

**PROCEEDINGS OF THE
SIXTY-SECOND ANNUAL MEETING
of the
UPPER MISSISSIPPI RIVER CONSERVATION COMMITTEE**



HANNIBAL, MO

MARCH 14-16, 2006

**PROCEEDINGS OF THE
SIXTY-SECOND ANNUAL MEETING
of the
UPPER MISSISSIPPI RIVER
CONSERVATION COMMITTEE**

**QUALITY INN AND SUITES
CONFERENCE CENTER**

Hannibal, MO

March 14-16, 2006

**Upper Mississippi River Conservation Committee
4469 48th Avenue Court
Rock Island, Illinois 61201**

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OFFICERS
of the
UPPER MISSISSIPPI RIVER CONSERVATION COMMITTEE

Elected at
SIXTY-SECOND ANNUAL MEETING

To Serve During
2006

Chairperson: Martin Konrad
Iowa Department of Natural Resources
502 E. 9th Street
Des Moines, IA 50319

Chairperson-Elect: Janet Sternburg
Missouri Department of Conservation
P.O. Box 180
Jefferson City, MO 65102

Secretary-Treasurer: Patrick Short
Wisconsin Department of Natural Resources
1502 E. Lessard St.
Prairie du Chien, WI 53821

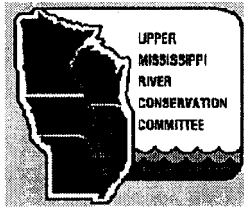
UMRCC Executive Board
March 2005 – March 2006

Ron Benjamin Chairperson & Wisconsin Delegate	608/785-9012 FAX 608-785-9990	3550 Mormon Coulee Road, 108 State Office Bldg LaCrosse, WI 54601	benjar@dnr.state.wi.us
Martin Konrad Chairperson Elect & Iowa Delegate (Replaced Mike McGhee)	515/281-6976 FAX 281-6794	Department of Natural Resources 502 E. 9th St. Des Moines, IA	Martin.konrad@dnr.state.ia.us
Kevin Stauffer Minnesota Delegate	651/345-3365 FAX 651/345-3975	Minnesota DNR 1801 – South Oak st. Lake City, MN 55041	kevin.stauffer@dnr.state.mn.us
Janet Sternburg Missouri Delegate	573/522-4115 FAX 573-526-4495	Missouri Dept. Conservation PO Box 180 Jefferson City, MO 65102	Janet.sternburg@mdc.mo.gov
Dan Sallee Illinois Delegate	815/625-2968 FAX 815/625-0706	Illinois DNR 2317 - East Lincolnway Suite A, Sterling, IL 61081	dsallee@dnrmail.state.il.us
Patrick Short Secty/Treasurer	608/326-8818 FAX 608/326-8818	Wisconsin DNR 1502 E. Lessard St Prairie du Chien, WI 53821	shortp@dnr.state.wi.us
Mike Steuck Fish Chairperson	563/872-4976 FAX 872-4945	Iowa DNR 24143 Hwy 52 Bellevue, IA 52031	michael.steuck@dnr.state.ia.us
Mike Griffin Wildlife Chairperson	563/872-5700 FAX 872-5456	Iowa DNR 206 Rose st. Bellevue, IA 52031	Michael.Griffin@dnr.state.ia.us
John Olson Water Quality	515/281-8905 FAX 281-8895	Iowa DNR Wallace State Office Bldg Des Moines, IA 50319	john.olson@dnr.state.ia.us
Steve Dewald Law Enforcement	608-785-9970 FAX 785-9990	Wisconsin DNR 3550 Mormon Coulee Rd LaCrosse, WI	dewals@dnr.state.wi.us
Don Hultman Refuge Observer	507 494-6218 FAX 507 452-0851	US F & W Service 51 East Fourth St., Room 101 Winona, MN 55987	Don_hultman@fws.gov
Jon Duyvejonck UMRCC Coordinator	309/793-5800 FAX 309/793-5804	US F & W Service 4469 – 48 th Ave court Rock Island, IL 61201	Jon_duyvejonck@fws.gov

PLACE, DATE AND OFFICERS OF PAST MEETINGS

Place	Date	Chairman	Assistant Secretary Vice Chairman (1948-68) Chairman Elect (1969-)	Secretary-Treasurer	Coordinator, Fish Tech. Committee (1958-61) UMRCC Coordinator (1962-Present)
Dubuque, IA	Jan. 26, 1946	Dr. Edward Schneberger	Dr. George W. Bennett	Everett B. Speaker	Not Provided For
St. Louis, MO	Jan. 28, 1946	Dr. Edward Schneberger	Dr. George W. Bennett	Everett B. Speaker	Not Provided For
St. Paul, MN	Jan. 6, 1947	Dr. Lloyd L. Smith	Dr. George W. Bennett	Everett B. Speaker	Not Provided For
Madison, WI	Jan. 27, 1948	Dr. George W. Bennett	W.E. Albert	Everett B. Speaker	Not Provided For
Chicago, IL	Dec. 17, 1949	Jerome H. Stoudt	Dr. George B. Herndon	Everett B. Speaker	Not Provided For
Dubuque, IA	Jan. 30, 1950	Dr. George B. Herndon	Frank Bellrose	Everett B. Speaker	Not Provided For
St. Louis, MO	Jan. 5, 1951	Frank Bellrose	Everett B. Speaker	Charles N. Lloyd	Not Provided For
Madison, WI	Feb. 1, 1952	Everett B. Speaker	Dr. Raymond E. Johnson	Charles N. Lloyd	Not Provided For
St. Paul, MN	Feb. 13, 1953	Dr. John Moyle	Ray C. Steele	Charles N. Lloyd	Not Provided For
Chicago, IL	Feb. 12, 1954	Ray C. Steele	Dr. William C. Starrett	Charles N. Lloyd	Not Provided For
Dubuque, IA	Jan. 7, 1955	Dr. William C. Starrett	Charles R. Burrows	Charles N. Lloyd	Not Provided For
St. Louis, MO	Jan. 6, 1956	Charles R. Burrows	Ray W. Beckman	William J. Harth	Not Provided For
Madison, WI	Jan. 4, 1957	Ray W. Beckman	Charles N. Lloyd	William J. Harth	Not Provided For
St. Paul, MN	Jan. 7, 1958	Charles N. Lloyd	Dr. George B. Herndon	William J. Harth	Robert Nord
Chicago, IL	Jan. 6, 1959	Dr. George B. Herndon	Kenneth M. Madden	William J. Harth	Robert Nord
Des Moines, IA	Jan. 5, 1960	Kenneth M. Madden	Jerome H. Kuehn	William J. Harth	Robert Nord
St. Louis, MO	Jan. 10, 1961	Jerome H. Kuehn	William J. Harth	Herbert J. Fisher	Robert Nord
LaCrosse, WI	Jan. 9, 1962	William J. Harth	Dr. Edward Schneberger	Herbert J. Fisher	Robert Nord
Winona, MN	Jan. 8, 1963	Dr. Edward Schneberger	Everett B. Speaker	Herbert J. Fisher	Robert Nord
Peoria, IL	Jan. 7, 1964	Everett B. Speaker	Hjalmar O. Swenson	Herbert J. Fisher	Robert Nord
Des Moines, IA	Jan. 12, 1965	Hjalmar O. Swenson	Alvin C. Lopinot & Willis Hanson	Herbert J. Fisher	Robert Nord
St. Louis, MO	Jan. 11, 1966	Alvin C. Lopinot	James L. Bailey	Jerome H. Kuehn	Robert Nord
LaCrosse, WI	Jan. 10, 1967	James L. Bailey	(not provided for in Constitution)	Jerome H. Kuehn	Robert Nord
St. Paul, MN	Jan. 9, 1968	John Funk*	Earl T. Rose	Stanley Daley	Raymond C. Hubley
Springfield, IL	Jan. 13-14, 1969	John Brasch	Earl T. Rose	Stanley Daley	Raymond C. Hubley
Des Moines, IA	Jan. 12-13, 1970	John Brasch	Earl T. Rose	Stanley Daley	Raymond C. Hubley
St. Louis, MO	Jan. 11-12, 1971	Earl T. Rose	John Funk	C.L. Cline	Raymond C. Hubley
LaCrosse, WI	Jan. 11-12, 1972	John Funk	Jerome H. Kuehn	C.L. Cline	Charles Kulp
Minneapolis, MN	Jan. 9-10, 1973	Jerome H. Kuehn	A.C. Lopinot	Willis Fernholz	Charles Kulp
Rock Island, IL	Jan. 8-9, 1974	A.C. Lopinot	C.W. Threinen	Willis Fernholz	Kent D. Keenlyne
Dubuque, IA	Jan. 7-8, 1975	C.W. Threinen	Jerry M. Conley	Willis Fernholz	Kent D. Keenlyne
Hannibal, MO	Jan. 7-8, 1976	Jerry M. Conley	Edwin H. Glaser	Willis Fernholz	Charles Kulp/ David Parsons
LaCrosse, WI	Jan. 11-12, 1977	Edwin H. Glaser	Charles Burrows	Willis Fernholz	David Parsons/ Jerry Rasmussen
Rochester, MN	Jan. 10-11, 1978	Charles R. Burrows	Larry Dunham	Steve Waters	Jerry Rasmussen
Rock Island, IL**	Jan. 16-17, 1979	Larry Dunham	James Addis	Steve Waters	Jerry Rasmussen
Muscatine, IA	Apr. 2-3, 1980	James Addis	Marion Conover	Steve Waters	Jerry Rasmussen
St. Louis, MO	Mar. 17-19, 1981	Marion Conover	Edwin H. Glaser	Steve Waters	Jerry Rasmussen
Madison, WI	Mar. 16-17, 1982	Edwin H. Glaser	James Schneider	Steve Waters	Jerry Rasmussen
Quincy, IL	Mar. 13-15, 1983	James Schneider	Bill Bertrand	Steve Waters	Jerry Rasmussen
Rochester, MN	Mar. 13-15, 1984	Bill Bertrand	Lee Kernen	Steve Waters	Jerry Rasmussen
Burlington, IA	Mar. 5-7, 1985	Lee Kernen	Marion Conover	Geof Emerson	Jerry Rasmussen
Hannibal, MO	Mar. 11-13, 1986	Marion Conover	Bill Dieffenbach	Willis Fernholz	Jerry Rasmussen
Winona, MN	Mar. 10-12, 1987	Bill Dieffenbach	Jack Skrypek	Willis Fernholz	Jerry Rasmussen
Peoria, IL	Mar. 8-10, 1988	Jack Skrypek	Bill Bertrand	Willis Fernholz	Gail Carmody
Wisconsin Dells, WI	Mar. 7-9, 1989	Bill Bertrand	Lee Kernen	Willis Fernholz	Gail Carmody
Bettendorf, IA	Mar. 13-15, 1990	Lee Kernen	Marion Conover	Willis Fernholz	Gail Carmody
St. Louis, MO	Mar. 12-14, 1991	Marion Conover	Bill Dieffenbach	Gary Ackerman	Gail Carmody
Red Wing, MN	Mar. 10-12, 1992	Bill Dieffenbach	Mark Heywood	Gary Ackerman	Jon Duyvejonck
Galena, IL	Mar. 9-11, 1993	Mark Heywood	Bill Bertrand	Gary Ackerman	Jon Duyvejonck
LaCrosse, WI	Mar. 15-17, 1994	Bill Bertrand	Mike Talbot	Ron Benjamin	Jon Duyvejonck
Dubuque, IA	Mar. 15-17, 1995	Mike Talbot	Kevin Szcodronski	Ron Benjamin	Jon Duyvejonck
Cape Girardeau, MO	Mar. 5-7, 1996	Kevin Szcodronski	Norm Stucky	Dan Sallee	Jon Duyvejonck
Winona, MN	Mar. 11-13, 1997	Norm Stucky	Mark Heywood	Dan Sallee	Jon Duyvejonck
Moline, IL	Mar. 17-19, 1998	Mark Heywood	Bill Bertrand	Ron Benjamin	Jon Duyvejonck
LaCrosse, WI	Mar. 9-11, 1999	Bill Bertrand	Mary Ellen Vollbrecht	Ken Brummett	Jon Duyvejonck
Cape Girardeau, MO	Mar. 20-23, 2000	Kevin Szcodronski	Gordon Farabee	Ken Brummett	Jon Duyvejonck
Bettendorf, IA	Mar. 13-15, 2001	Gordon Farabee	Mark Heywood	Ken Brummett	Jon Duyvejonck
Red Wing, MN	Mar. 12-14, 2002	Mark Heywood	Bill Bertrand	Rob Maher	Jon Duyvejonck
Collinsville, IL	Mar. 18-20, 2003	Dan Sallee	Ron Benjamin	Rob Maher	Jon Duyvejonck
LaCrosse, WI	Mar. 16-18, 2004	Ron Benjamin	Mike McGhee	Patrick Short	Jon Duyvejonck
Dubuque, IA	Mar. 15-17, 2005	Mike McGhee	Janet Sternburg	Patrick Short	Jon Duyvejonck

* Filled unexpired term of James L. Bailey, **Annual Meeting cancelled due to blizzard



Secretary/Treasurers Report

Balance as of March 14, 2005 **\$33,492.91**

Deposits:

Dues	\$10,000.00
Registration Fees	\$1,975.00
Publication Sales	<u>\$30.00</u>

TOTAL **\$12,005.00**

Expenses:

Awards	\$483.82
Database Maintenance	\$615.00
Library	\$9,080.79
Donations	\$500.00
Miscellaneous	\$835.00
Seed Money	\$703.53
Subscriptions	\$45.00
Compendium Costs	\$150.00
Service Charges – Bank	<u>\$12.00</u>

TOTAL **\$12,414.12**

DRAFT

Proposed UMRCC Budget (March 2005 - February 2006)

	<u>Income</u>	<u>Expenses</u>
Approximate Cash Reserves (as of March 1, 2005)	\$29,500	
Estimated Annual Meeting (61st) income	15,000	
2005 Dues	10,000	
 I. Professional Services/ contracts		
A. UMRCC Web Page, computer assistance, library maintenance		\$1250
B. River Rat Awards (61st Annual Meeting) / Conservation Award		500
C. Compile Proceedings from 2001 through 2005 Annual Meetings		2,500
 II. MEETINGS		
A. March 2005 Annual Meeting expenditures		11,300
B. 2004 Fall Section Meetings (\$250 each Section)		750
 III. UMRCC Projects, Grants, etc.		
A. Sturgeon tagging study (\$ for pit tags)		5,000
 IV. Miscellaneous		
A. Petty Cash miscellaneous expenses		750
 TOTAL ESTIMATED INCOME.....\$54,500		
 TOTAL ESTIMATED EXPENDITURES.....\$22,050		
 Estimated Balance in March 2006.....\$32,450		

62ND ANNUAL UMRCR MEETING
PROGRAM AND ABSTRACTS



The 62nd Annual Meeting of the UMRCC
March 14th – 16th, 2006
Quality Inn and Suites, Conference Center
Hannibal, MO

**“Managing the River’s Resources: A Collaboration
of Management and Science”**

- | | |
|--|--|
| 6:30 AM – 8:00 AM | Hot breakfast available to hotel guests |
| <u>Tuesday, March 14th</u> | |
| 9:30 AM – 5:30 PM | Registration |
| 10:00 AM – Noon | Freshwater Mussel Ad hoc Committee Meeting |
| Noon – 1:00 PM | Lunch (On your own) |
| 1:00 PM – 5:00 PM | Technical Section Meetings
Fisheries – Paradise Room
Law Enforcement – Calypso Room
Recreation – TBD
Water Quality – Coral Room
Wildlife – Aloha Room |
| 2:45 PM – 3:15 PM | Break (All technical sections) |
| 5:00 PM – 9:00 PM | Social – Mark Twain Hotel, Hannibal
(Transportation information on last page) |
| <u>Wednesday, March 15th</u> | |
| 7:00 AM – 9:00 AM | Executive Board Meeting – Coral Room |
| 8:00 AM – 5:00 PM | Registration |
| 9:00 AM – 9:20 AM | Welcome – <i>Janet Sternburg, UMRCC Chair-Elect, MDC</i>
Welcoming Address – <i>John Hoskins, Director, MDC</i> |

Opening Session: Moderator - Brian Todd, MDC

- 9:20 AM – 9:40 AM The River, the UMRCC and You – How Conservation Professionals Saved the Upper Mississippi River and Why it Needs Saving Again – *Dan McGuinness, Audubon Society*
- 9:40 AM – 10:00AM Systemic Forest Management on the Upper Mississippi River System – *Randy R. Urich, USACOE*
- 10:00 AM – 10:30 AM LTRMP: Using Monitoring Data to Increase our Understanding of the UMRS and Inform Decisions about its Management – *Jeff Houser, Brian S. Ickes and Brent C. Knights, USGS*
- 10:30 AM – 10:50 AM Break
- 10:50 AM – 11:10 AM Missouri's Catfish Harvest Evaluation Project – *Ross Dames and Kevin Sullivan, MDC*
- 11:10 AM – 11:40 AM Operation Homestead – *Gregg Hitchings, MDC*
- 11:40 AM – 1:00 PM Lunch (On your own)

Afternoon Session: Moderator - Bob Hrabik, MDC

- 1:00 PM – 1:20 PM Long-term Trends in Abundance and Habitat-related Use by Waterfowl in the Central Mississippi and Illinois River Valleys – *Joshua D. Stafford, Michelle M. Horath, Aaron P. Yetter and Chris S. Hine, INHS*
- 1:20 PM – 1:40 PM Where are the Ducks? – *Andy Raedeke, Dave Graber and Mike Flaspohler (presenting), MDC*
- 1:40 PM – 2:00 PM Importance of the Upper Mississippi River Ecosystem to Neotropical Migratory Birds – *Eileen M. Kirsch and Patricia J. Heglund, USGS*
- 2:00 PM – 2:20 PM Preliminary Report on the Effects of the 2005 Pool 5, Mississippi River Drawdown on Shallow-water Native Mussels – *David Heath, WI DNR with MN DNR and USACOE*
- 2:20 PM – 2:40 PM Break
- 2:40 PM – 3:00 PM Reclaiming Ted Shanks Conservation Area – *Ryan Kelly and Mike Flaspohler, MDC*
- 3:00 PM – 3:20 PM Establishing Bottomland Oaks in the Mississippi River Floodplain – *Kristen Goodrich, MDC*
- 3:20 PM – 3:40 PM We Did Good or Did We – *Kenneth Dalrymple, USFWS*
- 3:40 PM – 4:00 PM Response of Fishes to Floodplain Connectivity in the Middle Mississippi River – *Valerie A. Barko, Dave Herzog (presenting), MDC and Martin T. O'Connell, University of New Orleans*
- 4:00 PM – 5:00 PM Poster Session (Authors present)
- 6:00 PM – 10:00 PM Banquet – Program, Awards and Raffle
Guest Speaker: Jim Rathert, MDC Photographer, will share his award winning wildlife photography

Thursday, March 16th

- 7:30 AM – 8:30 AM Registration

Final Session: Moderator - Chris Williamson, MDC

- 8:00 AM – 8:20 AM Mississippi River Bioassessment: USEPA, Minnesota, Wisconsin – *J. Therese Dukerschein, Heidi A. Langrehr, Andrew D. Bartels, WI DNR and Walter Popp and Megan Moore, MN DNR*
- 8:20 AM – 8:40 AM Pattern and Abundance of Fish in the Tailwaters of Two Mississippi River Dams – *Mark Cornish, USACOE*
- 8:40 AM – 9:00 AM Preliminary Results of Habitat Use of Adult Sturgeon in Pool 24 of the Mississippi River – *Greg Snellen, Western Illinois University*
- 9:00 AM – 9:20 AM Evaluation of a Catch and Release Regulation for Largemouth Bass in Brown's Lake, Pool 13, Upper Mississippi River – *Melvin C. Bowler and Kirk Hansen, IA DNR*
- 9:20 AM – 9:40 AM Fish Movement in the Mississippi River – *Ron Brooks, Brian Koch, Tim Spier, Jim Garvey, Rob Columbo, Southern Illinois University and Dave Herzog, Bob Hrabik, MDC*
- 9:40 AM – 10:00 AM Break

10:00 AM – Noon

UMRCC Business Meeting (All UMRCC members and observers welcome)

Poster Session

- 1) Lake Sturgeon (*Acipenser fulvescens*) Sampling Techniques on the Upper Mississippi River – *Marcus Miller, MDC/Western Illinois University*
- 2) A Southern Gent's View of Wisconsin's Lake Sturgeon Spearing Season – *Travis Moore, MDC*
- 3) A Wild Rice Ecotype for Missouri and Illinois – *B.R. Dalrymple and K. L. Dalrymple, Wildlife Biologists*
- 4) Illinois River Refuges – Chautauqua Refuge: Fishing Opportunities for Largemouth Bass – *T.D. VanMiddlesworth, Kevin S. Irons, T. Matthew O'Hara, Mike McClelland and Matt Sprenger, INHS*

Opening Comments by Janet Sternberg, MO DOC

Good Morning and welcome to the 62nd annual meeting of the Upper Mississippi River Conservation Committee. I am Janet Sternburg, the Missouri Delegate to the UMRCC and I am here to begin today's session. Before we begin, I have a couple of items to mention. First, please make sure your cell phone ringers are turned off. And secondly, we will be selling raffle tickets at the breaks and for the first 10 minutes of lunch.

