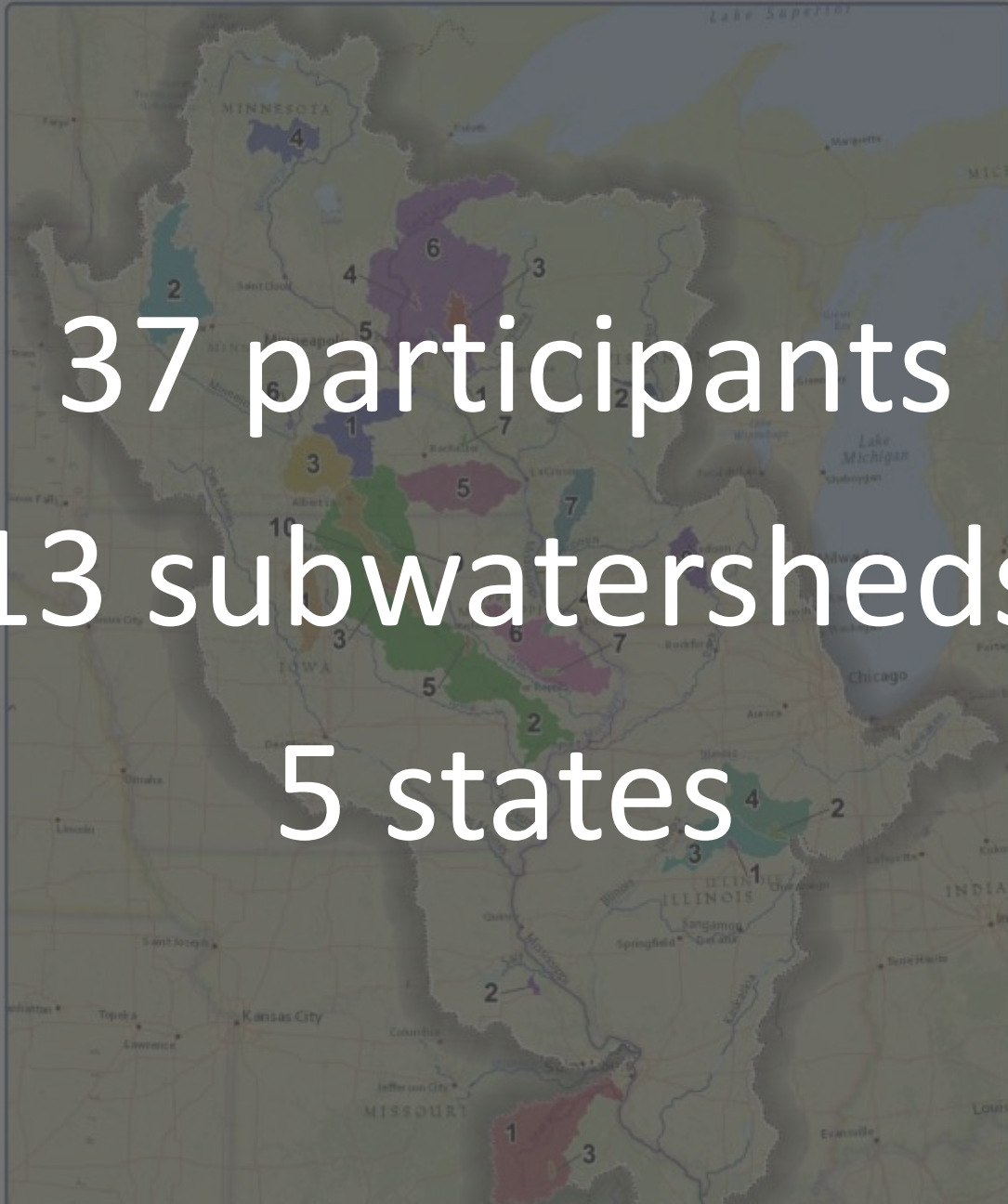


WATERSHED LEADERS NETWORK

Fishers & Farmers
Partnership for the
Upper Mississippi
River Basin



TWO 3-DAY RESIDENTIAL WORKSHOPS



The map displays the Upper Mississippi River Basin, covering parts of Minnesota, Iowa, Illinois, and Missouri. It is divided into 13 subwatersheds, each represented by a different color and labeled with a number indicating the number of participants. The subwatersheds and their participant counts are: 1 (red, Missouri), 2 (teal, Minnesota), 3 (orange, Iowa), 4 (blue, Minnesota), 5 (green, Iowa), 6 (purple, Minnesota), 7 (light blue, Iowa), 8 (pink, Iowa), 9 (yellow, Iowa), 10 (orange, Iowa), 11 (purple, Illinois), 12 (teal, Illinois), and 13 (red, Missouri).

