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# **LTRMP Analysis Team Meeting Minutes**

November 9 - 10, 1999

USGS Upper Midwest Environmental Sciences Center

Onalaska, Wisconsin

*FINAL*

February 7, 2000

Reviews of Draft 1 by J. Skalak, T. Schlagenhaft (no comments), R. Delaney, T. Dukerschein and K. Brummett.

Comments by J. Skalak, R. Delaney, T. Dukerschein, and K. Brummett have been incorporated.

## **Introduction, Minutes, Agenda**

Chairman Ken Brummett convened the LTRMP Analysis Team meeting at 1:00 on November 9, 1999. Following a welcome and introductions, minutes of the August 1999 Team meeting were reviewed. Terry Dukerschein and Ken Brummett offered changes, and the August minutes were accepted with those changes. Bob Delaney suggested that the list of action items emerging from Analysis Team meetings be distributed to Team members within a week following each meeting. Jerry Skalak agreed to send out the action items lists. No agenda changes were proposed.

Bob Delaney handed out draft executive summary fold-out sheets of the LTRMP Status and Trends Report.

## **LTRMP Structure**

Leslie Holland-Bartels announced changes in the organizational structure of the UMESC and the LTRMP management. Changes to both the administrative and science structure have been made. The intent is to provide more attention to the scientific aspects of the LTRMP, and to analysis of LTRMP monitoring data. Ken Lubinski has been assigned to lead analysis of LTRMP monitoring data. The Center has adopted a team organization, with Carl Korschgen (terrestrial sciences) Jim Wiener (aquatic sciences), and Linda Leake (geospatial sciences) as the science supervisors. There will be closer ties between the UMESC and the LTRMP field stations. Jim Wiener will be the UMESC coordinator for the northern field stations, and Carl Korschgen will work with the southern field stations.

John Wetzel asked when would analysis of the LTRMP monitoring data be completed. Leslie said that the FY2000 LTRMP work plan includes completion and interpretation of the analyses begun last year. John asked about subsequent changes to the LTRMP monitoring program. Leslie said that they will examine the fish and vegetation monitoring designs this year, and implement changes next year. John emphasized the need for the states to know what will be expected from the field stations, and the number of people needed.

## **LTRMP Annual Work Plan**

Jerry Skalak said that Leslie Holland-Bartels has established good working relations with the Corps Rock Island District EMP managers and with the Mississippi Valley Division. The Corps intends to fully support the LTRMP. Jerry announced that Division has turned over management responsibilities for EMP and the LTRMP to Rock Island District, therefore Tom Pullen will be attending to other Division activities and may not participate in all the Analysis Team meetings.

Jerry emphasized that funding levels are not guaranteed, and that increased LTRMP funding may result in increased contracting to get work done, rather than staffing up the UMESC and field stations. John Wetzel said that we should identify the base level of funding and work, to know how many people are needed at the field stations. Tim Schlagenhaft noted that the 1999 EMP reauthorization includes increased funding, that could allow monitoring of additional components. Leslie Holland-Bartels replied that they could do some pilot efforts to determine if expanded monitoring can be cost- and information- effective. They are now concentrating on determining if

the existing monitoring of vegetation, fish, and water quality can be made more effective. John Sullivan asked about increasing the priority for analysis of LTRMP monitoring data, which was started last year, to complete it sooner than next July. Leslie said that they will revisit that schedule, and try to accelerate the work.

Bob Delaney noted that the Corps, USGS, and State LTRMP partners agreed to plan for a ~3 percent increase in program costs due to salary increases and inflation. The Federal salary increase in FY2000 was 4.8 %. The UMESC will have to absorb this increased salary cost which is above the planned budget. The 99 WRDA authorized increased LTRMP funding, so the program needs to have plans in place to ramp up.

Leslie Holland-Bartels said that she is hearing a lot of interest in information about the ecological condition of the UMRS outside of the present LTRMP study areas, and that they need to identify information that is really needed for effective river management. Tim Schlagenhaft recalled that the UMRCC mussel ad-hoc committee recommended LTRMP mussel monitoring with a roving crew. Leslie said that we should discuss expanding LTRMP monitoring, but that we must also be our most severe critics. We need to state clear objectives for obtaining information, and test to see if we are meeting them. Leslie said that mussels are an example target group that may be best addressed through focused research vs. routine monitoring.

Jerry Skalak noted that an EMP Information Needs Assessment is proposed to take a hard look at information needed for river management, and to identify specific objectives for obtaining that information.

Leslie Holland-Bartels said that the focus this year will be on analysis of existing monitoring data, lessons learned, and identifying future directions. Fred Cronin expressed concern about the field station staff levels. Leslie agreed that it is problematic, but that we need to function under the existing basic program. Leslie and Carl Korschgen said that a number of student, contract, and term employees have been terminated at the UMESC, and that other formerly LTRMP-funded people have been reassigned to help stay within the present budget.

Jim Fisher asked if the LTRMP bathymetry crew could be reactivated with additional funding. Leslie said that the bathymetry and transect survey crew members have been reassigned to other work. Tim Schlagenhaft recalled that the bathymetry and transect survey work was cut from the program for one year to stay within the available budget. Dan Wilcox said that the bathymetry and transect elevation survey work could be done under contract. Carl Korschgen said that the UMESC is committed to retaining bathymetric survey capability, and has obtained new survey equipment with USGS funding. Leslie emphasized that bathymetry must be part of the base-funded LTRMP program if it is to be done in-house, given the personnel needed to do the work. Jerry Skalak cautioned that long-term guarantees of increased base program funding are uncertain, even with the recent reauthorization. Jerry noted that additional funding is available for FY00 above the base LTRMP funding level, from the EMP HREP projects and other Corps Construction General fund sources.