It is my pleasure this morning, to introduce the Director of the Missouri Department of Conservation, John Hoskins. John has been with the agency since 1977, having served as conservation agent, regional protection supervisor, chief of general services, Protection Division administrator, and since 2002, Director of the Conservation Department. John has both a BS in Education with a biology major, and a Master's in Public Administration. I believe the first time I really got to know him was about six years ago when we both were taking a class for the Master's in Public Administration. He was finishing up and I was just starting. Little did I know then that he was to be our next director. After his appointment, I thought to myself "I hoped I didn't make any stupid comments during the class and made a somewhat positive impression."

As you all know, the spring legislative session is a very busy time for Department directors as they are often called, and on short notice, to provide additional information on issues and budgets to the legislators. So, I am very pleased that John was able to make this meeting to welcome you to Missouri and start off this session. Please join me in welcoming, John Hoskins.

**UPPER MISSISSIPPI RIVER CONSERVATION COMMITTEE
JOHN HOSKINS
MARCH 15, 2006**

Good morning. On behalf of the Missouri Conservation Commission, I am pleased to welcome you to the 62nd annual meeting of the Upper Mississippi River Conservation Committee. Hannibal is a great setting for this meeting because it is one of the oldest Mississippi River towns in our state. By 1860, it was the second largest town in Missouri and was one of the main ports for steamboats, flatboats, and steamers on the Upper Mississippi River.

The life of a river rat was forever shaped for most of us by one of Hannibal's native sons-- Samuel Clemens, better known as Mark Twain. Twain based many of his stories on the people and places he knew as a boy. The river has changed considerably since that

time, but its resources are still a national treasure. So, in honor of our Hannibal location, I will occasionally pass on some of Twain's thoughts about our work.

As I consider that this is the 62nd meeting of the organization, I realize that 62 years is a long time to be in existence, especially for a group of government agencies! If the Committee was a person, it would be eligible for social security, and perhaps thinking about retirement. But from what I hear, this organization shows no signs of slowing down.

Twain pondered age and concluded, "If I had been helping the Almighty when he created man, I would have had him begin at the other end, and start human beings with old age. How much better to start old and have all the bitterness and blindness of age in the beginning!"

Perhaps as it applies to UMRCC, longevity is the greatest statement about the continued need for the Committee's work. It is still creating opportunities for river managers, biologists, researchers, and law enforcement officers to:

- share resource information and learn from one another;
- collaborate on resource studies and issues;
- seek opportunity for uniform regulations on the river;
- provide input on river initiatives; and
- educate citizens on the river's resources.

This level of cooperation is vitally important because all of the river's resources are spread across many political boundaries. Invasive species don't recognize state lines, just as sport fish, waterfowl, and neotropical migratory birds do not honor national boundaries. Ecosystem restoration may have site specific projects, but improving the entire river system relies upon collective actions. Collaboration and information sharing, two principal components of the UMRCC, will assist efforts to meet our current and future challenges.

Twain recognized it takes time to learn and find a path. He concluded, "A round man cannot be expected to fit in a square hole right away. He must have time to modify his shape."

I would like to digress from river issues for a moment by discussing another challenge facing resource agencies. In the next few years, a generational change will occur

in most governments with the retirement of the oldest baby boomers. In the natural resources, some professions and organizations are projected to see the retirement of more than fifty percent of upper level staff. This includes senior river managers, law enforcement officers, biologists and others. This will result in a tremendous loss of institutional memory and a loss in knowledge and history of the river's resources, programs and efforts.

Undoubtedly the next generation of professionals will do a wonderful job, but they will likely be faced with a steep learning curve. I believe the UMRCC is uniquely positioned to help transfer knowledge from the older to the less seasoned river rats, and to help fight the urge to reinvent the wheel. Or, as Twain warned, "Don't tell fish stories where the people know you; but particularly, don't tell them where they know the fish."

Events such as this annual meeting and technical section meetings provide great opportunities to network with peers. We each have a responsibility to make that interaction meaningful for current and future managers.

As we continue to move forward in managing the Mississippi River ecosystem, meaningful interactions with natural resource professionals, river management agencies, and other environmental organizations are required. Each group adds its own unique knowledge and its goals for the river. A collaborative process of gathering scientific information, understanding its meaning and using that information to influence management decisions enhances the opportunity for success.

The Corps of Engineer's Navigation and Ecosystem Sustainability Program proposes project evaluation and adaptive management to further both navigation and the sustainability of the river's ecosystem. Partners working on the ecosystem plan recognize the importance of evaluation to determine if a project successfully achieved its goals, or if modifications are needed.

The Missouri Department of Conservation, like many agencies responsible for fish and wildlife populations, has long recognized the need to evaluate harvest regulations using scientific studies. For example, sister agencies joined to establish a uniform regulation for shovelnose sturgeon in the Mississippi River within the boundaries of Missouri, Illinois and

Kentucky. These evaluation studies are now expanding to more management and restoration activities, to better understand what creates effective returns on our efforts.

In Missouri, we are undertaking what we call the Golden Anniversary Wetland Initiative. The project will rehabilitate older Department wetland management areas by incorporating 21st century wetland and ecological science into restoration approaches. We are consciously avoiding a “repair” mentality in planning these projects. Just south of Hannibal is one such area—the Ted Shanks Conservation Area.

Five decades of scientific studies conducted since the original wetlands were built, help us better understand how modern engineering, design and construction methods offer solutions to achieving desired wetland functions. This, in turn, will improve our capability to address a broader array of wetland species. Twain rightly observed, “Education consists mainly of what we have unlearned.”

Long-term success of these efforts will depend upon diverse partners for design and funding and upon quality monitoring and evaluation processes.

Biologists on Missouri’s large rivers are also evaluating the effects of habitat improvements and rehabilitation projects upon fish communities and water quality. Such evaluations should lead to tools and techniques that more river managers can use to improve the health of the river and its fisheries populations. Once again, collaboration of federal and state governments and university personnel better the position of all river users.

Measuring success is also essential in this era of accountability as the competition for dollars and time takes further hold. This is best summarized in the brief statement ... “Plan well, monitor effectively, celebrate often.” You are, after all, in the Show-Me state.

Therefore, I commend all of you dedicated professionals who participate to make UMRCC successful. Please enjoy a lively professional dialogue and join Missouri in celebrating often.

I leave you with a final thought from Twain about our natural resources and the impact of man. In discussing river diversity he said, “A river without islands is like a woman without hair. She may be good and pure, but one doesn't fall in love with her very often.”

62nd Annual Meeting of UMRCC Abstracts

Abstract

Bowler, Melvin C. and Kirk Hansen. Iowa Department of Natural Resources, Mississippi River Monitoring Station and Bellevue Research and Management Station

Evaluation of a Catch and Release Regulation for Largemouth Bass in Brown's Lake, Pool 13, Upper Mississippi River

Brown's Lake is a 453 acre backwater of Pool 13, Upper Mississippi River located 10 miles south of Bellevue, IA. Due to declines in the fishery observed from 1991-1997, a harvest regulation mandating the catch-and-release of all largemouth bass *Micropterus salmoides* was initiated in Brown's Lake on January 1, 1998. The effect of this regulation was evaluated over a 13-year pre and post-regulation period, using focused research data from Brown's Lake and data collected by the Long Term Resource Monitoring Program. The establishment of this catch-and-release bass fishery improved the abundance of preferred length largemouth bass (>15 inches) and improved angler catch rates and angler satisfaction. However, the regulation did not have a prolonged effect on the size structure (relative stock density) of largemouth bass within Brown's Lake. Initially largemouth bass size structure increased for a period of two years but then returned to levels consistent with other backwater lakes in Pool 13. These initial changes in size structure could not be attributed to any one factor and could be the result of the catch-and-release regulation, natural variation in local largemouth stocks within Pool 13, or low compliance with the regulation. Recommendations include: continue the present catch-and-release regulation in Brown's Lake; continue the annual collection of fall electrofishing data; and periodically assess largemouth bass abundance and size structure to evaluate the long-term effect of the regulation.

Abstract

Brooks, Ron, Brian Koch, Tim Spier, Jim Garvey, Rob Columbo, Southern Illinois University, and Dave Herzog, Bob Hrabik. Missouri Department of Conservation, Resource Science Division

Fish Movement in the Mississippi River

Fish biology and life cycles are very difficult to study for species inhabiting large river systems because of their propensity for long-range movement patterns. In freshwater, riverine environments, only ancillary information has been gathered to support the hypotheses of extreme migrations. For most fish species, we know little or nothing of seasonal distributions - even for critical periods such as pre-spawning, spawning, and post-spawning periods. This type of information has historically been collected using telemetry, but only in limited river reaches that were enclosed by dams. Invasion of Asian carp species, the population demise of Pallid Sturgeon, increased exploitation of Shovelnose Sturgeon and Paddlefish for caviar, and the potential range-limiting effects of dams on all migratory fish have induced interest in movement

studies for these and other riverine fish. Southern Illinois University (SIUC), the Missouri LTRM (Jackson, MO.), and the Army Corps of Engineers recently combined resources to study movements of Pallid Sturgeon in the middle Mississippi River and its tributaries in an effort to determine spawning periods and locations in addition to identifying migratory behavior. SIUC also completed a study investigating movement of Asian Carp and Paddlefish near the confluence of the upper Mississippi River and the Illinois River. In addition to traditional manual tracking methods using sonic telemetry equipment, stationary receivers were deployed in both studies for the first time in large, Midwestern rivers to facilitate the manual tracking effort. The combined methods provided insight to likely Pallid Sturgeon spawning areas and periods, and direct evidence of long-range movements of Pallid Sturgeon, Paddlefish, and Asian Carp. Stationary receivers were also instrumental in providing continuous surveillance of local areas of interest and detect Pallid Sturgeon movement from below a lowhead dam in the Mississippi River into the Missouri River - previously postulated as an unlikely feat for Pallid Sturgeon. The receivers also documented Paddlefish and Asian Carp movement from the Illinois River through or over two dams into the middle Mississippi River and/or the Missouri River. We are currently attempting to deploy a network of stationary receivers to economically and effectively monitor long and intermediate movement ranges of transmittered fish. The network will initially cover immediate areas of interest for projects currently in effect and be useful to all research entities that would use transmitters detectable to the receivers. This system will reduce the amount of manual effort required (and likely economically impossible to employ) to monitor movement of large river fishes that exhibit very long movement patterns.

Abstract

Cornish, Mark. U.S. Army Corps of Engineers

Pattern and Abundance of Fish in the Tailwaters of Two Mississippi River Dams

A hydroacoustic and fish capture study was performed in May, June, and November 2005 below two dams on the Upper Mississippi River. The study area included the tailwater sections of Melvin Price Locks and Dam (RM 200.8) and Lock and Dam 22 (RM 301.2). This study found that the pattern and abundance of fish differed below each dam. Large concentrations of fish greater than 40 inches were found below Melvin Price whereas smaller concentrations of generally smaller fish were observed below Lock and Dam 22. This study will be used to monitor existing conditions at these dams and guide planning efforts as part of the fish passage program of the Navigation and Ecosystem Sustainability Program (NESP).

Abstract

Dalrymple, B. R. and K. L. Dalrymple. Wildlife Biologists

A Wild Rice Ecotype for Missouri and Illinois Wildlife Biologists

Native wild rice seed was gathered in West Central Illinois by Kenneth Dalrymple in 2002 and has been successfully grown near Annada, Missouri for the past two years. This ecotype of wild rice will grow in moist soil management areas, ponds and other wetland sites that have a stable water level of two (2) to four (4) inches from April thru September. Maintaining the water depth at a constant elevation is the most important cultural practice of wild rice production. The plant is very competitive, can grow in ponded water (non-flowing) and will reseed naturally. Waterfowl may eat the entire crop in areas that are not protected by exclosures or with a minimum water depth of two feet (24 inches) during the fall and spring migration so puddle ducks cannot reach the seed. Spring planting with seedlings or stratified seed may be the best practice for a good stand of wild rice year after year.

Abstract

Dalrymple, Kenneth. U.S. Fish and Wildlife Service

We Did Good or Did We

Results of what happened ten years plus after implementation to RPM Tree plantations completed in 1994 – 1996 on unprotected sites adjacent to the Mississippi River where the survivability and regeneration of native hardwood trees in hostile, competitive growing environments is a challenge. RPM was new technology of root production that accelerated growth of hard mast oak trees from 3 to 5 feet the first year to make it more competitive in areas that frequently flood.

Abstract

Dames, Ross and Kevin Sullivan. Missouri Department of Conservation, Fisheries Division

Missouri's Catfish Harvest Evaluation Project

In 2005, the Missouri Department of Conservation initiated a 5-year project to assess stream dwelling flathead catfish and blue catfish. This project was designed to fulfill several strategies in Missouri's *Statewide Catfish Management Plan*, and to provide urgently needed population information to address public requests to liberalize catfish fishing methods. Specific objectives include: determining the best sampling methods for assessing stream catfish populations, describing current population structures, and assessing the impacts of fishing, including handfishing. The study area includes Pools 20 – 22 of the UMR, the Fabius River (a UMR tributary), and six other inland streams. Low pulse electrofishing, hoop netting and set lines were used to capture catfish in study streams. Flathead catfish and blue catfish were marked with reward tags. We captured a combined total of 8,880 flathead catfish and blue catfish during 2005. Of the three sampling methods, electrofishing captured the most and the widest size range of catfish, including large catfish. Set lines produced few catfish and did not capture large

catfish more efficiently than the other two methods. Over 4,960 flathead catfish were captured in the UMR and Fabius rivers combined, of which 917 were tagged. To date, 10% of the tags have been returned. Commercial fishing accounted for 48% of the returns, hook methods 51%, and handfishing 1%. Handfishers reported 139 trips and caught 28 catfish during Missouri's first experimental handfishing season that was open for 45 days on three streams during 2005.

Abstract

Dukerschein, J. Therese, Heidi A. Langrehr, Andrew. D. Bartels, Wisconsin DNR LTRMP/EMAP-GRE Field Station, and Walter Popp, Megan Moore. Minnesota DNR LTRMP/EMAP-GRE Field Station

Mississippi River Bioassessment: USEPA, Minnesota, Wisconsin

Wisconsin Department of Natural Resources, Minnesota Department of Natural Resources, and the Minnesota Pollution Control Agency are forming a new Cooperative Agreement with U.S. Environmental Protection Agency's Office of Research and Development. The work planned consists of 3 parts:

1. Continuation of EMAP-GRE monitoring per EMAP-GRE protocols used in the 2004/05 sampling plus additional design elements to model and develop objective criteria and reaches that represent reference condition on the upper Mississippi River.
2. Development of appropriate condition indices and biocriteria for submersed aquatic vegetation, a major ecological driver in the WI/MN reach of the upper Mississippi River. The sampling design is a modification of EMAP-GRE design suitable for submersed aquatic vegetation and the sampling protocols are derived from LTRMP rake method .
3. Comparison of Lyons (2001) IBI metrics and scores on catches obtained from the various electrofishing protocols used for large river fisheries assessment in Wisconsin and Minnesota

Goals, objectives, design, and sampling/analysis methods will be described in more detail in the presentation and are relevant to the linkage of management and research, in this case, research to develop more quantitative and robust assessment tools to evaluate need for and response to management measures possible on the upper Mississippi River.

Abstract

Raedeke, Andy, Dave Graber and Mike Flaspohler (presenting). Missouri Department of Conservation, Resource Science Division and Wildlife Division

Where are the Ducks?

Every year hunters all across North America ask "Where are the ducks?" and "What is the outlook for the season?" Like all parts of the world, Missouri duck hunters have competing ideas on where the ducks are and what is to blame for poor hunting. Some of these ideas

include: “If we’d only have a dry year, then the ducks would be concentrated in the places that have water,” versus, “If we would only have a wet year, there would be more habitat available and more ducks.” Hunting would be better if we could only hunt the refuges and get the ducks to spread out,” versus, “We need more refuges in our hunting area to attract more ducks.” In an effort to answer these questions in Missouri, researchers with help from wetland managers conducted a retrospective analysis of fall population data, harvest reports, and management activities to evaluate the influence of refuges and habitat restoration on duck use and harvest. The data indicates that as we have added additional, quality habitat and refuge we have continued to increase duck use across the state thus providing for more hunting opportunity.