37 participants
13 subwatersheds
5 states



EXAMINE ATTITUDE



ARRIVE AS HUMAN BEINGS



PROGRAMMING



CHALLENGES

1. Emerging technologies
 2. Community Based Organizations
 3. NRS
- ...by conversations
...and rural conservation
...Reduction Strategy
...Equipment/technology
...benefits for
...groups

CHALLENGES

- Programs about farm...
 - Coordination bet...
 - ★ Bottlenecks -
 - ★ Delivery of
 - Some farmers they would
 - ★ Cost share
 - Run off - high water table
 - Mgmt of farm sometimes
 - Inconsistent Funding -
 - Can't do home-b...
 - ★ Technical de
 - customer service
- ...Role of local
...Farmer-led
...Farmers w
↑ conserv
...Retired agen
...walk-walks just
Farmers band
Setting boundar
overcoming pro
How more farm
come to the
do help w/ l
learning fro
ce w/o
before t
orpe
/a/
12

ACKNOWLEDGE COMPLEXITY



VOLUNTARY IMPLEMENTATION



CO-CREATE LOCAL SOLUTIONS



DIVERSE SKILLS & PERSPECTIVES



COMMUNICATE SHARED VISION
HEAR SUCCESS

MAKE THE
BUSINESS CASE
to FARMERS &
BANKERS
data / metrics

LEGACY
environment is changing
we HAVE to ADAPT

COMMITMENT
&
ACCOUNTABILITY
AMONG FARMERS

TRUST
building trust between
Farmers & agency folks
- consistency - listening
- awareness - support

Improve Soil Health
on my own land

Influence culture
change in my own
community

Focus on Farms
Upstream

BOTTOM LINE &
STEWARDSHIP
is the way to Talk
to Farmers

→ Both are Essential

FEMALE LAND
OWNERS
- education, legal
advice, building
confidence to decide
what happens on their land

"NET POSITIVE"
We have to do more
than maintain what
we have → we need
RESTORATION

BE SUPPORTIVE
NOT A WATCH DOG
→ Focus on Opportunity
→ Gather & share data
with landowners
→ use success to inspire

HIGHEST LEVERAGE POINT FOR
IMPACTING CHANGE



WATERSHED LEADERS NETWORK

ACTION RESOURCES

Surf Your Watershed

U.S. EPA | Enter zip code for water assessments, data, and groups at work in your watershed
Ag Site Assessment Tool | Generate a report on your land and its surroundings

Agricultural Practices

- Best Management Practices | Clean Water Iowa
- Iowa Learning Farms | Iowa State University Extension
- Best Management Practices | Illinois Council On Best Management Practices
- Agricultural Best Management Practices | Minnesota Department Of Agriculture
- Nitrogen Fertilizer Best Management Practices | Minnesota Department Of Agriculture
- Private Landowner Network | Encyclopedic resource for conservation of private lands
- Soil & Water Conservation Districts (SWCD) | Iowa
- Soil & Water Conservation Districts (SWCD) | Minnesota
- Soil & Water Conservation Districts (SWCD) | Missouri
- Soil & Water Conservation Districts (SWCD) | Wisconsin

Grazing

- Grassworks
- Wallace Pasture Project
- Iowa Forage & Grassland Council
- Minnesota Grazing Lands Conservation Association
- Missouri Forage & Grassland Council
- Illinois Grazing Lands Conservation Initiative
- Practical Farmers Of Iowa
- Dairy Grazing Apprenticeship
- School For Beginning Dairy & Livestock Farmers | University Of Wisconsin
- Illinois Grazing Manual | NRCS Illinois
- Library Of Grazing Publications | Iowa Beef Center, Iowa State University
- Rotational Grazing | Minnesota Dept. of Agriculture
- Perennial Pasture Grazing | Land Stewardship Project
- Pasture Based Dairy | University Of Missouri Extension

WATERSHED LEADERS NETWORK



Apple-Plum Watershed

Water Resource Management in Northwest Illinois, Northeast Iowa, Southwest Wisconsin

47 Trained to Facilitate Watershed Game

The League of Women Voters of Jo Daviess County is following up on action items identified in the recently completed Jo Daviess County Water Resource Management Plan. On October 24th and 25th, John Biliotta and Cindy Hagley (University of Minnesota Extension) were invited to the DeSoto House Hotel in Galena to conduct 2 day-long sessions to train 47 individuals to become facilitators for "The Watershed Game".