Tom Boland explained to Leslie Holland-Bartels that the Analysis Team doesn't want to micro-manage, but is interested in plans for program management. Leslie said that there won't be a set of people at the UMESC who are "owned" by the LTRMP. UMESC staff will work in teams on LTRMP and other USGS efforts. They plan to raise the visibility of the LTRMP within the USGS. Leslie said that they have a good program, that they intend to make it better, and that they will try to expand the program with increased funding. Jerry Skalak said that there is a high level of support within the Corps for the EMP, but that we need to provide good justification for increased funding.

Jim Fisher asked what are we after with bathymetry. Dan Wilcox suggested that there is a clear need for systemic bathymetric coverage. The LTRMP program has successfully completed bathymetric surveys in the study pools and some additional ones, but that there remains a need

for bathymetry spatial data for the rest of the system. Dan suggested that systemic bathymetry and high-resolution floodplain elevation data would emerge at the top of an information needs assessment for management of the UMRS.

#### **FY00 Budget**

Tom Kelly handed out LTRMP budget spreadsheets for FY00. The budget is based on \$4,829,000 total, less allocations to the Corps, leaving \$4,674,000 available for transfer to the USGS. Tom Boland noted that the 14.6% savings and slippage is higher than in past years. Jerry Skalak said that they had planned on 15% savings and slippage for program restructuring, and suggested that EMPCC members discuss this further. Dan Wilcox said that a number of scopes of work have been prepared to make use of S+S and other additional funds that may become available.

#### **FY00 Annual Work Plan**

Jerry Skalak and Dan Wilcox explained the process of developing the FY00 Annual Work Plan (AWP) starting with the USGS Study Plan Proposals and preparation of Scopes of Work by the Corps in collaboration with the UMESC. Tom Schlagenhaft asked if the AWP is still a draft. Bob Delaney said that it is, and reflects a compressed (2 month) planning process. The base funding was already discussed with the Analysis Team and the EMPCC as part of LTRMP restructuring. Development of the FY01 Annual Work Plan will proceed in a more timely way as depicted in Appendix A of the LTRMP Strategic Plan.

Carl Korschgen reported that he is now supervising the UMESC terrestrial science team, including Carol Lowenberg, Jim Rogala, Pete Boma, Chuck Theiling, and Mary Craig, who have been working on the LTRMP. Carl emphasized that his role is that of a facilitator and problem solver. Jim Wiener is the leader of the aquatic sciences team, with Randy Burkhardt, Bob Gaugush, Dave Soballe, Ken Lubinski, Jennie Sauer, Shirley Huan, and the analytical laboratory staff. Carl said that he and Jim Wiener have a primary interest in increasing the scientific quality and efficiency of LTRMP work. He and Jim have staff supervisory responsibilities, coordinating roles with the field stations, and are still expected to do research and make scientific contributions.

Carl Korschgen suggested reviewing the AWP by work elements. Carl asked the UMESC principal investigators to make brief presentations on the planned FY00 work elements. Title numbers below refer to the USGS Study Plan Proposal titles.

**Monitoring:** Randy Burkhardt reported that the fish monitoring will continue, on a reduced basis except at the Open River field station where the sampling effort will be the same as last year. Dave Soballe said that stratified-random water quality sampling effort will be reduced, along with the number of routinely-monitored parameters at about 25% of the sites. Yao Yin said that they will continue stratified-random vegetation sampling, but that the transect sampling effort will be reduced by about 50%. Vegetation transect surveys will continue in Year 2000 in Pool 13, to provide data needed for comparison with SRS sampling. Due to funding shortfalls, only half of the transect sampling done formerly in Pools 4 and 8 will be completed. Jennie Sauer said that invertebrate sampling will be the same as previous years. The Open River field station will prepare a revised sampling protocol to reduce macroinvertebrate sampling effort.

**Title 20 Land Use/Land Cover -** Larry Robinson said that the LU/LC from the 1989 aerial photography will be completed for the entire UMRS. The vegetation classification will be simplified from the original LTRMP classification to the classification presently being used for the EMP Habitat Needs Assessment.

**Title 5 Floodplain Vegetation Coverages -** Larry Robinson said that this work may be done if additional funding becomes available.



Title 2 Sediment Resuspension Modeling - Bob Gaugush explained that this work is an outgrowth of the HREP Islands Study, and that an empirical model to predict wind-driven sediment resuspension will be further developed and tested.

Title 13 Pool-Scale Sediment Budgets – Bob Gaugush said that the proposed work would be to analyze the suspended sediment inflow/outflow data collected by the USGS for Pools 8, 13, and 26.

Title 14 Sediment Penetrometer – Bob Gaugush said that the proposed work would be to prepare a report on penetrometer sampling already conducted.

Title 1 Model Invertebrate Distribution – Jennie Sauer explained that the work will expand upon and test an existing empirical model using current velocity to simulate macroinvertebrate density distribution.