Abstract

Goodrich, Kristen. Missouri Department of Conservation, Forestry Division

Establishing Bottomland Oaks in the Mississippi River Floodplain

As the hydrology of the Mississippi River changes, the management of the floodplains must also change. To answer some forestry related concerns, a management and evaluation project was implemented to arrive at some conclusions about reforestation. Questions that many managers struggle with are being addressed and include: best elevations to plant trees on, species of trees to plant, is RPM significantly better than bare root in a bottomland setting to warrant the cost, and should trees be planted on mounds. As the project progresses, so will our conclusions to these questions which should allow bottomland managers in this area of the Mississippi to make more educated management decisions.

Abstract

Heath, David. Wisconsin Department of Natural Resources with Minnesota Department of Natural Resources and U.S. Army Corps of Engineers

Preliminary Report on the Effects of the 2005 Pool 5, Mississippi River Drawdown on Shallow-water Native Mussels.

During the summer of 2005, Navigation Pool 5 of the upper Mississippi River was draw down to encourage macrophyte growth. During this drawdown, we investigated the effects of lowered water on shallow-water freshwater mussels by comparing experimental sites in Pool 5 to reference sites in Pool 4, a pool that was not draw down. Pool 5 elevations were an average of 1.25ft and 1.33ft lower at the dam (secondary control point) and Alma gage (primary control point), respectively, than they were normally. Mean daily temperatures were 20.4°C higher on dewatered areas compared with watered areas in Pool 4. Estimated area exposed from the drawdown was 1251ac. The combined total survival rate of shallow-water mussels in Pool 4 was 100% while 71.9% of shallow-water mussels survived in Pool 5. Mussel survival in Pool 5 was related to depth; 30.1% of mussels initially placed in 1ft of water survived while 98% survived when initially placed in 3ft of water.

Mussels at sloped sites had three times the survival than those at flat sites suggesting that escape routes to water are important. Members of the subfamily Ambleminae had over 1.6 times the survival rate as members of the subfamily Lampsilinae.

We also sampled ~randomly selected transects in dewatered locations. The mean density of freshly dead mussels from transects in lower half of the pool was 0.40/m² compared to 0.57/m² for living mussels. A minimum of somewhere between 1.84 and 6.93 million mussels died in Pool 5 as a result of the drawdown. We were not able to estimate the mortality of state listed species, although we know that at least 8 of these species occur in the pool and were killed by the drawdown.

Abstract

Barko, Valerie A., David P. Herzog (presenting), Missouri Department of Conservation, Resource Science Division, and Martin T. O'Connell, University of New Orleans, Pontchartrain Institute for Environmental Sciences

Response of Fishes to Floodplain Connectivity During and Following a 500-Year Flood Event in the Unimpounded Upper Mississippi River

We examined fish assemblage structure among three differing floodplain types (broad, moderate, and narrow) during the 1993 flood in the unimpounded reach of the upper Mississippi River. This 500 y flood event provided a unique opportunity to investigate fish-floodplain function because the main river channel is typically disjunct from approximately 82% of its floodplain by an extensive levee system. Fishes were sampled during three separate periods and 42 species were captured. Analysis of similarity (ANOSIM) revealed a significant and distinguishable difference of both adult and young-of-the-year (YOY) assemblage structure among the three floodplain types (broad, moderate, and narrow). Mean Secchi transparency, temperature, and dissolved oxygen were greatest at the broad floodplain, while mean turbidity and water velocity were greatest at the narrow floodplain, while mean turbidity and water velocity were greatest at the narrow floodplain. However, only depth of gear deployment and Secchi transparency were significantly correlated with adult assemblage structure, while none of these variables were significantly correlated with YOY assemblage structure. The numerically abundant families on the floodplain included Centrarchidae, Clupeidae, Cyprinidae, and Ictaluridae. Both native and non-native fishes were captured on all the floodplain, suggesting that some species may have used flooded terrestrial habitat for spawning, feeding, or both. In addition, several of the numerically abundant species that were captured on the floodplain peaked in catch-per-unit-effort 1-3 years after the 1993 flood event. The findings from our study provide much needed insight into fish-floodplain function in a temperate, channelized river system and suggest that lateral connectivity of the main river channel to less degraded reaches of its floodplain should become a management priority to not only maintain faunal biodiversity but also potentially reduce the impacts of non-native species in large river systems.

Abstract

Hitchings, Gregg. Missouri Department of Conservation, Protection Division

Operation Homestead

A review of the development, implementation and results of a joint investigation by Missouri and Iowa targeting hunting and fishing permit fraud.

Abstract

Houser, Jeff, Brian S. Ickes and Brent C. Knights. U.S. Geological Survey, Upper Midwest Environmental Sciences Center

LTRMP: Using Monitoring Data to Increase our Understanding of the UMRS and Inform Decisions about its Management

Over the last 10+ years LTRMP has assembled a large flood plain river data base that is unprecedented in its temporal and spatial extent. Much of the analytical effort to date has focused on refining sampling strategies, evaluating methodologies, and describing basic temporal and spatial patterns. These important and necessary first steps have spanned a range of analytical perspectives, increased our understanding of the UMRS, and generated specific hypotheses relevant to management and research. In the first part of this talk, we will highlight some of the knowledge gained from these efforts and how that knowledge is relevant to management and river ecology. For example, LTRMP data have contributed to our understanding of the interaction between suspended sediments, water level fluctuations and aquatic vegetation, the relative abundance of invasive fish species, and the role of backwaters as areas of primary production and nutrient processing.

While important first steps have been made to understand UMRS ecosystems using LTRMP data sources, we still largely lack capabilities to predict ecological responses to management actions. This is because such prediction depends in part upon a complex chain of causation, the entirety of which rarely falls under the domain of a single coordinated research or monitoring project. However, LTRMP data, coupled with ecosystem models and data from other efforts and studies, hold incredible promise for enhancing our collective understanding of UMRS ecosystems. The balance of the talk will focus on the potential role of models in integrated science and management of UMRS ecosystems, briefly highlight some key features of useful models as well as challenges in developing them, and introduce our early efforts to forge a flexible modeling framework for addressing a wide array of management and science needs within the UMRS basin.

Abstract

Kelly, Ryan P. and Frank A. Nelson. Missouri Department of Conservation, Wildlife Division and Resources Sciences Division

Reclaiming Shanks

Reed Canary Grass, *Phalaris arundinacea* L. (RCG) is an exotic, cool-season grass that is impacting biodiversity in wetlands nationwide. The “Great Flood” of 1993 killed the majority of bottomland trees at Ted Shanks Conservation Area (TSCA), south of Hannibal. At the same time, the flood deposited Reed Canary Grass seed from the surrounding agricultural area and levees onto TSCA. In little time, RCG dominated the understory of the dead pin oak forest. The dead timber has inhibited machinery access and the size of the impoundments has negated manual treatment attempts. Eleven years later TSCA management staff began efforts to clear the woody debris to enable RCG control measures. At the end of August 2005, 900 acres had been cleared and were more accessible for management. We are beginning to evaluate several management actions to control RCG. Various combinations of disking, herbicide, Roundup Ready Corn®, and winter wheat (*Triticum aestivum*) are being used to exhaust and suppress RCG. Steps are being made to reclaim TSCA and provide valuable habitat to resident and migratory wildlife.

Abstract

Kirsch, Eileen M. and Patricia J. Heglund. U.S. Geological Survey, Upper Midwest Environmental Sciences Center

Importance of the Upper Mississippi River Ecosystem to Migrating Neotropical Migratory Birds

Floodplain forest on the Upper Mississippi River and adjacent upland forests which line the bluffs next to the river and tributaries, compose a habitat corridor for migrating forest birds in a highly agricultural portion of the USA. It is thought that this corridor provides an important link between southern wintering grounds and northern breeding grounds for neotropical and short distance migrant songbirds. There is growing concern and interest in bird habitat use during migration so that conservation efforts can target important migration habitat and landscapes. Floodplain and upland forests in the region have fundamentally different vegetation species composition and edaphic conditions. Further, conservation and management challenges differ due to human activities affecting floodplain and upland forests. In 2005 we began a study of spring songbird migration along the Upper Mississippi River (Pools 6-9). Area searches were conducted in random forest locations on the floodplain and in uplands within 10 miles of the river; and two banding stations were established, one in the floodplain and one in upland forest. Results of area searches reveal no differences in abundance but species compositions seemed to differ between upland and floodplain forest. For example, Rose-breasted Grosbeaks and Tennessee Warblers were more frequently detected in upland forest, whereas American Redstarts, House Wrens, Great-crested Flycatchers, and Song Sparrows were more frequently detected in the floodplain. Species composition and abundance of birds netted at banding

stations differed markedly between the floodplain and upland forest. White-throated Sparrows and American Redstarts were very common at the floodplain site, and Rose-breasted Grosbeaks and Eastern Towhees were almost exclusively netted in the upland site. These differences may be due to site effects, not overall habitat effects and to explore this further we plan to increase the number of banding stations in 2006. Also in 2006, we will be expanding the transect sampling to include floodplain forests on Pools 16-18 and adjacent upland forests. Also in 2006, we will be examining radar images (NEXRAD) to look for potential migration “hot spots” along the UMR and any evidence that the river corridor is used more heavily than surrounding landscapes.

Abstract

Miller, Marcus. Missouri Department of Conservation and Western Illinois University

Lake Sturgeon (*Acipenser fulvescens*) Sampling Techniques on the Upper Mississippi River

Poster presentation will show efforts of the past year and what data we have gathered including our present and future plan of study. This past year our focus was to capture target sized adult lake sturgeon for transmitter implantation. We utilized dead set gill nets in early spring and gradually switched to trot lines through early summer as water temperatures were on the rise. We also tried hoop nets and trammel net drifts. As summer temperatures peaked we switched back to dead set gill nets. Information collected was water temperature, GPS location, Depth, and Habitat. We also checked and tagged all Lake Sturgeon with PIT tags for identification.

Our present and future effort includes a more comprehensive study into capture technique. Using this study as a graduate research project through Western Illinois University we will sample different habitats at different water conditions with a variety of gears. This will be done in an effort to produce an effective guide on how and when to capture lake sturgeon of varying age classes for future studies. This poster presentation will discuss techniques used and information we have gathered thus far.

Abstract

Moore, Travis. Missouri Department of Conservation, Fisheries Division

A Southern Gent's View of Wisconsin's Lake Sturgeon Spearing Season

In February, 2005, I traveled to Lake Winnebago, Wisconsin to learn more about the biology of lake sturgeon and Wisconsin's management approach for this species. The Lake Winnebago lake sturgeon spearing season opens in mid-February and attracts spearers from almost all 50 states. All speared fish must be submitted to a check station where a variety of biological information is collected, making this a good opportunity to learn more about this amazing fish.

To my surprise, the trip also proved to be an incredible cultural experience. My presentation will highlight Wisconsin's spearing season, identify who the spearers are, and also delve into what the spearing season means to those who partake in it.

Abstract

Snellen, Greg R. Western Illinois University, Department of Biological Sciences

Preliminary results of Habitat Use of Adult Lake Sturgeon in Pool 24 of the Mississippi River

Lake Sturgeon were nearly extirpated from Missouri waters in the early 1900's. The Missouri Department of Conservation started restocking lake sturgeon in 1984 and as of 2005 approximately 280,606 were released in Mark Twain Lake, the Missouri River and the Upper Mississippi River. Some of these fish are nearing sexual maturity. Basic information needed to evaluate the current Lake Sturgeon population is lacking. A pilot study of habitat use and movement of lake sturgeon was conducted from October 2004 until November 2005. Special emphasis was placed on identifying, and classifying spawning sites. Ten lake sturgeon were surgically implanted with radio transmitters and tracked on a weekly basis in Pool 24 near Louisiana, Missouri. Lake sturgeon primarily used main channel border and main channel habitat and all but one fish were located in Pool 24. No spawning sites were documented.

Abstract

Stafford, Joshua D., Michelle M. Horath, Aaron P. Yetter, and Chris S. Hine. Illinois Natural History Survey, Bellrose Waterfowl Research Center, Havana, IL

Long-term Trends in Abundance and Habitat-related Use by Waterfowl in the Central Mississippi and Illinois River Valleys

The Central Mississippi (i.e., Pools 16-26) and Illinois (i.e., Peoria and LaGrange Pools) river valleys (hereafter, CMRV and IRV) provide important habitats for migrating waterfowl. Unfortunately, both river systems have experienced large-scale hydrologic alterations, resulting in considerable loss of waterfowl habitat. The Illinois Natural History Survey has aeri ally inventoried waterfowl on both river systems during fall since 1948 and intermittently during spring since 1955. We analyzed these data in relation to time and wetland characteristics to provide information to guide wetland conservation and restoration efforts. Trends in abundance varied considerably among species and river regions, but waterfowl abundance was generally more stable at CMRV than IRV sites during falls 1948-2000. Mallard abundance declined significantly or nearly so at IRV sites, whereas abundance of several other dabbling duck species (e.g., gadwall, American wigeon, northern shoveler) increased in both river systems. Conversely, scaup abundance declined significantly in the upper CMRV (i.e., pools 16-19), but exhibited a nearly significant increase in the lower CMRV (i.e., pools 20-26). Abundance of

mallard and non-mallard dabbling ducks was positively associated with the proportion of wetland area classified as “emergent” (i.e., shallow marsh-wet meadow or deep marsh) during spring and fall in both river valleys. Interestingly, abundance of diving ducks was positively associated with open water area at CMRV sites, but negatively associated with this variable at IRV locations, likely reflecting markedly lower quality of open water habitats in the IRV. Waterfowl abundance was also related to refuge area at inventoried locations during fall and spring, perhaps indicating interseasonal philopatry to, or better spring management of, refuge sites. We suggest habitat acquisition and restoration efforts intended to benefit waterfowl emphasize emergent-wetland components. Further, we recommend investigations of habitat use by waterfowl in each river system to elucidate the respective roles of refuge and non-refuge sites in the midcontinent region during fall and spring migration.

Abstract

Urich, Randall R. U.S. Army Corps of Engineers, Natural Resource Project

Systemic Forest Management on the Upper Mississippi River System

The Upper Mississippi River System (UMRS) is a vital part of our national economy and an irreplaceable ecological treasure. The forest and grassland components of the UMRS floodplain are very important habitat for migratory and nesting birds as well as other wildlife. Through the Corps of Engineers Navigation and Ecosystem Restoration Program (NESP), a project is underway to develop a regional management plan, which will establish a foundation for the Corps, partner agencies and stakeholders to more effectively collaborate on and implement environmental stewardship activities within UMRS forests. This presentation will include a general overview of the project, recent accomplishments and proposed activities for the future.

Abstract

VanMiddlesworth, T. D., Kevin S. Irons, T. Matthew O’Hara, Mike McClelland, and Matt Sprenger. Illinois Natural History Survey

Illinois River Refuges – Chautauqua Refuge: Fishing Opportunities for Largemouth Bass

Lake Chautauqua Refuge is part of the Illinois River Refuge System managed by the U.S. Fish and Wildlife Service. The refuge is composed of 4,388 acres of land and water. Lake Chautauqua itself consists of roughly 3,200 acres of wetted area. This area is divided by a cross dike into a north pool and a south pool. Recent construction by an Environmental Management Program (EMP) and a Habitat Rehabilitation and Enhancement Project (HREP) has improved the habitats and management capabilities of the refuge. The south pool is managed for migrating waterfowl and shorebirds and the water levels are manipulated for moist soil habitat, which are flooded in the fall and winter for these birds to use. The 1,200 acre north pool was constructed

to maintain deep water habitat for fish and diving ducks. After being refilled, the North Pool has been stocked with many fish, including largemouth bass, (*Micropterus salmoides*).

Largemouth bass are a desired sport fish in central Illinois and are common in the Illinois River and its backwaters. Within the refuge, largemouth bass anchor the fishery within the north pool along with white crappie, (*Pomoxis annularis*), black crappie, (*Pomoxis nigromaculatus*), channel catfish, (*Ictalurus punctatus*), bluegill, (*Lepomis macrochirus*), and white bass, (*Morone chrysops*). In 2005, 30 species and 1 hybrid species (white bass) have been found in the north pool by the Illinois Natural History Survey monitoring, so anglers may catch other fish species as well. Largemouth bass populations have established themselves in the lake with individuals up to 19 inches in length and weighing as much as 5 pounds. Initial stockings in 1997-1998 added to the lakes bass population along with the Illinois Department of Natural Resources stocking efforts and supplemental stockings in 2004. The bass population within the lake appears to be healthy and improving as the number of bass greater than 15 inches shows. Additionally, bass have been reproducing since 1999.

MINUTES OF THE UMRCC
TECHINICAL SECTIONS
2005-2006

AGENDA

Upper Mississippi River Conservation Committee Water Quality Technical Section

Quality Inn & Suites, Conference Center
Hannibal, Missouri

March 14, 2006

Chair: John Olson, Iowa Department of Natural Resources

Phone: (515) 281-8905; FAX: (515) 281-8895; e-mail:
john.olson@dnr.state.ia.us

1:00 to 5:00 P.M.:

- Welcome; Introductions
 - State/Agency updates
 - Coordinator's report: Jon Duyvejonck, USFWS
 - Great Rivers EMAP update / discussion: Dave Bolgrien, U.S. EPA, Duluth
 - Mississippi River Bioassessment: USEPA, Minnesota and Wisconsin: Terry Dukerschein, Wisconsin DNR/LTRMP, La Crosse
 - Water quality monitoring possibilities for the UMR under the Navigation & Ecosystem Sustainability Program (NESP): Barry Johnson, USGS, Upper Midwest Environmental Sciences Center, La Crosse.
 - Progress on updating the UMR water quality database. Bill Franz or Simon Manoyan, U.S. EPA Region 5, Chicago
 - Addressing sediment-related water quality impairments on the UMR: a progress report from the Upper Mississippi River Basin Association's *Water Quality Task Force*. John Olson, Iowa DNR, Des Moines
- **Selection of new chair**
 - **Closing**

Minutes of the Spring 2006 meeting of the UMRCC Water Quality Technical Section

Revised on April 27, 2006

Chair: John Olson, Iowa Department of Natural Resources

Phone: (515) 281-8905; FAX: (515) 281-8895

The Spring 2006 meeting of the UMRCC Water Quality Technical Section (WQTS) was held from 1:00 to 5:00 P.M. on March 14th in conjunction with the annual UMRCC meeting held from March 14-16 in Hannibal, MO. The following persons attended the Technical Section meeting.