30 of the trainees were from within Jo Daviess County and have committed to playing the game with a group in the county within one year to raise awareness and literacy about watershed issues. Stream, Lake and classroom versions of the game were purchased and are available for the facilitators to check out from the county environmental health department.

The game provides a fun way to learn about watersheds, land use impacts on water quality, and strategic collaboration to achieve water quality goals. In addition to the Jo Daviess County facilitators, 17 individuals from other parts of the Upper Mississippi River Region received training (Madison, Ottumwa, Dubuque, and LaCrosse were among the communities represented).

These individuals were part of the Upper Mississippi River Region Inter-League Organization (LWV-UMRR ILO). Affectionately referred to as the "Ummer," the inter-league, comprised of over 60 local Leagues in Illinois, Iowa, Minnesota and Wisconsin, just celebrated its 1st anniversary, having formed in October of 2015. Nutrient pollution was chosen as a focus issue for the ILO since each of the states has been challenged to reduce nitrate, nitrogen and phosphorus contributions to the Mississippi River. The Watershed Game is seen as a tool for raising awareness about these issues.



Agriculture in Jo Daviess County Watershed Plan



NEWS ARCHIVE

47 Trained to Facilitate Watershed Game
Nov 28, 2016

Award For Local, Collaborative Work
Aug 1, 2016

League of Women Voters Jo Daviess County
July 8, 2016

SUPPORTING TOOLS

<http://fishersandfarmers.org/>

Q2 Is there something you've already done or plan to do because you attended this workshop? How can we support you in that work now, or at our November 28-30 workshop? Specific needs? Specific things you want to learn?

Answered: 12 | Skipped: 0

Responses	Date
Scheduled a group meeting to discuss what our next step will be in our watershed. Want more info on water testing.	8/23/2016 8:44 PM
I'm going to try to find different ways to get grant money into our local watershed	8/23/2016 8:41 PM
Speak with crop advisors about helping support watershed projects and inquire if they are willing to provide incentives on their farm.	8/23/2016 4:33 PM
...	8/18/2016 10:36 AM
...	8/15/2016 10:00 AM
...	8/15/2016 8:06 AM
...	8/14/2016 9:00 PM
...	8/11/2016 12:51 PM
...	8/11/2016 11:58 AM
...	8/11/2016 9:50 AM
...	8/10/2016 3:43 PM
...	8/10/2016 7:12 AM



DOCUMENTATION



VALUED CONNECTION



SUPPORT PROJECT MANAGERS

rootriverfieldtostream.org/

Video Link: youtu.be/TD8GLuRL-wg



INTRODUCTIONS & NEW STORIES

HARVEST: WHAT DID WE HEAR OVER COFFEE?

NOW WHAT? LOCAL GROUP WORK

LUNCH 10:11



GALLERY CONVERSATION

WHAT DO YOU NEED?

OPEN SPACE DIALOGUE

10:11

DINNER

DINNER

10:11

FFP (& others) to happen?
What Commitments you making?

Kickapoo

Next Steps

- Gather Ag Econ Software / Watershed Decision M
- Research Water Storage Options for Farmers
- Continue data collection & report conversations
- Plan more conversations
- Attend Mill Creek Watershed mtg with Kickapoo Farmers
- Learn more about conservation practices & farm-freedom
- Create strong 1st watershed meeting (farmer led) (TJCF F

FFP

- Facilitate communication btw. FIF participants
- \$ Funding for groups & helping secure farmer incentive (if to suppl. cost share)
- Hosting a data / monitoring / success measures group
- FIF Regional one-day conference? Focus on farm scale activities you tube? virtual field days
- More watershed leaders gatherings - capacity - building
- Legacy stories compiled - booklet w/ farmer-led examples

TELLING ABOUT THEIR WORK

FFP Benefits

- I gather Ag Econ Software / Decision M
- Water storage conversation w/ farmers, focus on program
- in Data / Monitoring / Measurement Regional Group
- Farming
- activities in watershed
- logbook for Mill Creek trip w/ Farmers
- Farming Ag Econ / Conservation practice software / resources
- Mill Creek Watershed Meeting
- to work with NRCS to maximize NRCS costs



CONNECTION LED TO ACTION
PEERS SUPPORTING EACH OTHER



Fishers & Farmers
Partnership for the
Upper Mississippi
River Basin

“The workshop was effective by facilitating dialogue within our local leadership, and it gave us an opportunity to explain our challenges and opportunities to others. Learning from other attendees helped discover solutions that we might consider applying in our watershed, and helped me sort and focus on a path to pursue.”

– Pat Donahue

Fishersandfarmers.org
Heidi_Keuler@fws.gov