Title 3 Trends in Submersed Aquatic Vegetation – Yao Yin described the proposed work to assess changes in SAV over time in selected pools. Dan Wilcox suggested that existing growth and reproduction models for *Valisneria americana* and *Potamogeton pectinatus* could be applied to assess the influence of annual progression of physical conditions on these species. John Barko recommended a collaborative effort with the Corps Waterways Experiment Station. John Sullivan suggested a change in title to include examination of trends, identification of causal factors, and prediction of future conditions. Carl Korschgen and Jim Wiener said that the study plan proposal will be revised as part of the USGS planning process for new research in collaboration with the Corps Waterways Experiment Station.

Title 17 Annual Addendum to Status and Trends Report – Bob Delaney explained that an executive summary to the Status and Trends Report would be prepared and distributed. John Wetzel and John Sullivan recommended that an annual monitoring results summary be prepared instead.

Title 4 Implement Science Review Committee Recommendations – Bob Delaney said that a number of Science Review Committee recommendations have yet to be implemented. John Barko noted that WRDA'99 authorized a scientific advisory committee. Bob Delaney suggested that the science review committee in WRDA '99 is for the HREP part of the program. Bob recommended that a small interdisciplinary team review the previous Science Review Committee recommendations and assess the degree to which they have been implemented. Jerry Skalak said that this work is a program management activity will probably not be funded separately. Bob noted that funding for this work item is not included in the program management costs.

The Analysis Team adjourned for the evening at 5:00, and reconvened on Wednesday, November 10 at 8:00.

#### **Additional Work Items**

Bob Delaney introduced a series of additional work items that could be conducted if funding becomes available.

Title 6 Historic Land Use/Land Cover – Mary Craig explained that this work would complete a time series of LU/LC for Pools 4, 8, 13, and 26.

Title 8 Assess Floodplain Vegetation Change Detection – Larry Robinson described the proposed work to examine vegetation changes over three years ('89, '94, and '99) in Pools 4, 8, and 13. Carl Korschgen said that the USFWS has already funded some of this work.

Title 20 Integrated Analysis of Fish Monitoring Data – Todd Koel described the proposed work

with fish monitoring catch-per-unit-effort and community data. Tim Schlagenhaft asked if there would be any inter-component analysis associated with this work. Carl Korschgen said that integration is a number one goal. Todd said that the influence of selected abiotic factors on fish would be assessed. Dan Wilcox recalled Steve Gutreuter's review of a proposed Index of Biological Integrity for the UMR, the EPA/USGS large rivers biocriteria pilot effort on the UMR, and Todd's analysis of the influence of the hydrologic regime on Illinois River fish. Dan said that integrated analysis of the effects of abiotic conditions such as weather and the hydrologic regime on fish is needed to diagnose causal factors of changes in fish abundance.

**Title 4 Field Station Equipment Replacement** – Bob Delaney said that \$400,000 is needed to refresh equipment at the field stations. Jerry Skalak noted that the Corps will need assurances that equipment refreshment costs will be included in future annual program cost estimates prior to acting upon this funding request. Bob said that this is intended to be a one-time catch-up funding request. Bob claimed that it has not been possible during the last several years to apply standard life cycle management procedures for field station equipment. Field station replenishment of equipment was stopped except for emergency purchases. After this catch-up funding is used to replenish field station equipment, standard life cycle property management procedures will be applied. Ken Brummett asked if the USGS has an equipment maintenance and replacement management program with maintenance logs. Bob Delaney said that they do have such a record-keeping system.

**Title 5 Evaluate Expanding Monitoring** – Bob Delaney explained that the proposed work would examine expanding monitoring beyond the existing LTRMP study areas. John Wetzel asked if the work could be done under contract. Bob thought that it could be done by contract or by other USGS elements. John Sullivan said that it would be premature until analysis of monitoring data collected to date is completed. John also suggested an integrated analysis of what really needs to be monitored.

**Title 7 Investigation of Remote Sensing Technology** – Larry Robinson said that the proposed work would examine improved and more cost-effective methods for acquiring land use/land cover data.

**Title 9 Habitat in off-channel areas** – Dave Soballe said that the proposed work would be a continuation of studies of backwater limnology, with an emphasis on winter conditions and development of models to predict water quality conditions.

**Title 14 Modeling habitat conditions** – Carl Korschgen explained that an overall approach to using GIS to model UMRS habitat conditions is needed. The proposed work would be a direct outgrowth of the EMP Habitat Needs Assessment and the Decision Support System.

Bob Delaney reviewed other additional work capabilities, and noted a need to decide on priority of work should additional funds become available. A discussion of additional work priorities ensued.

### **Priority of Additional Work**

Dan Wilcox recalled that bathymetry surveys were previously identified as a first priority for resumption if funds become available. Bob Delaney indicated that bathymetry and sediment-related work were the two top priority work items, and referenced previous Analysis Team and EMPCC meeting records. Tim Schlagenhaft asked what the Corps and USGS priorities are. Dan said that the Corps is interested in main channel trawling to estimate fish entrainment mortality to support the Navigation Study and bathymetric surveys. Dan suggested systemic bathymetric and floodplain elevation surveys to be done under contract. Ken Brummett asked that Analysis Team members send their recommendations on priority of additional work items to him by email. John Wetzel commended the USGS on the preparation of the study plan proposals. Jerry Skalak said that in the future, they will ensure a more timely preparation and review of study plan proposals.