	Name	Affiliation	E-mail Address
1.	Sharonne Baylor	USFWS, Upper Miss. Refuge	Sharonne_baylor@fws.gov
2.	Dave Bierl	U.S. ACE, Rock Island	David.p.bierl@usace.army.mil
3.	Dave Bierman	Iowa DNR/LTRMP, Bellevue	Dave.bierman@dnr.state.ia.us
4.	Dave Bolgrien	U.S. EPA, Duluth	Bolgrien.dave@epa.gov
5.	Rich Burdge	Missouri DNR	Rich.burdge@dnr.mo.gov
6.	Terry Dukerschein	Wisconsin DNR, La Crosse	tdukerschein@usgs.gov
7.	Jon Duyvejonck	USFWS, Rock Island	Jon_duyvejonck@fws.gov
8.	Jim Fischer	Wisconsin DNR/LTRMP, La Crosse	James.fischer@dnr.state.wi.us
9.	Bill Franz	U.S. EPA, Region 5, Chicago	Franz.william@epa.gov
10.	Jeff Houser	Upper Mississippi Environmental Science Center/USGS	jhouser@usgs.gov
11.	Brian Ickes	USGS, UMESC, La Crosse	bickes@usgs.gov
12.	Barry Johnson	USGS, UMESC, La Crosse	bljohnson@usgs.gov
13.	Bill McGuire	Missouri Dept. of Conservation	Bill.mcguire@mdc.mo.gov
14.	Mike McKee	Missouri Dept. of Conservation	Mike.mckee@mdc.mo.gov
15.	John Olson	Iowa DNR, Des Moines	John.olson@dnr.state.ia.us
16.	Kevin Slattery	U.S. ACE, St. Louis	Kevin.p.slattery@usace.army.mil
17.	Mike Smith	Illinois Natural History Survey/LTRMP, Havana	Msmitty2@uiuc.edu
18.	John Sullivan	Wisconsin DNR, La Crosse	John.sullivan@dnr.state.wi.us
19.	Mary White	U.S. EPA, Region 5, Chicago	White.mary@epa.gov
20.	Scott Yess	USFWS, La Crosse	Scott_yess@fws.gov

Four of the five UMR state were represented at the meeting; water quality agencies with Clean Water Act reporting responsibilities were represented by three states: IA, MO, and WI.

State/Agency updates

Iowa DNR, John Olson: John provided updates on the following: (1) New fish consumption advisory protocol. As of March 2006, Iowa DNR has adopted a risk-based fish consumption advisory protocol that replaces the previous protocol based on action levels published by the U.S. Food and Drug Administration. Implementation of this advisory resulted in issuance of four new advisories in 2006; all the advisories were due to levels of mercury in fish. No new advisories have been issued for the Iowa reach of the UMR. (2) 2006 impaired waters (Section 303(d) list for the Iowa reach of the UMR. Iowa DNR has prepared draft water quality assessments for the UMR; these assessments indicate no change from the previous (2004) assessments, with impairments due to arsenic affecting drinking water uses at Ft. Madison, Keokuk, and Davenport and the bacterial slime problem downriver from Clinton continuing. Also, as of March 30, 2006, Iowa does not yet have an approved 2004 Section 303(d) list from U.S. EPA. (3) Missouri River Interstate Water Quality Workshop: A workshop was planned for March 21-22 in Omaha for Missouri River basin states to discuss issues water quality monitoring, Clean Water Act (305(b)/303(d)) assessments and listings, and creation of a WQ forum for the Missouri River. The meeting was organized by EPA Regions 7 and 8 with assistance from the Council of State Governments. [Due to the March 19-20 snow storm, the meeting was postponed and has been rescheduled for May 2-3 in Omaha.] (4) Upper Mississippi River Basin Association's Water Quality Task Force: The WQTF completed its work on consistent fish consumption advisory protocols in fall 2005 with the publishing of Upper Mississippi River Fish Consumption Advisories: state approaches to issuing and using fish consumption advisories on the Upper Mississippi River (see <http://www.umrba.org/reports.htm> for this and other WQTF reports). Since that time, the Task Force has been addressing the issue of sediment-related water quality criteria for the UMR. Task Force meetings were held in November 2005 and February 2006 to discuss background issues and to identify options for developing sediment-related criteria. John provided an update of progress on this issue to the WQ Tech. Section (see below).

Wisconsin DNR: John Sullivan: Wisconsin DNR is preparing a report on long-term trends in water quality based on results of fixed station monitoring on Wisconsin's rivers. This report will attempt to explore the relationship between land use and water quality parameters. John has recommended to the Region and Central Office that their reach of the UMR from the St. Croix River to Lake Pepin be included on the 2006 Impaired Waters Listing for sediments and nutrients. He has also proposed that the reach from Lake Pepin to Lock and Dam 9 (above Prairie du Chien) be listed as impaired by nutrients. Final decisions for including this listing in 2006 will be made within the next several weeks. John is continuing to conduct contaminant monitoring through use of sediment traps, and he has requested that his fall 2005 samples be analyzed for perfluorochemicals (PFCs), including PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid). PFCs have recently been detected by MPCA in fish from lower Pool 2 from a local source input (Chemolite – 3M).

USACE, Rock Island, IL: Dave Bierl: Dave reported on the following activities: **EMP HREP Monitoring:** Monitoring was performed during the winter of 2005-2006 at the following HREPs: (1) ***Performance Evaluation Monitoring*** - Pool 11 Islands (Sunfish Lake and Mud Lake), Spring Lake, Potter's Marsh, Andalusia Refuge, Big Timber and Cottonwood Island, and (2) ***Baseline Monitoring*** - Pool 12 Overwintering. Water quality sonde deployments were concentrated in the Sunfish and Mud Lake areas of Pool 11 in a cooperative effort with Iowa DNR personnel, who are performing fish telemetry studies at these HREPs. In addition, temperature probes were deployed at several locations within the dredge cut at Mud Lake in an effort to determine if stratification is present. **Transparency Tube Measurements at District Locks:** Transparency measurements continue to be taken at District L/Ds. The frequency of measurements will increase now that most of the ice cover is gone. Measurements will be taken daily (Monday through Friday) from April through October. During the remainder of the year measurements will be taken less frequently. The data can currently be input and viewed only internally, but will eventually be available to the public on the *rivergages.com* website (<http://www.rivergages.com>). **Fish Passage at L/D 22 and Melvin Price L/D:** As part of the Navigation and Ecosystem Sustainability Program (NESP), the Rock Island, St. Louis and St. Paul districts are currently preparing an Alternative Screening Report for fish passage improvements at L/D 22 and Melvin Price L/D.

Missouri DNR, Rich Burdge, Jefferson City. Missouri has public noticed its Section 303(d) list of impaired waters; this is a lengthy rule-making process. Missouri may be removing some restrictions on data quality and age of data for listing. This may result in listings for the Missouri reach of the UMR due to fish consumption advisories.

Missouri DOC, Mike McKee, Columbia. Missouri has changed its 2006 fish consumption advisory protocol to include one meal per week restriction on large channel catfish (greater than 17" in length) due to levels of chlordane and PCBs. Also, the advisory for largemouth bass greater than 12 inches for the sensitive population (pregnant and nursing women, women who may become pregnant or children 12 years old and younger) was changed from "do not consume" to "1 meal/month". In addition, smallmouth bass and spotted bass were added to the "1 meal/month" advisory.

Bill Franz, U.S.EPA Region 5, Chicago. Bill reported the following: The **state of Louisiana** is in the process of developing nutrient criteria, with adoption of these criteria expected by the end of 2007. This development could have big implications for upstream states. **Dave Bolgrien** (U.S. EPA Region 4) is working on a nutrient TMDL for the Mississippi River. A **Gulf Science Symposium** will be held in April 2006. A **Lower Mississippi River basin science symposium** will be held in June 2006 in Memphis. The **Upper Mississippi River Subbasin Hypoxia Nutrient Committee (UMRSHNC)** [see <http://www.umrshnc.org/>] is looking at modeling to identify areas with high nutrient loadings. This group will meet in April in Moline, IL. U.S. EPA Region 5 is working with **Dale Robertson** and the SPARROW model to look at nutrient/sediment loadings ["SPARROW" = SPAtially Referenced Regression on Watershed attributes; see <http://water.usgs.gov/nawqa/sparrow/>]. **Mary White (U.S. EPA Region 5)** is involved with a research project to evaluate feasibility of water quality monitoring via remote sensing. **Progress on updating the UMR water quality database.** Bill reported that, while the previous data summary effort covered historical data, the current update will cover the years

2000 through 2005. The final product will be a CD with the data; there are no plans to prepare an accompanying report for these data.

USGS/UMESC, Jeff Houser: Jeff reported that that the Upper Midwest Environmental Sciences Center (UMESC) has a new director. Analysis has been completed on the LTRMP's 2005 samples.

Coordinator's Report: Jon Duyvejonck, USFWS, Rock Island:

The main item in the Coordinator's report was the recent change in the UMRCC coordinator. Due to the inability of the USFWS's Rock Island Office to provide adequate support, the Coordinator's position is being transferred to Scott Yess at the USFWS office in La Crosse.

Presentations:

Great Rivers EMAP update / discussion, Dave Bolgrien, U.S. EPA, Duluth: Dave provided background information for the Great Rivers EMAP project that involves sampling at randomly-chosen sites on the Upper Mississippi, Ohio, and Missouri rivers. Thus far, field crews have conducted two years of monitoring, and by the end of 2006, will have sampled approximately 450 sites, all with the same methods and quality assurance procedures. In 2006, the focus will on use of the information collected to develop assessments of the condition of the Great Rivers, and to accomplish this, reference conditions for these rivers need to be developed. A "least disturbed condition" approach based on abiotic factors, combined with best professional judgment of those working on these rivers, will be used to define these reference conditions. Future plans call for initiating the Lower Mississippi River assessment.

Mississippi River Bioassessment: USEPA, Minnesota and Wisconsin: Improving the science and practice of assessing the Mississippi River System: Terry Dukerschein, Wisconsin DNR/LTRMP, La Crosse. As part of involvement with the Great Rivers EMAP project, Terry described her efforts to evaluate indicators of water quality, submersed aquatic vegetation (SAV), and fish indexes of biotic integrity (IBIs). The following indicators have been evaluated: contaminants in fish (including organochlorine pesticides, PCBs and PBDEs), zooplankton, genetic analysis of fish to validate field identification, sediment microbial enzyme activity (an indicator of processing organic carbon), and nutrients and chlorophyll. [Note: Terry presented an expanded version of this presentation at the plenary session of the UMRCC meeting.]

Water quality monitoring possibilities for the UMR under the Navigation & Ecosystem Sustainability Program (NESP): Barry Johnson, USGS, Upper Midwest Environmental Sciences Center, La Crosse. After emphasizing that, currently, there is no "NESP", Barry noted that the NESP Science Panel has discussed monitoring and has made general recommendations but has not made any proposals for monitoring thus far. The Panel has recommended that monitoring under NESP be conducted a several scales: (1) local projects,

with more projects monitored than has been the case under EMP, (2) pool/reach scale, and (3) floodplain scale, and (4) systemic monitoring possibly using a randomized pool design. The pool/reach, floodplain, and systemic scales are currently part of LTRMP monitoring, although LTRMP does not provide systemic information for most parameters. The NESP Science Panel recommendations are based on (1) the need for data at both small and large scales for an effective adaptive management program and (2) the need to learn about project design, implementation, and evaluation (what works and what doesn't) at multiple scales.

Addressing sediment-related water quality impairments on the UMR: a progress report from the Upper Mississippi River Basin Association's Water Quality Task Force. John Olson, Iowa DNR, Des Moines. John provided a brief history of the UMRBA (formed in 1981) and its Water Quality Task Force that was formed in 1998 in response to a lack of coordination on interstate water quality issues, especially the states' identification and listing of water quality impairments for the UMR as required by Section 303(d) of the Clean Water Act. Since its formation in 1998, the WQTF has developed consistent assessment reaches for the UMR (as formalized in an MOU) and has explored the potential for consistent fish consumption advisory protocol for the UMR. Currently, the WQTF is involved in an effort to develop consistent approaches to identify sediment-related water quality impacts on the UMR. As with the WQTF's efforts on consistent assessment reaches and fish consumption advisory protocols, the project on sediment related impacts was funded by grants from EPA Regions 5 (Chicago) and 7 (Kansas City), and a contractor was hired to facilitate meetings and to lead preparation of reports. This project began in summer 2005. Progress thus far has included (1) preparation of a background report on state approaches to CWA monitoring and assessment decisions regarding sediment-related impairments, (2) a November 2005 workshop on sediment-related impacts and potential criteria, (3) a January 2006 report identifying options for developing sediment-related water quality criteria for the UMR, and (4) a February 2006 consultation meeting on potential criteria (these reports are available at the UMRBA's web site at <http://www.umrba.org/reports.htm>). The final report for this project is expected in late summer 2006. This project has demonstrated the complexities inherent in identifying sediment-related water quality impacts. Thus far, the most progress has been made in the area of identifying impacts related of suspended sediment on submersed aquatic vegetation (SAV) and the potential application of criteria for water transparency proposed by the UMRCC WQ Technical Section to protect SAV in the river. Currently, the WQ Task Force plans to develop a guidance document based on the UMRCC SAV criteria; this document would be used by states at their discretion. Regarding the more difficult issue of "bedded" or accumulated sediments, a "white paper" will be prepared to summarize the state of knowledge and the data needs for this especially complex topic.

Selection of new chair and location of Fall 2006 meeting:

A new chair for the WQ Technical Section has yet to be determined. The location of the Fall 2006 meeting will be determined following selection of a Section chair.

2006 UMRCC
Fish, Wildlife and Rec Tech Section Meeting
September 19-21
Camp Okotipi, Hannibal, MO

Fish Tech Agenda

Tuesday, Sept. 19 – lunch on your own

12:00 – 1:30 Registration and check-in

Joint Meeting with Wildlife and Recreation Tech Sections

1:30 – 2:00 Vegetation Ad Hoc Meeting
2:00 – 2:15 Welcome/Housekeeping – Beissel, Dieterman, Johnson, Moore
2:15 – 2:45 Joe Lund – Vegetation sampling – Pools 9 and 19
2:45 – 3:30 Eric Nelson/Cindy Samples – CCP update, etc. and UMRCC involvement
3:30 – 3:45 Scott Yess – Coordinators Report
3:45 – 4:00 Break
4:00 – 4:30 Mike Reed (MDOC) – Establishing aquatic and wetland vegetation
4:30 – 5:00 Pool Drawdowns/Floodplain enhancement opportunities (open discussion)
5:00 – 6:30 Social
6:30 Dinner

Wednesday, Sept. 20

7:00 Breakfast
8:00 – 10:00 Agency Reports*
10:00 – 10:30 Break
10:30 – 11:00 2006 drought - observations (open discussion)
11:00 – 11:15 Ann Runstrom – MICRA UMR sub-basin Paddlefish Report/Plan
11:15 – 11:30 Mussel Ad Hoc Committee Update
11:30 – 11:45 Education, Publication Committees Update
11:45 – 12:00 NESP Update
12:00 Lunch
1:00 – 1:30 Mark Cornish – Fish Passage Project
2:00 – 5:00 L&D 22 Tour and hydro-acoustics demo
5:00 – 6:30 Social
6:30 Dinner

Thursday, Sept. 21

7:00 Breakfast
8:00 – 8:30 USFWS CCP Step-down plan for Tournament Regs
8:30 – 9:00 Tournament Committee update and discussion

9:00 – 9:30 Open discussion (any topic)
9:30 Adjourn

* We are going to try something different this fall: Agency reports will be limited to 10 minutes or less and should be a presentation of sorts on **one topic** of interest (what one activity have you done in the past 6 months that would be of special interest to the group). If you choose to present this topic using Powerpoint, etc. you could email a copy to me to place on a flash drive so that presentations will be more easily accessible. All other activities associated with a typical agency report should be submitted (preferably by email) to me for inclusion in the meeting minutes.

UMRCC WILDLIFE TECHNICAL SECTION MEETING MINUTES

March 14, 2006

Quality Inn and Suites, Conference Center, Hannibal, MO

Bill Ohde, acting for chairman Mike Griffin, called the meeting to order at approximately 1:00 PM. Twenty-six people were present representing Missouri, Iowa, Wisconsin, Minnesota, Fish and Wildlife Service, Corps of Engineers and Illinois Natural History Survey. Introductions were made.

Joe Lundh, vegetation ad hoc chairman, reported results of a cooperative vegetation survey done on pools 9 and 19 in August 2005. Discussion followed on future cooperative vegetation surveys. The predominant feeling was to continue surveys on pools 9 and 19, and add pool 18 because of a proposed future drawdown on that pool.

Josh Stafford of the Illinois Natural History Survey gave a brief history of their history and personnel, and an overview of their current activities.

Jon Duyvejonck of the Fish and Wildlife Service introduced the new coordinator, Scott Yess, and gave a brief update on the coordinator position.

Eric Nelson of the Upper Mississippi National Wildlife and Fish Refuge gave an update on refuge activities, the Comprehensive Conservation Plan and the pool 5 drawdown.

The pool 5 drawdown information led to a discussion of the mussel mortality associated with the drawdown. David Heath of the Wisconsin DNR then presented a proposed draft resolution on experimental water level management and comprehensive evaluation. He presented part of his program to be presented at the next day's general session as background information. Extensive discussion followed. No consensus was reached.

Dick Steinbach of the Mark Twain National Wildlife Refuge Complex gave an update on the refuge system reorganization.

Mike Flaspohler of the Missouri DOC presented banding and recovery information on waterfowl including different species, years and locations of banding and recovery. It was a good example of what can be done with data available from the Bird Banding Lab.

The states and Refuge personnel each gave updates on public waterfowl hunting management in their respective states and areas. Controlled hunting, permanent blinds and special regulations were discussed.

Reports were given on each state's activities for the past year. The meeting was adjourned about 5:30 PM.

UMRCC Mussel Ad Hoc
Meeting Minutes
March 14, 2006

The spring UMRCC Mussel ad Hoc meeting was held on Tuesday, March 14, 2006, in Hannibal, Missouri. An attendance list is attached.

Due to bad weather and effects on travel, several presenters were unable to attend. The majority of discussions focused on the following topics:

1. Effects of the 2005 Pool 5, Mississippi River Drawdown on Shallow-water Native Mussels. Dave Heath, WDNR provided a status report on mussel data collected during the Pool 5 drawdown in 2005. Data were collected from shallow water grids in Pools 5 and 4 (control), pool-wide transects and airboat survey. The 1.5-foot drawdown exposed approximately 1,250 acres (10% of Pool 5). Survival of marked mussels was 100% in Pool 4 (control) and 72% in Pool 5. Survival of mussels was related to water depth, bottom slope and species. Survival was higher for mussels in deeper water and not exposed by the drawdown. Mussels on a sloping substrate had better survival than those on large flat area; mussels could sense lowering water levels and move downslope to deeper water. There was also a difference between species; survival of three ridge (*Ambleminae*) was 1.6 times higher than plain pocketbook and fat mucket (*Lampsilinae*). Based on data collected, estimated mortality of mussels was between 1 and 7 million; however, there are no population/community mussel data available for Pool 5 for comparison leading to a discussion of the next topic.
2. Development of guidelines or criteria for assessing levels of acceptability of mussel impacts. Jon Duyvejonck, FWS, led a discussion on the need for standardized sampling methods/protocols/decision processes for assessing impacts to mussels from both small- (individual project) and large-scales (pool drawdowns). The Pool 11 NESP project was presented as an example of a habitat project affecting native mussels including the federally endangered Higgins eye pearl mussel. In the case of Higgins eye, the project may exceed the incidental take statement of 500 individuals that was provided for the entire NESP program for the next 50 years. Since Higgins eye is a rare species, finding only a few individuals in a survey can quickly become a sizable estimate once data are expanded to the entire project footprint. Also absent are population estimates for Higgins eye and other mussels at the pool scale for comparison. Jon will be continuing his efforts on standard mussel surveys for small and large scale projects, methods for estimating populations on a pool scale, and decision processes for evaluating survey results (i.e. what are acceptable levels of mussel impacts?).
3. The continued saga of forming a new UMRS Mussel Conservation Team under NESP. Gary Wege, FWS, provided the latest draft proposal on establishing a mussel conservation element of NESP. The document was later revised and is attached.
4. UMRCC Mussel Compendium/UMRS Mussel GIS Database. At last years' meeting, we discussed the desire for a UMRCC Mussel Compendium that would be similar to the fish compendium. At the Fish Technical Section meeting, Mark Cornish, Corps of Engineers, pointed out that Dan Kelner put together information on mussel distribution several months ago (information attached). It would seem logical that the new GIS mussel database that the Corps is working on would include this information too. We are hopeful that the new mussel database is up and running by the end of the year. We can revisit the need for a separate mussel compendium after evaluating the new database.
5. Other activities. Gary Wege, FWS, showed photos of eleven winged mapleleaf collected from a propagation cage in the St. Croix River in 2005. An invitation was extended to participate in 2006 activities of the Mussel Coordination Team.

Submitted by Gary Wege, Chairman UMRCC Mussel Ad Hoc

Attendance List
UMRCC Mussel Ad Hoc Meeting
March 14-16, 2006 – Hannibal, MO

Name	Agency	Phone #	E-Mail Address
Ken VonRuden	WI DNR		Kenneth.VonRuden@dnr.state.wi.us
Caleb Schnitzler	IA DNR	563-872-4976	Caleb.Schnitzler@dnr.state.ia.us
Ken Cook	USACE		Kenneth.m.cook@usace.army.mil
Kevin Stauffer	MN DNR	651-345-3365	kevin.stauffer@dnr.state.mn.us
Dan Dieterman	MN DNR	651-345-3365	dan.dieterman@dnr.state.mn.us
Joe Jordan	USACE		Joseph.w.jordan@usace.army.mil
Steve Johnson	USACE-RI		Steven.m.johnson@usace.army.mil
Scott Yess	USFWS		scott_yess@fws.gov
Don Nelson	MN DNR		Don.nelson@dnr.state.mn.us
Steven Dewald	WI DNR		Steven.dewald@dnr.state.wi.us
Shawna Stringham	WI DNR		Shawna.Stringham@dnr.state.wi.us
Mike Cross	WI DNR		Mike.cross@dnr.state.wi.us
Martin Konrad	IA DNR		martin.konrad@dnr.state.ia.us
Kirk Hansen	IA DNR	563-872-4976	Kirk.Hansen@dnr.state.ia.us
Michelle Marron	WI DNR	608-685-6221	Michelle.Marron@dnr.state.wi.us
Jennifer Sauer	USGS		jsauer@usgs.gov
Pam Thiel	USFWS	608-783-8431	pam_thiel@fws.gov
Scott Gritters	IA DNR	563-252-1156	scott.gritters@dnr.state.ia.us
David Heath	WI DNR	608-785-9993	david.heath@dnr.state.wi.us
Jeff Janvrin	WI DNR	608-785-9005	jeff.javrin@dnr.state.wi.us
Gary Wege	USFWS	612-725-3548x207	Gary_Wege@fws.gov
Scot Johnson	MN DNR	651-345-3365	Scot.Johnson@dnr.state.mn.us
Patrick Short	WI DNR	608-326-8818	patrick.short@dnr.state.wi.us
Mike Steuck	IA DNR	563-872-4976	michael.steuck@dnr.state.ia.us
Jon Christensen	IA DNR	563-263-5655	Jon.Christensen@dnr.state.ia.us
Bernard Schonhoff	IA DNR	563-263-5062	Bernard.Schonhoff@dnr.state.ia.us

Navigation and Ecosystem Sustainability Program (NESP)

Gary Wege, TCFO, 10-31-05

1. Twin Cities Field Office FY 05 Activities

Water level management Product Deliver Team (PDT) – A 1.5-foot drawdown was accomplished this summer in Pool 5. Approximately 900 acres were exposed and vegetated. Numerous monitoring activities were accomplished including a special study on mussel movement and mortality. A mussel survey was conducted for Pool 9 in anticipation of a drawdown in FY 06; however, we may shift focus to another pool since submerged vegetation is quite abundant in Pool 9.

Ecosystem Management Product Delivery Team – We are currently finalizing goals and objectives for ecosystem activities in Pool 5 and met with the Science Panel last week. Two major activities accomplished this year are the Pool 5 drawdown and construction of the Spring Lake Habitat Rehabilitation and Enhancement Project which is a multifaceted project involving island construction, dredging, centrarchid overwintering habitat, construction of

mudflats, and island vegetation. LIDAR imagery was collected this year for Pool 5 which provides amazing data on topography.

Floodplain Restoration Product Delivery Team – We are looking at two sites; the Zumbro River Bottoms in Pool 5 which was selected in the original work, and the Root River Bottoms in Pool 8. A significant acreage of floodplain has been acquired in the past 10 years by the Service, Minnesota Department of Natural Resources, Pheasants Forever, and Minnesota Department of Transportation. The Corps has also collected hydraulic data for the lower Root River and we hope to complete that process. The Root River project has been coordinated by an interagency partnership prior to NESP. The goal of both projects is restoring the connectivity of the river with its floodplain once a sufficient amount of land is acquired/under easement.

Embankments Product Delivery Team - The St. Paul District formed an interagency embankments partnership prior to NESP and has been working on embankment planning for several years. A key site is Lock and Dam 8 where we are currently evaluating a variety of possible erosion control/environmental enhancement measures including lowering portions of the spillway, prairie establishment, and constructing one or two “riffles” through the embankment for habitat enhancement and fish passage. Fishery data will be collected this spring.

Establishing a Mussel Conservation Product Delivery Team – We initiated discussions on establishing a new PDT in FY 06 for conservation of native mussels. Basically, the existing interagency Mussel Coordination Team would become the PDT and begin conservation discussions and activities for the overall mussel community; currently, the MCT is limited to working on two federally-listed species (Higgins eye and winged mapleleaf). The UMRCC Conservation Plan for Freshwater Mussels of the UMRS would be used to guide PDT activities.

2. TCFO Expenditures for FY 05, NESP

According to my records, TCFO received \$13,043 initially to work on NESP activities in FY 05. We subsequently received an additional \$3,100 for a total of \$16,143. All funds were expended in FY 05.

I estimate that TCFO spent an additional \$12,000 in FY 05 on NESP related activities. These additional staff-days and associated travel costs were expended on review of NESP documents including Institutional Arrangements, additional effort on the above Product Delivery Teams – in particular the Pool 5 Water Level Management, Pool 5 Ecosystem Restoration, and Lock and Dam 8 Embankment projects, participation at several UMRBA/EMPCC/RRF/FWWG meetings related to NESP organization and activities, and work on forming a new PDT on UMRS Mussel Conservation.

**UMRCC - Veg Ad Hoc Minutes
Quality Inn – Hannibal, MO
During Wildlife Tech meeting March 14, 2006**

1. UMRCC Field Day discussion
 - a. Joe Lundh provided a **summary of the Pool 9 and 19 aquatic vegetation surveys done in August of 2005**. The group also decided to continue the work in 2006 by surveying Pool 9 again, lower Pool 19, and also lower Pool 18.
 - i. The Field Days were a cooperative effort with representation from Iowa, Illinois, Wisconsin, and Minnesota DNR's along with UMESC, FWS, Corps, county conservation boards, the Audubon Society and many others.
 - ii. A big thanks to those who helped organize the event: Mike Griffin, Megan Moore, Theresa Shay, Jon Duyvejonck, Randy Hines, Jim Rogalla, Tim Loose, Bill Ohde, Kristen Lundh, and others. Thanks to UMESC for generation of sampling points, mapping support, and assistance with data entry. Megan Moore and Theresa Shay proofed the data sheets.
 - iii. UMRCC provided funds to purchase/build sampling rakes. Mike Griffin coordinated.
 - iv. Pool 9 info- August 16,17
 1. Tim Loose, FWS POC
 2. Approximately 15 boat/50 people day 1. Additional surveys done on second day.
 3. Data summary slide- more analysis will be forthcoming.

P9 Vegetation Data Summary

- 314 of 404 sites surveyed
- 32 no sample (deep, inaccessible)
- 223 of 282 sites vegetated
- 28 species SAV plus algae and lemna
- Up to 12 species at a plot

Species - % sites	
Wild Celery	56%
Elodea/ Canada waterweed	56
Yellow water stargrass	49
Coontail	38
Eurasian water milfoil	18
White waterlily	16
Yellow lotus	15
River pondweed	11

- v. Pool 19 info- August 9,10
 - 1. Joe Lundh, Corps- POC
 - 2. 12 boats/25 people day 1. several boats day 2
 - 3. Data Summary- from info compiled by Theresa Shay, IA DNR

P19 Vegetation Data Summary

- 378 of 605 sites surveyed
- 187 sites too deep
- 20 couldn't navigate to
- 55 sites of 191 vegetated
- 12 species SAV plus algae
- Depth of veg sites ave 0.6 meters, max 1.3

Species- % sites	
Wild celery	19%
Coontail	17
Elodea/ Canada waterweed	13
Yellow water stargrass	10
Brittle waternymph	9
Yellow lotus	9
Sago pondweed	8
Eurasian water milfoil	4

- b. The group was interested in **resurveying Pools 9 and lower 19 along with the addition of lower Pool 18**. Pools 9 and 18 are potential drawdown pools and the surveys will provide good pre drawdown information.
 - i. Those interested in helping organize the event should contact Joe Lundh at 309-794-4528.
 - ii. There was interest in collecting water quality data while sampling. Jon Duyvejonck talked with the Water Quality Tech Session on methods. Feedback from their members indicated use of a transparency tube would be recommended. Will coordinate further with group for sampling protocol.
2. Aquatic Habitat Quality Index survey (AHQI)
- a. **Surveys completed for Pools 3-9, 13, 19, and some on the Illinois River.**
 - b. Big thanks to Dan Dieterman for completing surveys in 7 Pools. Also thanks to Megan Moore, Heidi Langrehr, Theresa Shay, and others who completed the surveys.
 - c. The AHQI surveys will be compared to data gained from LTRMP protocol for presentation at the fall meeting.
 - d. Sign ups for pools will be sent out along with survey information prior to the survey period this year. The hope is to increase coverage of the survey.
 - e. The veg ad hoc is looking for feedback on our website. Specifically on the AHQI data. The site will be modified and can be changed to include things like maps for

each survey area and possibly entry of survey information online through a simple form interface.

- f. Survey information available on the web. Including the summary information along with scanned copies of each of the completed surveys. Surf from the UMRCC web site <http://mississippi-river.com/umrcc/> under Tech Sections or visit the Veg Ad Hoc site on <http://www.mvr.usace.army.mil/forestry/>
- g. Please send completed AQHI surveys to Joe Lundh
Mississippi River Project, PO Box 534, Pleasant Valley, IA 52767
Joseph.s.lundh@usace.army.mil
Fax: 309-794-4347
Phone: 309-794-4528

3. **Volunteers requested for vegetation ad hoc chair.** Current chair, Joe Lundh, will be stepping down after the fall meeting this year. A list of nominees is being formed (whether they know it or not).
- Introductions
 - 1:10- 1:55 Vegetation adhoc (Joe Lundh)
 - Vegetation surveys
 - Pool 19
 - Pool 9
 - What is next
 - Pool surveys?
 - NESP forestry
 - 2:00 Illinois Natural History activities (Josh Stafford)
 - 2:15 Upper Miss Refuge (Eric Nelson)
 - USFWS CCP
 - Wildlife surveys
 - Drawdowns and mussel impacts
 - USFWS restructuring (Nelson, Steinbach)
 - 2:45 Break
 - 3:15 Scaup study (Bill Ohde for Michael Anteau)
 - 3:35 Banding data
 - What MO has done
 - What kind of questions do we need answered on the UMRS
 - Requests from the banding lab?
 - 4:00 Public Waterfowl Hunting Area Management. (Permanent blinds, controlled access ect.)
 - MO
 - Illinois
 - Iowa
 - Wisconsin
 - Minnesota
 - USFWS
 - Mark Twain, Upper Miss
 - Agency Reports, Coordinator Report

**Minutes of the 2005 Fall Fisheries Technical Section Meeting
September 13-15, 2005 – Mississippi River Headwaters, Itasca, MN
Joint Meeting with the UMRCC Wildlife Technical Section**

The UMRCC Fisheries Technical Section Chairman Mike Steuck (IA) welcomed all to the University of Minnesota's Itasca Biological Station at Itasca State Park near Itasca, MN. There were 38 people in attendance for the 62nd UMRCC Fisheries Technical Section Meeting and 12 people in attendance for the Wildlife Technical Section Meeting. Kevin Stauffer (MN) was thanked for arranging the meeting facilities, meal provisions and local fish population information.

Jeff Janvrin (WI) gave a presentation on backwater overwinter habitat sampling. For several years, backwater areas were electrofished. The data has been compiled into a Microsoft Access database and data analysis has just begun. One more year of sampling is scheduled and a report should be out December of 2006. Preliminary analysis shows that fair to good overwinter habitat will produce CPUE's of 100-300 fish/hr for bluegill and 100-200 fish/hr for largemouth bass. In Pool 9, out of 30,000 acres (1989 land/water coverage) of aquatic area, 1,200 acres of backwater habitats were sampled that had the attributes (adequate depth, low to no flow and/or presence of ice anglers) of overwinter habitat. Out of the 1,200 acres, 900 acres had fair to good CPUEs. Trend line analysis of cpue of bluegill ≥ 6 inches and largemouth bass ≥ 13 inches to backwater water temperature indicated no trend for bluegill and an inverse relationship higher cpue's as water temperatures declined. Jeff asked the group to provide suggestions to improve analysis of this data. The main points of the talk were to show that: 1) CPUE can be used as an indicator of the quality of existing overwintering habitat. 2) A "Quantitative Goal" for CPUE of target species in overwintering habitat can be established. 3) A quality ranking of existing overwintering habitat based on numerous factors (CPUE, population structure, temp, DO, vel, depth, professional judgment, etc.) can be assigned.

Uniformity of fisheries regulations were discussed by the group.

Recreational: Mike Steuck (IA) noted that preliminary analysis of the Tailwater closures at L&Ds 11, 12 & 13 for sauger showed that angling pressure at L&D 10 has not increased but was the second lowest and harvest was the second highest out of five years of creel data. Dan Dieterman (MN) updated the group on the experimental bag limits for panfish.

Commercial: Regulations concerning the commercial harvest of sturgeon were discussed at a later time.

Tournament: Tournament regulations and permitting was brought up by Mike Steuck (IA).

Discussions on the following items related to tournaments followed.

- Regulation waivers for tournaments. Iowa and Illinois had been asked in 2005 and Illinois granted the waiver, Iowa did not. MN, WI and MO had not been asked to waive regulations for tournaments in the past.
- FWS CCP tournament involvement.
- No cull rules.
- Loss of bass in tourneys because of increased stress leading to largemouth bass virus. WI had a tournament where many LMB were lost post tournament due to tournament stress that triggered the virus. Iowa has found LMBV in one of its southeast Iowa lakes.

- Movement of fish between pools by tourney anglers and the possibility of limiting anglers to one lockage.
- Developing a set of tournament regulations for tournaments to protect the resource.
- Having the UMRCC track tournaments and statistics.
- Kevin Stauffer (MN) and Ron Benjamin (WI) discussed their respective states tournament committee's status and ideas with the group.
- It was discussed that the states tournament representatives get together and discuss these issues, look at what has been done in their respective states, look in past UMRCC documents to see if any work had been done by the UMRCC in the past, document what we have in place now and what we would like as the UMRCC in the future.
- The state tournament reps are as follows:
 - MN – Kevin Stauffer
 - WI – Ron Benjamin
 - IA – Bernie Schonhoff
 - IL – Dan Sallee
 - MO – Travis Moore

Mississippi River Basin wide Sturgeon issues were discussed by the group at length.

- Illinois and Missouri (and possibly Tennessee and Kentucky) agreed upon sturgeon regs were discussed.
 - Sturgeon commercial Harvest Permit
 - October 15 – May 15 harvest season
 - 24” – 32” snout to fork length harvest slot
 - Based on data at hand, these regs would do the following:
 - the 32” max would protect pallid sturgeon
 - the 24” – 32” harvest slot would provide minimal protection to female sturgeon
 - and the Oct 15 – May 15 harvest season would reduce harvest by half in the two highest harvest months of October and May given that effort does not shift to Nov, Dec, Jan, Feb, March or April.
- Wisconsin will look at attempting to follow suit with IA
- Mike Steuck (IA) gave the tag retention update. To date (one year, two months), 12 out of 13 sturgeon are still alive and have retained their PIT tags at the Fairport Fish Hatchery in Iowa.
- Gene Jones (IA) and Pat Short (WI) updated the group on their shovelnose sturgeon sampling. Jones has sampled and tagged nearly 1,000 sturgeon this summer and PIT tagged fish 24” and greater. Efforts have begun to check commercial fishermen as they bring in their catch of sturgeon to assess commercial exploitation. Short summarized the work that WI crews have completed this year. Catches were down compared to previous years for Pool 9 & 10. Attempts to sample shovelnose in pool 4 by Dan Dieterman (MN) and Pool 7 by Dave Heath (WI) yielded poor results.
- Contaminates in Shovelnose Sturgeon flesh and roe was discussed.
 - WI has sampled Pool 9 fish in 2003 or 2004
 - Iowa sampled Pools 10, 13 and 15 fish in 2005
 - Illinois sampled Pools 17 and 20 fish in 2005

- Missouri sampled Pool 22 fish in 2004
- Suggest Gene Jones (IA) and/or Michelle Marron (WI) write up a summary of the sturgeon contaminates for the Proceedings
- Suggest that a talk be given at the Spring Annual Meeting in Hannibal
- This information should be sent to MICRA's Bobby Reed who is writing up the Mississippi River Basin portion of the Paddlefish and Sturgeon Subcommittee report.
- A shovelnose sturgeon proposal submitted to the FWS for funding in the form of a USGS Science Support grant written by Dr. Mike Quist from Iowa State University was discussed. More information on the proposal can be found by contacting Dr. Mike Quist (ISU) or Mike Steuck (IA).

The Fish Technical Section convened jointly with the Wildlife Technical Section on Wednesday morning September 14.

Chuck Theiling of the Rock Island District Corps of Engineers updated the group on the Navigation and Environmental Sustainability Program.