### **Habitat Needs Assessment**

Scott Whitney reported on the ongoing HNA. Consultations with resource managers about HNA query tool development and existing and forecasted future conditions are under way. So far, over 70 biologists have participated in 5 workshops. The HNA query tool development has progressed to the point that queries by habitat area type and by species can now be made. Scott commended the excellent work by Hank DeHaan and Tim Fox of the USGS UMESC on development of the HNA query tool. Dan Wilcox noted that the query tool will be useful for many river management applications in addition to the HNA. A forecast of future conditions will be done making use of the Navigation Study Cumulative Effects Assessment forecasts of geomorphic changes, supplemented by qualitative descriptions of habitat change provided by resource managers. Scott reported concern about application of the HNA, focused on revision of the habitat projects selection process and political equity of funding for projects between states and Corps Districts.

### **Information Needs Assessment**

Jerry Skalak reviewed a list of alternative approaches to assessing information needed for river management:

Thematic – Could be done this year for bathymetry, topography

No action – Continue present activities

Delay 1 year to allow completion of HNA, Navigation Study

Comprehensive INA

Basin – level INA

Jerry said that he will present the alternatives list to Division, and will confer with EMPCC members and the USGS prior to the next EMPCC meeting.

John Wetzel handed out and described a proposal for planning LTRMP expanded activities. Jerry Skalak noted that John's proposal and an INA are headed in the same direction. Dan Wilcox suggested that we define specifically what information is needed for river management, then scope out how best to obtain it, as part of a formal INA. Bob Delaney suggested that an INA is premature, until the ongoing HNA and Navigation Study clarify information needs. Tim Schlagenhaft voiced concern about the timeliness of another planning process to guide the LTRMP.

### **Field Stations – River Management Support Activities**

In the interest of time, Bob Hrabik deferred reporting on an update of field station support activities until the next Analysis Team meeting.

### **Agency Reports**

Pete Redmon described some proposed EPA initiatives. People from 6 EPA regions met in St. Louis to plan Mississippi River activities. The EPA wants to work on economics and the Navigation Study. They will hold a workshop in January in Memphis. They intend to do a baseline characterization of the entire Mississippi and Missouri Rivers, and identify needs from the Clean Water Action Plan, with attention to the Gulf of Mexico hypoxia phenomenon.

Jennie Sauer reported on a large rivers biocriteria workshop held in October at the UMESC. A number of people from different agencies participated in planning a pilot effort on the UMR to develop methods for tracking large river ecological conditions.

Linda Leake reported that UMESC equipment refreshment has been put on hold. The USGS earlier funded \$150,000 for replacement of computing equipment. New servers, PC's for the field stations, and updated programming for water quality data entry were purchased with the USGS funding. Tom Boland expressed thanks for the new computers on behalf of the field stations.

Jim Wiener reported that the Upper Mississippi River sediment contaminant database is now on-line through the UMESC Internet home page, with analytical results from over 2600 samples.

Dan Wilcox reported that the UMESC, Corps, and Minnesota DNR completed an excellent synthesis report on the Finger Lakes HREP Biological Response Study. The report will be published and distributed to EMP partners in year 2000. UMESC research scientists have already published four papers in professional journals about the Finger Lakes study, and will submit a series of additional manuscripts for publication.

Jerry Skalak said that the Corps is revising EMP program implementation, based on policy recommendations contained in the EMP Report to Congress.

**Next Meeting**

The next Analysis Team meeting will be held February 2-3, 2000 at the Blackhawk Hotel in Davenport, Iowa.

The Analysis Team meeting adjourned at 1:00.

Respectfully submitted,  
Dan Wilcox



Attendance List  
 LTRMP Analysis Team Meeting November 9 -10, 1999  
 USGS UMESC Onalaska, Wisconsin

<u>Name</u>	<u>Agency, Location</u>	<u>Telephone</u>
Robert Delaney	USGS UMESC Onalaska WI	608-783-7550
Leslie Holland-Bartels	USGS UMESC LaCrosse WI	608-783-6451
Carl Korschgen	USGS UMESC Onalaska WI	608-783-7550
Jim Wiener	USGS UMESC Onalaska WI	608-783-7550
Dave Soballe	USGS UMESC Onalaska WI	608-783-7550
Randy Burkhardt	USGS UMESC Onalaska WI	608-783-7550
Jennie Sauer	USGS UMESC Onalaska WI	608-783-7550
Larry Robinson	USGS UMESC Onalaska WI	608-783-7550
Mary Craig	USGS UMESC Onalaska WI	608-783-7550
Yao Yin	USGS UMESC Onalaska WI	608-783-7550
Linda Leake	USGS UMESC Onalaska WI	608-783-7550
Tom Kelly	USGS UMESC Onalaska WI	608-783-7550
Fred Kollman	NRCS UMESC Onalaska WI	608-783-7550
Jerry Skalak	Corps Rock Island IL	309-794-5605
Dan Wilcox	Corps St. Paul MN	651-290-5276
John Barko	Corps WES Vicksburg MS	601-634-3654
Ken Brummett	MO DOC Hannibal MO	573-248-2530
Terry Dukerschein	Wisconsin DNR LaCrosse WI	608-783-6169
John Wetzel	WI DNR LaCrosse	608-785-9994
John Sullivan	WI DNR LaCrosse	608-785-9995
Walt Popp	MN DNR Lake City MN	651-345-3331
Todd Koel	INHS Havana IL	309-543-6000
Jeff Arnold	INHS Havana IL	309-543-6000
Fred Cronin	INHS Pool 26 IL	618-466-9690
Tim Schlagenhaft	MN DNR Lake City MN	612-345-3365
Tom Boland	IA DNR Bellvue IA	319-872-4976
Mike Steuck	IA DNR Bellvue IA	319-872-5495
Jim Fisher	USFWS Winona MN	507-452-4232
Pete Redmon	USEPA Chicago IL	312-886-6110

# **LTRMP Analysis Team Meeting Minutes**

February 2-3, 2000  
Blackhawk Hotel  
Davenport Iowa

*DRAFT 1*  
March 27, 2000

## **Introduction, Minutes, Agenda**

Chairman Ken Brummett convened the LTRMP Analysis Team meeting at 1:00 on February 2, 2000. Following a welcome, Ken said that a report of field station outside support activities will be deferred until the next meeting. Bob Hrabik explained that field station staff changes at Alton and Havana Illinois have prevented completing an update. Dan Wilcox said that draft minutes of the November 1999 Analysis Team meeting were sent by email to meeting participants, and that some comments were received. Dan will send the final minutes to Analysis Team members and meeting participants by email.

## **Report on EMPCC Meeting**

Ken Brummett sent a letter to the EMPCC urging increased funding to expand the LTRMP. Analysis Team members were sent copies by email. Linda Leake said that the USGS UMESC has changed its email software to Lotus Notes, and that there have been some problems in the transition. Ken reported on the recent EMPCC meeting:

The Corps Division wants the EMPCC to focus on policy decisions, not just activity updates. Accordingly, the EMPCC will address action items and limit discussion on non-decision matters. The EMPCC took note of the Analysis Team letter.

Need to increase time between the Analysis Team and EMPCC meeting, provide written update/briefings

Leo Foley of the Corps Rock Island District reported that FY99 EMP expenditures were ~96%

The EMPCC asked the Corps to look for additional funding for the LTRMP

Policy changes were discussed:

- Delegation of habitat project approval authority to Districts

- Renew Department of Interior/Department of Army EMP Memorandum of Agreement

- Permit up to 80% of habitat project cost share costs to be met through in-kind services

- Permit upland sediment control features on local watersheds for EMP habitat projects

Recommended against using EMP funds to support the Dubuque Discovery Center

Recommended a streamlined planning process for habitat restoration and protection projects, with planning focus at the pool scale

Recommended that the Corps and USGS prepare scopes of work for future LTRMP activities, to be ready as additional funds become available

Recommended conducting the Information Needs Assessment in FY01

Recommended to maintain program flexibility

The States were asked about supporting increased LTRMP field station staff

Jerry Skalak said that the Corps has prepared an issue paper on expanding habitat protection and restoration work, which will be discussed at the next EMPCC meeting. Jerry said that the Corps Division wants to see increased LTRMP expenditures becoming dependable to avoid problems associated with increased staff. Ken Brummett explained that the newly authorized level of LTRMP funding would only return the program to the original funding level, counting inflation. Ken said that there is interest in adding monitoring components such as mussels and wildlife. Flexibility could be maintained through contracts, rather than increasing staff.

## **Habitat Projects Planning**

Tom Boland reported about a committee that was formed at the recommendation of the EMPCC to review the process of selecting and planning EMP habitat protection and restoration projects.

The committee examined the existing process, and is preparing a first draft of an update to the project selection process. The committee wants to base future EMP habitat protection and restoration work on need. Tim Schlagenhaft expressed concern that the committee has not gained input from the states. Tom Boland said that the ad-hoc committee was tasked by the EMPCC to prepare a first draft of an updated projects selection process. Bob Delaney asked how the EMP Habitat Needs Assessment (HNA) will be used. Tom said that the HNA will be a "tool" in the selection process.

Dan Wilcox suggested that the EMP needs to change from an approach which competes pre-conceived concept-level habitat projects one against another, toward a focus on the habitat protection and restoration needs, as identified in the HNA, making use of principles of conservation and restoration ecology. Tom Boland agreed, and noted that Marvin Hubble, the Illinois EMPCC representative, wants to "think out of the box" on this subject. Dan Wilcox recommended that some planning take place, building on the HNA, to estimate the time and cost requirements of protecting and restoring habitat throughout the system to attain the desired future habitat conditions. Allocation of habitat protection and restoration efforts and funding could be based then on these requirements, with consideration of political equity between states and Corps Districts. Detailed planning of habitat protection and restoration work should be done by the existing District-level interagency committees (FWWG, FWIC) with planning focused at the pool scale. Dan Wilcox suggested that the EMP adopt a different approach for floodplain habitat acquisition and restoration projects.

Tom Boland recognized the need for "soft engineering" approaches to habitat, rather than a continuing emphasis on structural measures that appear to be built structures. John Barko recommended planning habitat projects at the pool scale. Tim Schlagenhaft concurred, and said that Minnesota has been doing planning for habitat restoration and protection in Pool 5. Tim has sent a draft of this proposal to EMP partners. Tim noted that planning future EMP habitat protection and restoration work is important, and it deserves involvement with members of the UMRS scientific and resource management community.

Jim Fisher reported that the USFWS has sent a letter to the Corps Division office requesting transfer of EMP funds to the USFWS for participation in EMP planning, and for Corps assistance in restoration of EMP habitat projects that have been damaged by floods.