Items discussed included:

- The Science Panel and its members
- The Evaluation and Sequencing Team and its members
- The Monitoring Team and its members
- The Report Card Team, the metrics, its similarity to the great lakes, that it will be easy for the public to understand, will be trackable and updateable
- Institutional Arrangements
- Trend Monitoring should continue (up to 25% towards monitoring with the first 15 years frontloaded with monitoring and evaluation)

Several questions arose from Chuck's talk that should be answered in the near future:

Who will review the Science Panel products?

What form will the Interagency Agreements take?

How will EMP be affected by NESP?

If the NESP is fully funded, how will the partner agencies participate with out funding?

All agencies and partners should work towards changes in the legislation that would allow for funding directly to the partners so that they may have the ability to participate and assist to the level that is needed to implement a program of this magnitude.

Questions on the Fish & Wildlife Service Comprehensive Conservation Plan were tables due to no FWS Refuge staff attended the meeting.

Jon Duyvejonck UMRCC Coordinator gave a coordinators report.

- Spending majority of time on NESP and spending little time on UMRCC tasks
- 2000 proceedings is the last one published and 2001 com fish report is the last one completed
- Effort should be taken to have the UMRCC obtain a seat on the River Management Council
 - A letter to Chuck Spitzack (COE) would get the ball rolling on this issue

- Spring Annual UMRCC Meeting is March 14-16, 2006 in Hannibal, MO
- Fall Fish Tech Section Meeting will be near Hannibal, MO Sept. 26-28, 2006

Discussion among the group ensued about the lack of Coordinator support.

- Suggest a joint Fish & Wildlife Tech Section resolution back to the Executive board to make sure they know we support the coordinators position.
- Suggest a letter from MICRA in support of the coordinators position.

Mussel Ad Hoc Committee update:

- Dave Heath (WI) presented information on the Effects of the Pool 5 Drawdown on Mussels.
 - Estimated 1.5 million mussels died
 - About 50% of shallow water mussels died, none died in the control pool.
 - About 85%, 48% and 18% of mussels in 1ft, 2ft and 3ft, respectively, died.
 - Mussel mortalities were fairly uniform throughout the pool.
 - Individuals of 8 state listed species died from the drawdown.
 - Discussed tradeoffs
- Mussel Ad Hoc Committee Chairman Gary Wege gave the group the 2005 highlights.
 - Higgins eye
 - In 2006, the Corps will initiate a feasibility on zebra mussel management on the UMRS. The study was recommended by a reconnaissance study required by the 2000 Biological Opinion.
 - For the first time, four juvenile Higgins eye were found in the Wisconsin River, Wisconsin, downstream of open propagation cages.
 - For the first time, one female subadult Higgins eye was found in the Wapsipinicon River, Iowa, in the vicinity of previous host fish releases.
 - For the first time, 400 juvenile Higgins eye were collected from closed propagation cages in the Wisconsin River, Wisconsin.
 - 1,200 juvenile Higgins eye were collected from one closed cage in the Upper Mississippi River, Pool 4, Minnesota (Frontenac); the previous record for one cage was 850 juveniles in 2003.
 - For the first time, over 5,000 juvenile Higgins eye were collected from nine closed floating cages in the Upper Mississippi River, Pool 12, Iowa (Dubuque Ice Harbor).
 - Possible fish predation of subadult Higgins eye was observed in the Upper Mississippi River, Pools 2 and 4.
 - Subadult Higgins eye placed in the Upper Mississippi River, Pool 3, in 2003 are now gravid adults at Age 5.
 - Seventeen adult Higgins eye were collected in shallow water (less than 3 feet deep) at the Prairie du Chien Essential Habitat Area on the Upper Mississippi River, Pool 10.
 - Winged Mapleleaf
 - For the first time, 11 juvenile winged mapleleaf were collected from one closed propagation cage in the St. Croix River, Minnesota (Interstate State Park).

- 300 channel catfish inoculated with glochidia are being held overwinter at the Genoa National Fish Hatchery, Wisconsin, for placement in closed propagation cages in 2006.
- The Saline River in Arkansas likely contains the largest known population of winged mapleleaf; 27 were found in a search of 28 quadrats in summer 2005. In early November 2005, 7 gravid females were collected (in 15 minutes!) and taken to Chris Barnhart at Missouri State to confirm the hosts for the southern populations.
- Other Species and Activities
 - Discussions will continue with the Corps on establishing a new Product Delivery Team (PDT) on UMRS Mussel Conservation under NESP. The concept is to use the interagency Mussel Coordination Team as the PDT and expand their current scope from two federally endangered species to the entire mussel fauna of the UMRS.
 - The FWS/USGS mussel web site (www.fws.gov/midwest/mussel) is currently being updated; should be completed by March 1.
 - For the first time, over 3,000 juvenile black sandshell were collected from three closed floating cages in the Upper Mississippi River, Pool 12, Iowa (Dubuque Ice Harbor).
 - For the first time, over 200 mucket and 500 fatmucket juveniles were collected from closed propagation cages in the Upper Mississippi River, Pool 4, Minnesota (Frontenac).
 - Zebra mussels continue to be a major threat to native mussels on the Upper Mississippi River System and appear to be increasing in abundance at some locations. The U.S. Army Corps of Engineers completed the report “Distribution and Density of Zebra Mussel Veligers at Sites in the Upper Mississippi River System and its Major Tributaries, 2004”.
 - The Minnesota Department of Natural Resources drafted a report “Freshwater Mussels of Minnesota: A Plan for Controlled Propagation, Reintroduction and Augmentation within the Mississippi River from St. Anthony Falls to Lake Pepin”.
 - Two new types of propagation cages were tested this year; a floating cage system, and a “cage-on-a-cage” design which allows for easy removal of host fish.
 - The U.S. Army Corps of Engineers completed the report “Status of Implementation of Higgins Eye Pearlymussel (*Lampsilis higginsii*) Reasonable and Prudent Alternatives and Reasonable and Prudent Measures, and Winged Mapleleaf (*Quadrula fragosa*) Reasonable and Prudent Measures”.
- Mike Davis updated the group on several other issues:
 - Slides showing probable fish predation of subadult Higg shells after placement. Believe common carp but no proof as of yet.
 - Mike introduced Kari Tomperi, from Wedena SWCD, MN who gave a talk on their volunteer group that is interested in mussels and water quality

Jerry Rassmussen (MICRA) updated the group on current MICRA activities.

- Background material on MICRA
- Commission Status
- Sauger management investigation proposal
- Paddlefish/Sturgeon Subcommittee

There was no new information about the EPA 316b hydropower issue.

Non-Native Species update:

- Pam Theil (FWS) noted that Round Gobies were not any further downstream on the Illinois River that in the past. Asian Carp were not any closer to the great lakes as of yet (45-50 miles) and are 18 miles below the electric barrier.
- Those that haven't commented on Black Carp on the Federal Register need to do that as soon as possible. The comment period is open till the end of October. Jon Duyvejonck will check to see if UMRCC has commented in the past. Mike Oetker (FWS) commented that the Aquaculture Industry wants to get out of using black carp but have no alternative to control snails.
- Gary Wege (FWS) provided information on invasive species impact to native mussels. An animal already in jeopardy due to zebra mussels.

American Eel were discussed by the group. The FWS will be conducting an official review of the status of the species for possible listing under the Endangered Species Act. Anyone with info should send it to Marie Maltese. The team is looking for historic and current distribution, fishery records, abundance, and anecdotal information. The comment period for the Federal register notice ends September 6, so Marie would like to have the information by 8/31/05 if possible. Dan Sallee will contact the Illinois Natural History Survey.

Committee Reports:

- Publications. Dan Kirby of Iowa will take over the vacant chairman position.
 - Commercial Fish Data is currently being summarized by Dr. Mike Quist (ISU) and Mike Steuck (IA).
 - Other suggested publications are the Distribution and Abundance of Fishes and possibly a mussel section to be included in the Distribution and Abundance of Fishes.
 - Contacts for publications in the other agencies are as follows:
 - WI – Ron Benjamin
 - MN – Steve Haxmeier
 - IL – Dan Sallee
 - MO – Travis Moore
 - FWS – Pam Theil
- Education: Jeff Janvrin (WI), chairman informed the group that the Teacher workshops he conducts will continue and that if anyone has any ideas, to contact him. Jon Duyvejonck informed the group that Public Television was looking to work on television spots that focused on the UMRCC. In order for the group to do this we were looking for monies to support and assist the UMRCC. TNC may have some

resources to assist. Jeff Janvrin (WI) will put some numbers together and will have a better idea for the group at the spring meeting.

Agency reports were given from south to north by Missouri, Illinois, USACE St. Louis-Rock Island-St. Paul, The Nature Conservancy, Wisconsin, Minnesota, USFWS-Ecological Services and Fisheries. Thanks to those who provided electric or hand-written reports.

The Spring UMRCC Fish Tech Section Meeting will be held in conjunction with the Annual UMRCC Meeting March 14-16, 2006 in Hannibal, MO.

The Fall UMRCC Fish Tech Section Meeting will be held at Camp Okatipi in MO, south of Hannibal and one mile north of L&D 22 at a date yet to be determined.

The attendance sheet is attached.

An Agenda is attached.

Agency reports that were typed or handed in are attached.

Respectfully Submitted,

Mike Steuck
UMRCC Fisheries Technical Section Chairman

Agenda
UMRCC Spring Fisheries Technical Section Meeting
March 14 - 16, 2006 – Mark Twain’s Stomping Grounds, Hannibal, MO

Tuesday, March 14th – 1:00 – 5:00

- Welcome – Mike Steuck (IA)
- Housekeeping – Travis Moore/Janet Sternburg (MO)
- National Fish Habitat Initiative and the Midwest Driftless Area Restoration Effort – Louise Mauldin (FWS – LaCrosse)
- Fisheries Regulations – uniformity
 - Tournament – MN, WI reworking their requirements
 - Recreational – None
 - Commercial – Sturgeon, will talk about below.
- Sturgeon
 - Sampling update – Past work and plans for the coming year: All States and Universities.
 - Regulations update – All States
 - Flesh and Roe contaminants update – Short presentation and handout, Michelle Marron (WI)
- Paddlefish ???
- NESP/EMP/HREP – Update – Chuck Theiling (COE – Rock Island)
 - Discuss possible options to attain \$\$ directed to the partners for Plan implementation.
- FWS Upper Miss Refuge CCP Update – Don Hultman - Upper Miss Refuge FWS
- UMRCC Chairman Report – Jon Duyvejonck – Scott Yess
 - Update on the discussion on the UMRCC Coordinator Position
- LTRMP Update
- Mussel Ad Hoc
 - Quick update on the Mussel Ad Hoc Meeting from this morning
 - Regulations
 - Mussel study in Pool 5 related to the drawdown
- EPA 316b – Hydropower update - Larry LaJoene (Exelon Nuclear)
- Non-Native Species Update - all

- MICRA Update – Jerry Rassmussen
- Impaired Waters: Is the Mississippi Impaired?? – Bill Franz (EPA) – Possible joint discussion with the WQ Tech Section.
- Committee Reports
 - Publications – Dan Kirby (IA)
 - Commercial Fish Data - Mike Quist, (ISU)
 - Distribution and Abundance of Fishes
 - Mussel portion of the distribution and abundance paper
 - Education – Jeff Janvrin (WI)
- UMRCC Fish Technical Section In-coming chairman – Next in line is Minnesota. Dan Dieterman will be the next Chairman.
- Fall Fish Technical Section Meeting will be in Missouri at Camp Okatipi, south of Hannibal and one mile north of L&D 22 at a date yet to be determined.
- Minnesota will host the Spring 2007 Annual Meeting.
- Agency Reports – Please provide written copy of reports to the chairman Mike Steuck for inclusion in the Annual Proceedings – Thanks!
- Adjourn – Thanks for attending

**Upper Mississippi River Conservation Committee
Fisheries Technical Section
Minutes of the 2006 Spring Fisheries Technical Section Meeting
March 14, 2006 – Mark Twain’s Stomping Grounds,**

The UMRCC Fisheries Technical Section Chairman Mike Steuck (IA) welcomed all to the Hannibal, Missouri. There were 66 people in attendance for the UMRCC Fisheries Technical Section Meeting. Travis Moore and Janet Sternburg (MO) were thanked for arranging the meeting facilities, meal provisions and the local attraction information.

Minutes of the 2005 fall meeting were discussed, no changes were made and approved.

Louise Mauldin (FWS LaCrosse Fisheries) presented information on the National Fish Habitat Initiative and the Midwest Driftless Area Restoration Effort. There is over \$1 million for five projects of which the Driftless Area is one. The partnership is broad which will allow for increased funding, increased public interest and increased public support. An action plan has been developed with three projects already on the ground in MN, IA and WI.

Uniformity of fisheries regulations were discussed by the group.

Tournament: Discussions on the following items related to tournaments followed.

- Kevin Stauffer (MN) and Ron Benjamin (WI) discussed their respective states tournament committee’s status and ideas with the group.
- Minnesota rules are proceeding through the legislature. Wisconsin is in the process of putting rules together and hope to have them promulgated in the fall of 2008.
- No cull rules. WI assessed culling by putting fish in net pens. There was lower mortality when the water was cooler.
- Loss of bass in tourneys because of increased stress leading to largemouth bass virus (LMBV). WI had a tournament where many LMB were lost post tournament due to tournament stress that triggered the virus. MN will prohibit tournaments in lakes with LMBV. Iowa has found LMBV in one of its southeast Iowa lakes. Bleach at 100ppm for 20 minutes will kill LMBV.
- Movement of fish between pools by tourney anglers. MN will allow only one lockage and WI is similar. Also proposing to limit the number of tournaments per pool per month and limiting catch, hold and release tournaments during the summer months.
- WI is doing an economic study of tournaments and surveying tournament and non-tournament anglers. The economic study is not showing benefits economically, the hotels would have been full w/out the tournament, that time of year is vacation season.
- Developing a set of tournament regulations for tournaments to protect the resource.
- Having the UMRCC track tournaments and statistics.
- The possibility of the FWS Refuges assisting the states in setting up an online, interactive website for logging tournaments and additional information.
- It was discussed that the states tournament representatives get together and discuss these issues, look at what has been done in their respective states, look in past UMRCC

documents to see if any work had been done by the UMRCC in the past, document what we have in place now and what we would like as the UMRCC in the future.

- The state tournament reps are as follows:
 - MN – Kevin Stauffer
 - WI – Ron Benjamin
 - IA – Bernie Schonhoff
 - IL – Dan Sallee
 - MO – Travis Moore
 - FWS – Scott Yess

Recreational: None at this time.

Commercial: Sturgeon were discussed next.

Mississippi River Basin wide Sturgeon issues were discussed by the group at length.

Mike Steuck (IA) informed the group on what was purchased with the money provided to the group by the UMRCC (\$5000), MICRA (\$1000), and Iowa Chapter AFS (\$500). The money was used to purchase two PIT tag readers, 20 tag injectors and 1200 PIT tags. The equipment and tags were distributed between Pat Short (WI) and Kirk Hansen (IA) to assist in tagging efforts to assess commercial exploitation.

Sturgeon Sampling Update: Very informative sturgeon presentations were given on past work and plans for the coming year by all states and universities working on sturgeon.

- Dan Dieterman (MN), Pat Short (WI), Kirk Hansen (IA), Mike Quist & Jeff Koch (ISU), Tim Spier (WIU), Rob Colombo & Jim Garvey (SIU), Travis Moore, Bob Hrabik & Dave Herzog (MO). Preliminary information shows that the potential is there to over-harvest shovelnose sturgeon with out regulation at the current or greater levels of harvest.
- Both Rob Colombo (SIU) and Kirk Hansen (IA) presented the results of shovelnose sturgeon modeling from the Middle (Rob) and Upper (Kirk) Mississippi River that indicates a 24 inch fork length minimum size limit does not protect the pop from recruitment overfishing.
 - Based on data at hand, the regs below would do the following:
 - 32” snout to fork max would protect pallid sturgeon
 - 24” – 32” snout to fork harvest slot would provide minimal protection to female shovelnose sturgeon
 - 27” snout to fork minimum would provide adequate protection to female shovelnose sturgeon
 - and the Oct 15 – May 15 harvest season would reduce shovelnose sturgeon harvest by half in the two highest harvest months of October and May given that effort does not shift to Nov, Dec, Jan, Feb, March or April.
 - Several agencies and universities plan to complete work on shovelnose sturgeon over the next two to three years to fine tune the modeling and get a better handle on commercial harvest and exploitation.
- Bob Hrabik (MO) informed the group about the “Interstate Standardization Network”. An email based network of people working on all species of sturgeon designed to keep

information as current as possible. If you are not on the list and would like to be, please contact Bob.

Regulations Update:

- MN – does not allow the harvest of shovelnose sturgeon commercially.
- WI – proposing a 27-32 inch snout to fork length harvest slot, continuous open season.
- IA – proposing a 27 inch snout to fork length minimum length limit, October 15 to May 15 harvest season.
- IL – proposing a 24 -32 inch snout to fork length harvest slot, October 15 to May 15 harvest season, Sturgeon harvest permit and a roe harvest permit
- MO – proposing a 24 -32 inch snout to fork length harvest slot, October 15 to May 15 harvest season.
- TN – have in place a 24 -32 inch snout to fork length harvest slot, October 15 to May 15 harvest season.
- KY – proposing a 24 -32 inch snout to fork length harvest slot, October 15 to May 15 harvest season.

Sturgeon Flesh and Roe contaminates update. Michelle Marron (WI) presented sturgeon flesh and roe contaminates information from all five UMRCC states. The main contaminates sampled for were PCB's, Chlordane and Mercury. Consumption advisories in MN, WI and IL are risk based and IA and MO are FDA level based but will change to risk based in the future. MO is the only state with a Mississippi River consumption advisory on shovelnose sturgeon and that advisory suggests no consumption of sturgeon flesh or roe mainly because of chlordane for Pools 20-26 and the open river down to Cairo, IL. There is a 2004 UMRBA report with information regarding contaminates advisories on the UMRBA website.

Michelle Marron (WI) also informed the group that bowfin is the next species that is beginning to be harvested for their roe to be used as caviar.

Jon Duyvejonck, UMRCC Coordinator gave a coordinators report.

- Jon was pleased to introduce Scott Yess (FWS-Fisheries, La Crosse, WI) as the next UMRCC Coordinator. Scott will relocate the UMRCC office and records from Rock Island, IL to the FWS Fisheries Resource Office in La Crosse, WI.
- Jon is looking forward to spending his time on habitat restoration, mussels, and the Navigation and Ecosystem Sustainability Program.
- The UMRCC Fisheries Technical Section would like to give Jon a big Thank You for all the hard work he's done for the UMRCC and the resource.

Ken Barr updated the group on the Navigation and Ecosystem Sustainability Program (NESP). \$1.5 Billion for Ecosystem Restoration and continued design work on the navigation improvements. There is a 50/50 chance that WRDA will hit the floor. The fisheries tech section suggested that contacts to the Senators be made regarding Ecosystem Restoration. One of the UMRBA issue papers deals w/ directly funding the states and universities for work on NESP. \$10 million is authorized for design, science panel work and report, decision support system and

assisting several project development teams. The reach planning reports will allow for prioritization of ecosystem restoration projects within NESP.