Bob Delaney said that the HNA is needed to identify system-wide habitat needs. Bill Bertrand thought that the states will each have their list of desired habitat projects. Dan Wilcox said that the HNA Technical Committee will directly consult with river resource managers to identify desired future habitat conditions in April. Jerry Skalak noted that the HNA is a good avenue to increase LTRMP linkage with EMP habitat work. Jim Fisher suggested including non-governmental organizations (NGO's) in planning for EMP habitat restoration and protection. Tom Boland acknowledged that the "hook and bullet crowd" has been influential, but that there are other NGO's who are interested. John Wetzel asked what might become of the EMP Science Review Committee authorized in WRDA 1999. Jerry Skalak said that the Corps Division office is not supportive of a Science Review committee, nor was the EMPCC. Dan Wilcox suggested that an EMP habitat restoration and protection planning team be formed to estimate systemic requirements following the HNA. Bill Bertrand reported that in Illinois, Corps-state watershed projects are competing for state funds against EMP projects. Dan Wilcox suggested that a Coastal America program, with federal, state, NGO, and corporate partnerships for habitat protection and restoration on the UMRS to augment the EMP. Bob Delaney acknowledged a need for NGO's to participate in the planning process for EMP habitat projects.

### **EMP Implementation**

Jerry Skalak reported about the ongoing Corps-USGS consultations which have produced scopes of work, with projects and milestone schedules for LTRMP activities. A progress review meeting was held in January. Jim Wiener distributed the milestones accomplishment list, indicating that



program activities are on track. As of February 2, 2000, expenditures of \$1,109,650 were made on FY00 obligations of \$4,438,600. An additional \$305,100 for base-funded activities is being transferred to the USGS, and a re-programming request for \$1,800,000 of additional LTRMP FY00 work is being prepared. The reprogramming request will go forward to the Corps Division office in two weeks. Jerry remarked on the good news, that the additional funding will result in the highest annual LTRMP funding in the program history.

#### **Additional FY00 Work Items**

Tim Schlagenhaft asked if more bathymetry work will be done with the additional funding. Jerry Skalak said that the Corps and the USGS will develop scopes of work for contractors to complete system-wide bathymetry and high resolution floodplain elevation surveys. Carl Korschgen said that the river bed elevation transect surveys will continue, and that the bathymetry field crew is out in the field working. Fred Kollman asked if Challenge 21 is funded this year. John Barko said that the program is not funded this year, but that the WRDA 2000 may include appropriations. Bob Delaney recalled the additional work items list from the last Analysis Team meeting, and those in the additional funding request, noting that they are all included.

#### **Fish resources of deep channels**

Jim Wiener said that Steve Gutreuter prepared the study plan proposal for a 1-year discrete unit of work, with several years of work planned. Ken Brummet asked how the results could contribute to the Corps Navigation Study. Jim said that characterization of the main channel fish community is needed to place towboat fish entrainment losses into perspective. A second study on towboat entrainment of fish will be separately funded by the Navigation Study. A third study on trophic pathways that support production will be conducted as well, funded through USGS research. These studies will be integrated, providing synergies of staff and logistics. Jim noted that \$89,000 of USGS funds were applied to upgrading the main channel trawling boat.

#### **River bed elevation transects**

Carl Korschgen said that the elevation transects to detect sedimentation and erosion will be done in both summer and winter. The bathymetry boat and equipment was recently upgraded with USGS funds, and will be maintained. Carl asked the field station managers for assistance in the transect surveys.

#### **Sediment and geomorphology**

Jim Wiener said that a review and update of the LTRMP plans for sediment and geomorphology work will be conducted during a workshop. Bob Gaughush will be the facilitator.

#### **Equipment refreshment**

Bob Delaney explained that \$350,000 of additional funding is being requested to replace equipment. \$200,000 will be for water quality-related equipment, of which \$90,000 will go to the field stations. Jerry Skalak said that in the future, equipment costs will be embedded in the scopes of work for monitoring and research. Bob Delaney noted that USGS maintenance funds were obtained for computers, Y2K upgrades, and the main channel trawling boat.

#### **Year 2000 aerial photography**

Linda Leake explained that complete aerial photography of the UMRS will be obtained, developed into a photomosaic, and posted on the UMESC internet site. The digital images will be rectified.

#### **Remote sensing for land use/land cover**

Linda said that OCONUS and other satellite data will be evaluated and compared to the aerial photography methods of developing land use/land cover data.

#### **Year 1975 land use/land cover**

Linda said that a 1975 land use/land cover GIS database will be completed for Pools 4 through



the Open River. The interpretation of the aerial photos is done, and the funds are for development of the database. Carl Korschgen said that the data will be added to the HNA query tool. Linda said that the classification will be cross-linked to the 18 HNA classes.

#### Fish passage through dams

Jim Wiener reported that the planned study will include a literature search, examine the consequences of restricted fish passage through dams on the UMR and evaluate alternatives for improving fish passage. When asked by Bill Bertrand, Jim replied that field work is not planned for this year. Bill expressed concern about the timing of the LTRMP work with Navigation Study mitigation. Bill said that he wouldn't want to have mitigation funding spent on measures that are not needed. Jim Wiener said that we need to identify concerns and objectives for fish passage. John Barko said that studies to date have been to estimate existing opportunity for fish passage, and we are now faced with the "so what?" question.

#### Backwater areas limnology

Jim Wiener said that the work will involve further development of predictive models for lentic habitats. Dave Soballe and Jim Rogala will be the principal investigators. John Wetzel asked if the modeling will make use of land use/land cover data. Dan Wilcox explained that the models make use of plan form data from the LC/LU and aquatic areas GIS. Tim Schlagenhaft emphasized the need to calibrate and verify the model.

#### Statistical analysis of LTRMP monitoring data

Jim Wiener reported that a 2-year, intensive examination of LTRMP monitoring data will be conducted. The existing sampling designs and directions for modification or expansion will be evaluated for use in program planning. These analyses will go beyond the initial work that was done last year. The work will be done under contract with a university statistician, and another statistician will be hired at the UMESC.

#### Aquatic plants modeling

Carl Korschgen said that two studies planned earlier had been combined. Corps scientists from the Waterways Experiment Station will collaborate with Yao Yin. \$25,000 of additional funding was requested for the WES participation.

#### Characterization of the UMR hydrologic regime

Jim Wiener said that this work will involve analysis of hydrologic records from a number of sites on the UMR using the Indicators of Hydrologic Alteration and other measures. Changes in the hydrologic regime will be analyzed using data from long-term gaging sites and through development of a synthetic hydrograph of the unregulated regime, prepared by the St. Paul District Corps.

#### Spatial analysis of fish data collected by active gear

Jerry Skalak explained that this is a new proposal. Todd Koel said that he was looking for a way to involve the field stations in an analysis of fisheries data with additional LTRMP funding. Todd said that seining and electrofishing (active gear) data from all locations will be examined. The funding is for additional temporary staff, and for some field work outside of the LTRMP study areas. Bill Bertrand cautioned that secondary channel sampling areas may become inaccessible in late summer. Todd said that the intent is to sample all strata. Jerry Skalak noted that it is important to test the assumption that the study areas are representative of other parts of the river

system. John Barko said that the study would provide an opportunity to examine the feasibility of expanded sampling at the same time. Jim Wiener said that most of the study budget is going to the field stations for salaries, and he commended Todd and others for scoping out an excellent study.

### **Program Expansion**

John Wetzel said that we need lead time for developing the FY01 LTRMP Annual Work Plan, prior to the August Analysis Team meeting. John recommended that study plan proposals be reviewed and signed off by Analysis Team members. Bob Delaney said that the USGS will work with the Corps in developing the proposed FY01 Annual Work Plan. Jerry said that the Corps will package up a draft scope of work for FY01 in the next month. Bob Delaney said that out-year LTRMP work will be driven by the Information Needs Assessment and other planning efforts taking place this year. Tim Schlagenhaft recommended referring to the LTRMP strategic plan, and checking off things that get done.

The Analysis Team adjourned for the evening at 5:00, and reconvened the next morning at 8:00.

John Wetzel reviewed his "ramp up" plan assumptions and justification arguments. Jim Fisher emphasized a need to increase LTRMP involvement in EMP habitat work. Tim Schlagenhaft asked how the EMP Information Needs Assessment will fit, and asked why it wasn't started this year. Bob Delaney explained that it was deferred because of staff availability, and the ongoing HNA and Navigation Study. Dan Wilcox and Jerry Skalak said that it is important to critically evaluate the program and to identify specific information needed for river management.

Bob Delaney explained that the expansion plan is simply a communication tool to demonstrate the need for additional funding. Out-year work is contingent on the outcome of the INA and ongoing planning efforts. Jim Wiener said that work to date has been focused in measures of system states. He noted a need to focus on more process-related work to better understand the expression of the biota. John Barko recommended an open category for additional research that has yet to be defined. Tom Boland said that we need to continue monitoring, increase analysis, and do more applied research. Tom recommended increased funding for research work. Tim Schlagenhaft noted a need to do more integrated analyses of monitoring data. Jim Wiener said that starting this year, a rigorous statistical analysis of the monitoring designs will be conducted.

Bob Delaney said that monitoring of mussels and wildlife should be started with pilot studies. Dan Wilcox recalled that Leslie Holland-Bartels said that we need to identify questions about mussels and wildlife on the UMRS that are relevant to management. Jim Wiener said that declines in mussels are documented, and that we may want to conduct directed research into causal effects and to identify effective management measures.

Carl Korschgen said that item O in the expansion plan; the HNA query tool, HNA updates, and evaluation of habitat protection and restoration work is a continuing process. Dan Wilcox said that the HNA query tool will eventually allow identification of habitat bottlenecks, and will become increasingly useful in planning and evaluating habitat protection and restoration projects. Mike Steuk asked if funding should come from the LTRMP. Dan Wilcox said that funding for support to the HNA and biological response studies has come from the habitat side of the EMP.

A discussion ensued on evaluating the ecological effectiveness of EMP habitat projects. Jim Fisher suggested shifting focus from monitoring to diagnostic research that would provide information needed for resource management, and increased emphasis on quantifying physical processes.

Linda Leake said that the hard work in creating a Year 2000 land use/land cover database is in interpreting the aerial photos for the 18 cover classes used in the HNA. Dan Wilcox noted a need to include the aquatic areas classification in this work. Linda said that item M in the expansion

plan, remote sensing for land use/land cover, is prototype testing that will be done this year. Bob Delaney recommended further work on the HNA query tool to allow more refined species:habitat mapping.

Jim Wiener explained that expansion plan item G, is development of models to test hypotheses suggested by correlations from the monitoring data.

Dan Wilcox suggested that expansion plan items I and H involving species life requisites be combined with item O, further development of the HNA query tool.

John Barko said that the FY01 budget process is beginning now. John recommended that the EMPCC put in a good word for EMP funding. Following discussion, it was agreed to send the program expansion plan to the EMPCC for their information. Jerry Skalak said that the items and costs referring to management tools/information management should be embedded in the other work line items.