Larry LaJoene (Exelon Nuclear, Cordova, IL) updated the group on the EPA 316b Hydropower issue.

- Law says that the electrical utilities need to comply.
- Restoration is a potential substitute for compliance. (IL alone has 18-19 facilities). The potential is there for mitigation/restoration dollars to be spent in the basin.
- Ruling will occur late this summer if restoration will be allowed.
- If restoration is allowed, mitigation/restoration enhancement will occur on an annual basis.

Non-Native Species update:

- Pam Theil (FWS La Crosse) gave us the dates of the Gobie Roundup and Asian Carp Corral. That will be on the Illinois River, June 12-16, from the western suburbs of Chicago down to Havana collecting carp in the upper stretches and gobies in the southern reaches.
- Rob Simmonds (FWS Carterville) provided information on the Asian Carp Management and Control Plan. The plan is now in the hands of the National Aquatic Nuisance Species Task Force in Washington DC which will then review the plan, incorporate comments then release for public comment.

Jerry Rassmussen (MICRA) updated the group on current MICRA activities.

- Paddlefish/Sturgeon Subcommittee is looking for someone to complete the Upper Mississippi River Basin paddlefish chapter.
- Sauger management investigation proposal is being revived, Kyle Austin will be the lead.
- MICRA is involved with the National Fish Habitat Initiative work on large rivers.
- Jerry heads up the Mississippi Panel on Aquatic Nuisance Species. The panel is looking into daughterless common carp as a possible long term solution for control or elimination. They only spawn males. The downside is it may take 20 or more years.
- MICRA would like the Fisheries Technical Section to come on board and support this initiative.

Jennifer Sauer (USGS-UMESC) updated the group on the LTRMP Fisheries Component activities. Under the minimal sustainable program (MSP) the fisheries component will only be sampling the 2nd and 3rd time periods. They are working on a multi-year report and the Fish Life History Database. Additional monies over and above MSP are directed to Additional Program Elements (APEs) which consist of focused research projects.

Mussel Ad Hoc Committee update:

- Gary Wege (Mussel Ad Hoc Chairman) gave a short and sweet summary of the Mussel Ad Hoc meeting held this morning in an effort to allow time to discuss the implications of Water Level Management on mussels and the costs and benefits of environmental restoration. Please see the Mussel Ad Hoc Minutes for complete details.

Costs and Benefits of Environmental Restoration:

- Dave Heath (WI) presented information on the Effects of the Pool 5 Drawdown on Mussels.
 - A 1.5 foot drawdown in pool 5 killed an Estimated 0.5 million mussels.
 - 72% survival for Pool 5 mussels during the drawdown compared to 95-100% in other studies
 - Many questions arise from this study.
 - Can populations of this imperiled animal group withstand periodic drawdowns (long lived, slow recovery)?
 - Are there any benefits to mussels from drawdowns? Unknown.
 - Do environmental benefits from Mississippi River drawdowns outweigh the costs? What are the benefits?
 - Do regulatory agencies expose themselves to criticisms?
 - Discussed the information at length
- A draft resolution on cost and benefits of environmental restoration activities was discussed at length by the group. See attachment Draft Resolution to the UMRCC.
- The discussion could be summarized as this: “Don’t stop using these environmental restoration tools, but urge the COE to evaluate the costs and benefits of all environmental restoration tools.
- The Wildlife Tech committee and the Mussel Ad Hoc Chair had no objections with the draft resolution.
- It was discussed that the Fish Tech Chairman, UMRCC Coordinator and Dave Heath (WI) edit the draft resolution by incorporating comments from today’s meetings and then send to all UMRCC Technical Committee Chairpersons for final comment before sending to the UMRCC Executive Board for approval. A show of hand in favor of moving forward in this direction were one (1) Nay, and a majority of the rest Yea.

Eric Nelson (FWS Winona) presented the group with a FWS Upper Miss Refuge CCP update.

- The CCP is the document that will bring the refuges into compliance with federal law. All refuges are required by law to do so.
- Think of it as “one stop shopping”.
- One issue is a navigability issue w/ the idea to reduce disturbance. Went from no fishing to voluntary avoidance in closed area only during the waterfowl season. There will be thresholds on disturbances and if hit that threshold, it may go back to no entrance.
- Document will address fish habitat in HREPs.
- Document supports fishing floats but will set standards
- Document proposes new boat access, walk in access and fishing piers.
- Any questions at all may be directed to Eric Nelson or Don Hultman (FWS, Upper Miss Refuge, Winona)

Bill Franz (EPA Region 5 Chicago) discussed listing areas of the Mississippi River as impaired for fisheries, sediment and/or nutrients on the states lists of impaired water-bodies. Lake Pepin (Pool 4) has a TMDL listing. It was noted that this would be an appropriate

topic for a future joint discussion with the WQ Tech Section and the Fish Tech Section along with EPA representatives.

Committee Reports:

- Publications - Dan Kirby (IA). Dan is looking for projects for the publications committee to work on and will coordinate any suggestions.
- Commercial Fish Data is currently being summarized by Dan Kirby (IA), Dr. Mike Quist (ISU) and Mike Steuck (IA). Still waiting on Missouri data.
- The Distribution and Abundance of Fishes, which was last published in 1995.
- A mussel section to be included in the Distribution and Abundance of Fishes was discussed. The COE has a mussel database and Kan Kelner (COE) may have what is needed for a mussel appendix to be included in the publication. The Freshwater Mussel Conservation Society is also working on something similar, we may want to check with them before proceeding.
- Contacts for publications in the other agencies are as follows:
 - WI – Ron Benjamin
 - MN – Steve Haxmeier
 - IL – Dan Sallee
 - MO – Travis Moore
 - FWS – Pam Theil
- Education: Jeff Janvrin (WI), chairman informed the group that the Teacher workshops he conducts will continue and that if anyone has any ideas, to contact him. Jon Duyvejonck informed the group that Public Television was looking to work on television spots that focused on the UMRCC. In order for the group to do this we were looking for monies to support and assist the UMRCC. TNC may have some resources to assist. Jeff Janvrin (WI) will put some numbers together and will have a better idea for the group at the spring meeting.

Tom Boland (IA-Retired) has been contracted to complete the 2001-2005 Proceedings in an attempt to bring us up to date. He has also been contracted to complete the 2005 Proceedings with out the commercial fish data and the 2006 Proceedings will have the 2001-2005 commercial fisheries data included.

Agency reports were given from south to north by Missouri, Illinois, USACE St. Louis-Rock Island-St. Paul, Wisconsin, Minnesota, USFWS-Ecological Services, Fisheries and Refuges. Thanks to those who provided electric or hand-written reports.

The 2006 Fall UMRCC Fish Tech Section Meeting will be held at Camp Okatipi in MO, south of Hannibal and one mile north of L&D 22 at a date yet to be determined. Contact Travis Moore (MO) for more information.

The 2007 Spring UMRCC Fish Tech Section Meeting will be held in conjunction with the Annual UMRCC Meeting tentatively March 21-23, 2007 in Minnesota.

Last but not least, Dan Dieterman (MN) will be taking over as the UMRCC Fisheries Technical Section Chairman.

The attendance sheet is attached.

An Agenda is attached.

Agency reports that were typed or handed in are attached.

Respectfully Submitted,

Mike Steuck
UMRCC Fisheries Technical Section Chairman

Attendance List
UMRCC Fisheries Technical Section Meeting
March 14, 2006 – Hannibal, MO

Name	Agency	Phone #	E-Mail Address
Fisheries			
Dan Kirby	IA DNR	563-872-5495	daniel.kirby@dnr.state.ia.us
Ken Von Ruden	WI DNR		Kenneth.VonRuden@dnr.state.wi.us
Jerry Rasmussen	MICRA		jjrivers@aol.com
Kevin Stauffer	MN DNR	651-345-3365	kevin.stauffer@dnr.state.mn.us
Dan Dieterman	MN DNR	651-345-3365	dan.dieterman@dnr.state.mn.us
Dan Sallee	IL DNR	815-625-2968	dsallee@dnrmail.state.il.us
Jon Duyvejonck	UMRCC Coord.	309-793-5800	Jon_Duyvejonck@fws.gov
Mark Cornish	USACE-MVR	309-794-5835	Mark.A.Cornish@usace.army.mil
Scott Yess	UMRCC Coord.		Scott_Yess@fws.gov
Chuck Theiling	USACE-MVR	309-794-5636	charles.h.theiling@usace.army.mil
Louise Mauldin	USFWS		louise_mauldin@fws.gov
Mark Boone	MO DOC		Mark.Boone@mdc.mo.gov
Kevin Mauel	WI DNR	608-781-6367	Kmauel@usgs.gov
Andy Bartels	WI DNR	608-781-6361	abartels@usgs.gov
Brian Johnson	USACE-MVS		Brian.L.Johnson@mvs02.usace.army.mil
Michelle Marron	WI DNR	608-685-6221	Michelle.Marron@dnr.state.wi.us
Kip Runyon	USACE-MVS		Kip.R.Runyon@mvs02.usace.army.mil
Tim Spier	WIU		tw-spier@wiu.edu
Pam Thiel	USFWS	608-783-8431	pam_thiel@fws.gov
Marcus Miller	WIU		ml-miller@wiu.edu
Scott Gritters	IA DNR	563-252-1156	scott.gritters@dnr.state.ia.us
Greg Snellen	WIU		grs107@wiu.edu
Ed Britton	USFWS		ed_britton@fws.gov
Rob Simmonds	USFWS		rob_simmonds@fws.gov
Danny Brown	MO DOC		danny_brown@mdc.mo.gov
Eric Nelson	USFWS		eric_nelson@fws.gov
David Heath	WI DNR	608-785-9993	david.heath@dnr.state.wi.us
Jeff Javrin	WI DNR	608-785-9005	jeff.javrin@dnr.state.wi.us
Travis Moore	MO DOC	573-248-2530	Travis.Moore@mdc.mo.gov
Tom Boland	IA DNR-Retired		TLBoland@msn.com
Gary Wege	USFWS	612-725-3548x207	Gary_Wege@fws.gov
Jodi Staebell	USACE-MVR		jodi.k.staebell@usace.army.mil
Patrick Short	WI DNR	608-326-8818	patrick.short@dnr.state.wi.us
Mike Steuck	IA DNR	563-872-4976	michael.steuck@dnr.state.ia.us
Jon Christensen	IA DNR	563-263-5655	Jon.Christensen@dnr.state.ia.us
Bernard Schonhoff	IA DNR	563-263-5062	Bernard.Schonhoff@dnr.state.ia.us

Ken Barr	USACE-MVR		kenneth.a.barr@usace.army.mil
John Pitlo	IA DNR-Retired	563-872-4976	John.Pitlo@dnr.state.ia.us
Joe Jordan	USACE-MVR		joseph.w.jordan@usace.army.mil
Ken Cook	USACE-MVR		kenneth.m.cook@usace.army.mil
Robert Colombo	SIU		rcolombo@siu.edu
Jim Garvey	SIU		jgarvey@siu.edu
Kirk Hansen	IA DNR	563-872-4976	Kirk.Hansen@dnr.state.ia.us
Mike Quist	ISU	515-294-9682	mcquist@iastate.edu
Ron Benjamin	WI DNR		ron.benjamin@dnr.state.wi.us
Bill Fritz	IL DNR-Retired		bnf53@ezeeweb.com
Caleb Schnitzler	IA DNR	563-872-4976	Caleb.Schnitzler@dnr.state.ia.us
Bob Hrabik	MO DOC		Robert.Hrabik@mdc.mo.gov
Karen Osterkamp	IA DNR	563-927-3276	Karen.Osterkamp@dnr.state.ia.us
Ross Dames	MO DOC		Ross.Dames@mdc.mo.gov
Gordon Farabee	MO DOC-Retired		SFarabee@nemonet.com
Ken Brummett	MO DOC-Retired		
Steve Waters	IA DNR		Steve.Waters@dnr.state.ia.us
Chris Williamson	MO DOC		Chris.Williamson@mdc.mo.gov
Steve Johnson	USACE-MVR	309-794-5704	Steven.M.Johnson@usace.army.mil
Mel Bowler	IA DNR	563-872-5495	Melvin.Bowler@dnr.state.ia.us
Mike McClelland	INHS		mmcclell@uiuc.edu
Kevin Irons	INHS		kirons@uiuc.edu
Norm Stucky	MO DOC-Retired		npstucky@aol.com
Heidi Dunn	Ecological Specialists		HDunn@Ecologicalspecialists.com
Mike Cochran	IL DNR-Retired		nhawk@adams.net
Jennifer Sauer	USGS-UMESC		jsauer@usgs.gov
Brent Knights	USGS-UMESC		bknight@usgs.gov
Larry LaJeone	Exelon Nuclear		larry.lajeone@exeloncorp.com
Bill A. Bertrand	IL DNR-Retired		billandila@frontiernet.net
Jeremiah J. Haas	HDR Engineering		jhaas@hdrinc.com

US FWS La Crosse, Fishery Resource Office Agency Report – Pam Theil

- Conducted pre construction monitoring for St Paul COE as a part of NESP for wing dam notching in Pool 2 with electrofishing and fyke nets.
- Collected fish for the Service’s wild fish survey in Pools 4 & 7.
- Participated in the Mussel Conservation Team and propagation activities for Higgins Eye mussel including infestation, cage building and diving
- Assisted with winged maple leaf mussel restoration by determining thermal life requisites and collecting specimens by diving.
- Conducted numerous outreach and educational activities including sport and fishing shows, school fairs, river education days, classroom presentations, parades and open water and ice fishing events.
- We provided technical and planning assistance on HREP and NESP projects including Pool 8 and Pool 11 Islands, Long Meadow, Pool 13 Overwintering, and Pool 5 ecosystem projects.
- We conducted our annual goby roundup / carp corral on the Illinois waterway and also assisted partners with monthly sampling for Asian Carp in the vicinity of the electrical dispersal barrier.
- We monitored the lower St. Croix River bi-weekly with plate samplers for zebra mussels and three times during the open water season with diving.

- We participated in various river groups such as the Mussel Coordination Team, FWWG, FWIC, UMRCC, (Fish Technical Committee and Mussel Ad Hoc), Chicago Dispersal Barrier Task Force and St Croix Aquatic Nuisance Species Task Force.
- We are coordinating the Service's participation in the Midwest Driftless Area Restoration as part of the National Fish Habitat Initiative.
- Our office is excited to have Scott Yess serve as the new UMRCC Coordinator.

US FWS Carterville, Fishery Resource Office Agency Report – Rob Simmonds

- Worked with Asian Carp Working Group to develop a first draft of a National Management and Control Plan for Asian Carps in the United States.
- Working with the Missouri DOC and others, develop a lake and shovelnose sturgeon tag database to centralize information on who tagged each fish so that when a tagged fish is collected, the agency tagging the fish can be contacted for additional information.
- Began first year of pre-project monitoring in the Herculaneum reach of the Middle Mississippi River (MMR). This area will be the site of a habitat restoration project under the NESP.
- Began first year of a pre-project monitoring on the Harlow Island side channel in the MMR. This is also a potential NESP restoration project.
- Collected fish below Mel Price and L&D 22 in conjunction with hydroacoustics surveys as part of pre-project monitoring for the fish passage projects at those sites. These are both NESP projects.
- Completed second year of fish aging as part of the Swan Lake HREP project evaluation.

Minnesota State Report, Fish Tech Section – 3/14/06 – Kevin Stauffer

Plans for 2006 include:

- Continued effort to sample shovelnose sturgeon in Pools 3-5. Will also collaborate with Wisconsin DNR as much as possible. We purchased additional hoopnets last fall, so our gear will now be similar to what Wisconsin and commercial anglers are using. We will also try trammel and gillnets in tailwaters.
- Continue annual fish and habitat monitoring as part of our Major River program.
- Complete annual Large Lake sampling on Pool 4 / Lake Pepin using trawl, seines, electrofishing and gillnets.
- Two-year creel survey on Pool 4 was started in November 2005. This is our normal 2 of 6 year rotation and is part of the Large Lake program in MN.

Ongoing project:

In January 2006 we started fieldwork on a winter angling mortality study for flathead catfish and sauger. Sampling locations were the tailwaters of L&D 3 and the upper end of Pool 4.

For sauger, we are using two methods to estimate hooking mortality: telemetry and vertical net pens. Net pens are 6' x 6' with a maximum depth of 30 feet. Sauger were angled from depths of 30 to 65 feet and placed in the vertical pen. Pens were lifted after three days and mortality recorded. All fish were marked with fin clips that corresponded to the depths at which they were caught. We have not analyzed any data yet, as the last of three trials was completed in early

March. Overall mortality ranged from 12 to 33 percent, but there were numerous logistical problems that likely increase the observed mortality in some trials.

We also used small, short battery life sonic transmitters to determine post release mortality of sauger. A total of 10 sauger (size range 11.5 to 15.5 in) were angled from depths 28 to 62 feet, tagged, and immediately released. Five of these fish were tagged in early January and five were tagged in mid-February. We tracked the tagged fish periodically for about three weeks. Movement, though limited, indicates that most fish survived. We lost signal on one tagged fish the day after release and were never able to relocate this fish. Likely causes are transmitter failure or unreported capture by angler.

Most of the sauger showed enough movement that we could consider them as surviving past our 72-hour time frame. One fish that we presumed dead (as it didn't move for over three weeks), was subsequently caught by an angler. Further analysis of movement data will need to be completed, but it appears that at least 9 of the 10 fish survived.

In mid-February, we also tagged 10 flathead catfish that were angled (snagged) from a known wintering location. Five of these fish were released at the capture site and five were released approximately one mile downstream. All five of the displaced fish moved back to (or near) the capture location within 48 hours. One of the displaced fish eventually moved about 0.4 miles upstream of the capture location. Movement data from all ten fish indicate that they survived and we continue to periodically locating these fish. Movements have been very limited so far, but they have shifted within the general wintering area. Tags on the flatheads have an approximate battery life of three months, so we hope to document the dispersal from their wintering location.

Results above are very preliminary, but final report on this project will be completed later this year. We will consider presenting at the fall Fish Tech meeting.

IA DNR Bellevue Research Station Agency Report for 2005 – Mike Steuck, Denny Weiss and Caleb Schnitzler

- Continue walleye/sauger sampling, VI tagging, creel, to evaluate changes in regulations
- Continue radio telemetry of walleye to document walleye spawning area and habitat use in Lower Pool 13 and to assist Rock Island Dist. COE evaluate COE O&M changes of wingdams in Pool 13.
- Continue radio telemetry of bluegill, black and white crappie to define the overwinter needs of centrarchids and to evaluate a newly completed HREP – Pool 11 Islands (without the Islands part)
- The Rock Island District COE (Mike Cox and Roger Perk) assisted in purchasing transmitters for both telemetry projects.
- Continue sampling flathead catfish as a part of a statewide flathead catfish project. Didn't have great retention w/ VI tags and are evaluating the use of PIT tags in flatheads.
- Assist Kirk Hansen (IA) and Mike Quist (ISU) with shovelnose sturgeon work.
- Participated in EMP-HREP, A-Team, EMPCC meetings
- Participated at the NECC, FWWG and FWIC meetings

- Participate in construction of the Rock Island Dist. Pool Plans
- MICRA Paddlefish sampling – Denny Weiss sampled roughly 200 paddlefish
- Public Outreach – school presentations, river education day, county fair, job shadows, career days, etc.
- FWS CCP review and attend public meetings

UMRCC River Rat Awards
62nd Annual Meeting – March 15, 2006
Hannibal, Mo

5-YEAR AWARDS

Bill Franz
Kevin Mauel
Kelly Mckay
Eric Ratcliff

10-YEAR AWARDS

Gretchen Benjamin
David Bierl
Terry Dukerschein
Scott Gritters
Brian Johnson
Eileen Kirsch
Larry Lejeone
Pete Redmon
Chuck Theiling

15-YEAR AWARDS

Mike Davis
David Kennedy
Bob Sheets
Larry Webinger

20-YEAR AWARDS

Dave Moeller
Steve Waters

25-YEAR AWARDS

John Pitlo

**UMRCC CORRESPONDENCE
AND DOCUMENTS
MARCH, 2005 – MARCH, 2006**

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

OFFICE MEMORANDUM

DATE: March 30, 2006

TO: Scott Yess, UMRCC Coordinator, LaCrosse

FROM: Scot Johnson, DNR Waters, Lake City
scot.johnson@dnr.state.mn.us

SUBJECT: UMRCC Annual Meeting - Recreation Technical Section Meeting Summary

The UMRCC Recreation Technical Section has been inactive for a number of years. Prior to the 2006 Annual UMRCC Meeting, a number of members were contacted to gauge the level of interest in reactivating the Recreation Technical Section. Based on the input, it was determined that there was enough interest within the UMRCC membership to warrant an informal meeting as part of the Annual Meeting.

The Recreation Technical Section met at 3:00 pm on March 14, 2006 in the breakfast eating area. There was no set agenda but a lengthy and wide-ranging discussion ensued. Representatives from 3 States, 3 Corps Districts and the USFWS concluded that it would be very beneficial to continue sharing work experiences and information through a reactivated Recreation Technical Section. Participants identified the need to collect, collate and disseminate regional and systemic recreation and interpretive information. A balance between concrete work products and the discussion of recreational based issues was identified as a general direction for the Section.

Kevin Berg, Corps-St. Paul District, and Scot Johnson, Minnesota DNR, will work together to further organize participants and develop an agenda for this Fall's Recreation Technical Section meeting.

Recreation Technical Section participants included:

Carol Ryan, USACE, St. Louis
John Knoble, USACE, Rock Island
Kevin Berg, USACE, St. Paul
Martin Konrad, Iowa DNR, Des Moines
Jim Fischer, Wisconsin DNR, LaCrosse
Sharonne Baylor, USFWS, Winona
Scot Johnson, Minnesota DNR, Lake City

CONSTITUTION
BYLAWS
AND
COOPERATIVE AGREEMENTS
OF THE
UPPER MISSISSIPPI RIVER
CONSERVATION COMMITTEE

CONSTITUTION OF THE UPPER MISSISSIPPI RIVER
CONSERVATION COMMITTEE

(Revised, January 1996)

Preamble

The Upper Mississippi River Conservation Committee was organized in 1943 and sponsored by the States of Minnesota, Wisconsin, Illinois, Iowa and Missouri with the encouragement of the U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers.

The objectives of the Committee were to provide a framework for facilitating cooperation between the states for studies of the natural resources of the river, exchange of information about the river and its problems at regular meetings, and promotion of cooperation in resource management of interstate water including development of more uniform laws and regulations affecting use of natural resources of the river. From its beginning as primarily an interstate organization, the Committee has worked closely with and had much cooperation from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the U.S. Public Health Service.

The Committee began its formal existence with an Agreement of Organization, dated December 15, 1943. As the activities of the Committee expanded, became more complex, and to a certain extent changed its approaches, need for a constitution became evident; especially to clarify and define the role, responsibilities and prerogatives of the state and cooperating agencies, both federal and local, in policy-making decisions. The original constitution was adopted in 1969 and is hereby revised to read as follows:

ARTICLE I

Name, Objectives and Purposes, Meetings

1. The name of the organization shall be the Upper Mississippi River Conservation Committee, hereinafter referred to as the Committee or U.M.R.C.C.
2. The objectives and purposes of the Committee shall be:
 - a. To promote the preservation, development, and wise utilization of the natural and recreational resources of the Upper Mississippi River

bordering the States of Minnesota, Wisconsin, Iowa, Illinois and Missouri.

- b. To formulate policies, plans, and programs for carrying on cooperative surveys and studies for the above-stated purposes.
- c. To keep necessary records, publish and distribute reports.
- d. To make recommendations to the governing state bodies in the furtherance of the objectives of the Committee.

3. Meetings

- a. Annual - The Committee shall hold an annual meeting at a time and place determined at the previous annual meeting.
- b. Special - A special meeting shall be called by the Chairman at the request of three or more official members.

ARTICLE II

Membership and Dues

- 1. The membership of the Committee shall be the following classes:
 - a. Official members and delegates - The official members (five) shall be: (1) Minnesota Department of Natural Resources; (2) Wisconsin Department of Natural Resources; (3) Iowa Department of Natural

Resources; (4) Illinois Department of Conservation; and (5) Missouri Department of Conservation. The appointed delegates shall constitute the Committee. Each official member shall be represented by a delegate appointed by the responsible administrator (director or commissioner) of the said agency. This delegate shall be a person having knowledge of and interest in the resources of the Mississippi River and shall be a person of responsible administrative authority who can make decisions on behalf of his agency provided the same are not contradictory to policies of his organization and do not exceed the financial limitations of his organization.

- b. Cooperating Agencies - Other governmental agencies as well as private organizations having an interest in the various resources of the Upper Mississippi River may serve as cooperating agencies with the approval of the Committee. Such approved agencies may appoint such members of the staffs as they may deem necessary and proper to aid the work of the Committee.

3. Dues

- a. Official member - The dues of the official members shall be \$2000 per state per year and shall be payable each January to the Secretary-Treasurer.

- b. Cooperating Agencies - There shall be no dues for cooperating agencies. However, the cooperating agencies may make financial and material contributions to the Committee.

ARTICLE III

Officer and Committees

1. The elected officers of the UMRCC shall be the Chairman, the Chairman-Elect, and the Secretary-Treasurer. The Chairman shall serve a one-year term. The Chairman-Elect shall be elected, serve a one-year term and succeed to the Chairmanship without further election. The Secretary-Treasurer shall serve for a two-year period. Only the Secretary-Treasurer may be re-elected for not more than two additional consecutive terms. In the event of the resignation of an officer that member (Agency) represented by him shall appoint a replacement for the unexpired term. Only delegates or standing committee chairman shall be eligible to serve in elective offices.
2. The Committee may appoint a Coordinator to devote full time to forwarding its objectives.
3. Committees - Executive Board, sections, sessional and ad hoc committees.
 - a. Executive Board

The Chairman, Chairman-Elect, Secretary-Treasurer, the official delegate of the delegation from each state not represented by an officer, and the chairman of each standing committee shall constitute

the Executive Board. Each state will have one vote (the state designee) on issues where a vote is required.

- b. Standing committees are continuous committees which shall investigate their assigned subject and present a report at the annual meeting. Standing committees shall be referred to as Technical Sections of the UMRCC, namely:

- (1) Fisheries Technical Section
- (2) Wildlife Technical Section
- (3) Law Enforcement Technical Section
- (4) Recreation and Water Use Technical Section
- (5) Water Quality Technical Section

The Chairman of the Executive Board shall appoint a Technical Section Chairman for each of the five sections. Prior to the annual meeting, each member state delegate shall designate a "technical section delegate" for each of the five Sections. The technical section delegate shall be the official voting representative for matters in the Technical Section. Cooperating agencies may also designate a non-voting representative if that agency desires. All other non-voting participants involved in UMRCC functions shall be referred to as "general members."

- c. Sessional committees - The Chairman is authorized to appoint the following sessional committees of five members each prior to each annual meeting for the necessary conduct of the meeting:

- (1) Time and place
- (2) Nominating
- (3) Audit

- d. Ad Hoc committees - The Chairman shall have the authority to appoint ad hoc committees for special assignments. An ad hoc committee shall be considered as a temporary committee given a short-term assignment and shall be terminated upon the presentation and acceptance of their report.

ARTICLE IV

Motions, Seconds, Voting and Quorum

1. Motions and seconds may be made by the official state delegate or his designee or any section member.
2. Each official member shall be entitled to only one vote. The chair shall give each official member a reasonable period of time to poll its representatives before calling for the final vote.
3. The presence of four of the five official members shall constitute a quorum and three affirmative votes will be necessary to pass a motion.

BYLAWS

1. Duties of Officers

- a. Chairman - The Chairman is responsible for the business of the UMRCC, makes appointments to the various sections and sub-committees, and exercises such other functions as may be determined from time to time by action of the members. He shall preside at the annual meeting, at special meetings and at meetings of the Executive Board.
- b. Chairman-Elect - The Chairman-Elect shall assume the duties of the Chairman in his absence or inability to act. He shall be prepared to take over the duties of the Chairmanship and shall have a full slate of committee appointments ready to be made when he becomes Chairman.
- c. Secretary-Treasurer - Secretary-Treasurer in his capacity of secretary is responsible for maintaining the official records of the Committee including the Proceedings of each annual meeting and special meetings. The form of the Proceedings shall be determined by the members. He shall notify members and cooperating agencies of the time and place of annual meetings at least one month in advance. The Secretary-Treasurer in his capacity as treasurer shall receive and collect all dues, fees, accounts receivable, and other income of the committee and shall have custody of its funds. He shall pay all accounts payable and other claims which have been duly authorized and approved. The Secretary-Treasurer shall present an annual report to the Committee.
- d. Coordinator - The Coordinator shall devote full time to furthering the objectives of the UMRCC. He shall coordinate its activities and promote harmony among the member agencies. He shall assist the Chairman and

the Secretary-Treasurer in such manner as they may desire, especially by acting as custodian of the Committee's records and publications, and in the preparation of the Proceedings of the annual meeting. He shall assist in the preparation of such other publications and publicity materials as the Committee may direct. He may, at the request of the Chairman, represent the UMRCC at interstate meetings and conferences, but any statement he may present at a legislative hearing must have been cleared by the Executive Board.

2. Cooperating Agencies

Representatives of cooperating agencies are encouraged to assist the Committee in coordinating activities and in supplying such service and information as may assist the Committee to achieve its objectives. The representatives of the cooperating agencies are eligible to serve as members or Chairman of any Section or ad hoc committee. They may present reports and participate in the discussion at annual and special meetings.

3. Responsibilities of Executive Board, Sections and Committees

- a. Executive Board - The Executive Board shall act for the UMRCC in the period between annual meetings, but only in matters of such urgency that action cannot be deferred until the next annual meeting. Such action may be taken only on unanimous vote of the representatives of all five states, and a full report of all such actions shall be included in the Chairman's report at the next annual meeting. The Executive Board may call on the Coordinator, Section Chairmen, Members, and cooperating agencies for assistance.

- b. Sections - The sections shall be responsible for surveillance of changes and developments on the river and for coordinating all work pertaining to their respective areas of responsibility. They may recommend action by the UMRCC in areas of their responsibilities and present action recommendations through the proper channels. The Chairman of each Section shall strive to hold one or more meetings of his Section in addition to the meeting held in concurrence with the annual meeting of the UMRCC. He shall prepare a written report of the activities of the Section for inclusion in the Proceedings and shall present an oral resume of his report at the annual meeting of the UMRCC.

- c. Sessional Committees - The Sessional Committees shall be appointed three months prior to the annual meeting for the necessary conduct of the meeting. Their duties are as follows:
 - (1) Time and Place - Select the time and place of the next year's meeting so that full details can be announced.
 - (2) Nominating - Present a slate of nominees for office, all of whom have consented to serve if elected.
 - (3) Audit - Audit the accounts of the Secretary-Treasurer.

4. Order of Business - The order of business at the annual meeting of the Committee shall include, but shall not necessarily be limited to the following.
 - a. Call to order by the Chairman.
 - b. Roll call and determination that a quorum is present.
 - c. Approval of minutes of the previous meeting.
 - d. Report of Chairman on actions of Executive Board.
 - e. Report to Secretary-Treasurer
 - f. Report of Coordinator.
 - g. Reports of Section Chairmen. Included will be the necessary action recommendations to the Committee for late consideration.
 - (1) Fisheries Section
 - (2) Wildlife Section
 - (3) Law Enforcement Section
 - (4) Recreation and Water Use Section
 - (5) Water Quality Section
 - h. Reports of Ad Hoc Committees.
 - i. Other business.
 - j. Announcement of membership on Sessional Committees.
 - k. Reports of Sessional Committees.

- (1) Audit Committee
- (2) Time and Place Committee
- (3) Nominating Committee

- l. Election of officials.
- m. Installation of newly-elected officers.
- n. Appointment of committees.
- o. New business.
- p. Adjournment.

5. Amendments to Constitution and Bylaws.

The constitution and bylaws may be amended at any annual or special meeting by a unanimous vote of the five official members.

COOPERATIVE AGREEMENT
BETWEEN
THE BUREAU OF SPORT FISHERIES AND WILDLIFE
AND
THE UPPER MISSISSIPPI RIVER CONSERVATION COMMITTEE

This agreement is entered into between the Upper Mississippi River Conservation Committee, an organization of the conservation agencies of Minnesota, Wisconsin, Iowa, Illinois, and Missouri, hereinafter referred to as the Committee and the Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service, Department of the Interior, Hereinafter referred to as the Bureau. For the purposes of this agreement, the Upper Mississippi River is defined as the area of land and water within the floodplain of the Mississippi River between the Ohio River on the south and the St. Croix River on the north.

WHEREAS:

1. The Committee has been organized under the sponsorship of the states of Minnesota, Wisconsin, Iowa, Illinois, and Missouri under a Constitution dated January 1969 for the purpose and objectives of promoting the preservation, development and wise utilization of the natural and recreational resources, including fish and wildlife resources of the Upper Mississippi River bordering the five member states;
2. The Fish and Wildlife Coordination Act of March 10, 1934 (48 Stat. 401) as amended (16 U.S.C. 661 et. seq.), hereinafter referred to as the Act, states as one of its purposes:

"...that wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation and rehabilitation..."

The Bureau, through delegation from the Secretary of the Interior, is authorized:

"...to provide assistance to, and cooperate with, Federal, State, and public or private agencies and organizations in the development, protection...of all species of wildlife, resources thereof and their habitat...to make surveys and investigations of the wildlife of the public domain...and...to accept...contributions of funds in furtherance of the purposes of this Act."

3. The Bureau has, for a number of years, cooperated with the Committee, operating in the capacity of a cooperating agency defined in Article II, Section 1(b) of the Constitution of the Committee as a governmental agency or private organization "having an interest in the various resources of the Upper Mississippi River." In addition, the Bureau has interests along the Upper Mississippi River that transcend state boundaries. Extensive Bureau lands are involved in Mark Twain and Upper Mississippi River Fish and Wildlife Refuges. Fish hatchery and fishery research programs of regional interest are based at Genoa, Wisconsin; Muscatine, Iowa; and LaCrosse, Wisconsin.
4. Article II, Section 2(b) of the Constitution provides that cooperating agencies pay no dues but may make financial or material contributions to the Committee. Paragraph 2 of the Committee by-laws encourages cooperating

agencies to provide assistance in coordinating Committee activities and in supplying services and information toward achieving mutual goals.

5. The Committee has requested the Bureau to assist it by providing a Coordinator to carry out such duties and functions as shall hereinafter be agreed upon.
6. The Committee has also requested the Bureau to provide office space, supplies, equipment, printing services, and such service and maintenance as may be necessary for the Coordinator to carry on his duties and functions in an efficient manner.

NOW THEREFORE, it is mutually agreed by the Bureau and the Committee, in furtherance of the purposes and objectives both of the Committee and of the Bureau under the mandate of the Act, as follows:

1. The Bureau shall assist the Committee by providing a Coordinator to serve upon the following terms and conditions and to perform the following duties:
 - a. The Coordinator of the UMRCC shall be a regularly salaried employee of the Bureau and shall serve an indefinite term. The Chairman of the UMRCC shall be advised in advance when it is necessary to appoint a new Coordinator.
 - b. The Coordinator's duties shall be to coordinate activities of the Committee and to serve as liaison between the Bureau and the Committee.

- (1) He shall act as custodian of the Committee's records and publications.
 - (2) He shall be responsible for preparation of the proceedings of the annual meeting and shall assist the UMRCC in the development of other publications as the Committee may require.
 - (3) He shall assist the Executive Board, the Chairman, and the Secretary-Treasurer in the performance of their duties.
 - (4) He may, at the request of the Chairman, attend meetings, conferences, and hearings; however, presentation of any statement of the UMRCC is not the responsibility of the Coordinator. UMRCC policy and the position statements shall be signed by the Chairman.
2. The Committee shall contribute funds to the Bureau each year in an amount to be determined by mutual consent of the Bureau and the Committee at the annual meeting of the Committee. Contributed funds are to be utilized by the Bureau to defray the expenses of employing a secretary and for other miscellaneous expenses through provision of assistance to the Committee.
3. This agreement may be modified or amended at any time by either party thereto by giving the other party 30 days advance notice in writing.
4. Upon execution, this agreement shall be of full and binding force and effect as set forth unless and until modified or abrogated by the parties or unless existing authority of either the Bureau or the Committee to carry out its terms is modified or withdrawn.

5. The Committee agrees to comply with the requirements of Executive Order No. 11246 and to 43 CFR 17*, both of which are incorporated into this agreement by reference.

* Executive Order No. 11246 is the Federal Government's policy on equal employment opportunity.

* 43 CFR 17 effectuates the provisions of the Civil Rights Act of 1964 and sets forth the non-discrimination policy in Federally assisted programs.

ILLINOIS DEPARTMENT OF CONSERVATION

August 29, 1973

/s/ Anthony T.

Dean

Date

Director

IOWA CONSERVATION COMMISSION

September 5, 1973

/s/ Fred A. Prierwert

Date

Director

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

September 21, 1973

/s/ Robert L. Herbst

Date

Commissioner

MISSOURI DEPARTMENT OF CONSERVATION

October 4, 1973

/s/ Carl R. Noren

Date

Director

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

October 24, 1973

/s/ L.P. Voight

Date

Secretary

BUREAU OF SPORT FISHERIES AND WILDLIFE

June 19, 1973

/s/ Charles A. Hughlett

Date

Acting Regional Director