### **Agency Reports**

EPA – Pete Redmon said that total maximum daily loads (TMDL) issue is of high interest, as well as sediment. A sediment contaminants database for the UMRS is now on the Internet (through the UMESC). A query tool for the database is being developed. Pete asked for input on the query tool structure.

Minnesota DNR – Tim Schlagenhaft said that the DNR has prepared a draft plan for habitat protection and restoration of Pool 5. He will send the draft plan to those interested.

Wisconsin DNR – Terry Dukerschein reported that the Wisconsin LTRMP field station will be doing some HREP monitoring, they are busy with LTRMP work, things are going well, and that they are financially ok for now. John Wetzel said that Wisconsin is doing other HREP monitoring work. John is doing a study to monitor snapping and softshell turtles. Females have been equipped with radio transmitters for telemetry. Bob Delaney thanked John Wetzel for preparing the LTRMP expansion plan.

Minnesota DNR – Todd Koel said that he is developing some metrics for fish community health.

Illinois DNR – Bill Bertrand said that Butch Atwood collected a pallid sturgeon below Lock and Dam 26 along with lake and shovelnose sturgeon. They are considering commercial fishing regulations to protect pallid sturgeon. They are doing telemetry of flathead catfish. On fish passed upriver through Dams 15 and 14 during time when the dam gates were in the water – perhaps the fish locked through or was transported.

Missouri DoC – Ken Brummet said that Missouri will impose a 30-inch FL maximum length limit on commercial fishing for sturgeon to protect pallid and lake sturgeon. They are doing a tagging study on flathead catfish in Pool 22. They have had 100 returns from 990 tagged fish. About 2/3 of the returns were from commercial fishermen. They are completing 10 years of stocking lake sturgeon in Pool 24, and will shift to Pool 22.

Bob Hrabek announced that Leslie Conoway is leaving the Missouri LTRMP field station to work at a new hatchery. They hired temporary staff and won't fill the position yet. The SRS water quality sampling went ok with one FTE and interns from Southeast Missouri State University. The field station staff will be assisting with the Cape Girardeau Nature Center. They are expecting a Section 6 grant from the USFWS to trawl for minnows and other cyprinids below the mouth of the Ohio. They captured some endangered sturgeon chubs on the Missouri River by trawling last year. They are developing an invertebrate monitoring program with University of Missouri for the Open River field station. The field station is working with the American Land Conservancy to acquire options for land along Shinneman (SP?) Chute. The land deals should be completed by

September. They are doing pre-project evaluations for use in planning EMP habitat protection and restoration. A private company, WESTVACO, is interested in selling floodplain land.

Iowa DNR – Mike Steuk reported that he is reformatting LTRMP fish monitoring data to compare with state data. He will make a presentation at the fall UMRCC fish technical section meeting. The Iowa DNR did a survey of recreational use in Pool 13, and a report is being prepared. Tom Boland said that the Department is taking on a basin approach to management. They are still monitoring the Browns Lake project, and have found a good response by largemouth bass. They conducted creel surveys, and imposed a catch-and-release rule for bass in Browns Lake. They have noted increases in catch and size of bass there. Tim Schlagenhaft said that largemouth bass appear to be increasing in abundance elsewhere on the UMRS. Mike Steuk reported that he has been working with the USFWS refuge on monitoring water quality in Browns Lake, to aid in deciding on operation. Tom Boland said that there is a need to take a more systemic approach to planning for habitat protection and restoration. Tom recommended that detailed planning take place at the pool scale.

Corps of Engineers – Jerry Skalak said that Tom Pullen sends his regards, but won't usually be attending Analysis Team meetings. Rock Island District will have a booth at the outdoor show in the Quad Cities. They sent out a final evaluation report on the Bay Island habitat project, and one is being prepared for the Peoria Lake project. Jerry asked for wider review, and input on these completion reports. Jerry announced that he will be sending a funding request forward for additional LTRMP work, \$1,800,000.

USFWS – Jim Fisher said that the USFWS sent a letter to the General Anderson at the Corps Mississippi Valley Division, requesting an additional \$300,000 in FY00 for EMP participation. The USFWS is getting added costs and responsibilities for EMP habitat projects planning, construction monitoring, operation and maintenance, and public use management. Discussion ensued about greater agency and NGO participation in funding EMP habitat projects.

#### **Action Items**

Ken Brummett summarized the items for action that emerged during the meeting:

The UMESC will prepare a 2-page summary of the LTRMP expansion plan, to provide to the EMPCC by March 15.

Jerry Skalak will send the LTRMP additional funding request to Division.

Jerry Skalak will prepare the draft Scope of Work for FY01 LTRMP base funding before the next Analysis Team meeting, and will present it to the EMPCC for their consideration at their August meeting. Jerry will work with the USGS UMESC in preparing the draft FY01 LTRMP Scope of Work.

#### **Next Meeting**

The next LTRMP Analysis Team meeting will be held April 18 – 19 at the Blackhawk Hotel in Davenport, Iowa.

The meeting adjourned at 12:00.

Respectfully submitted,  
Dan Wilcox.

#### **Attendance List**

LTRMP Analysis Team Meeting February 2-3, 2000  
Blackhawk Hotel Davenport, Iowa

Name

Agency, Location

Telephone



Robert Delaney	USGS UMESC Onalaska WI	608-783-7550
Carl Korschgen	USGS UMESC Onalaska WI	608-783-7550
Jim Wiener	USGS UMESC Onalaska WI	608-783-7550
Linda Leake	USGS UMESC Onalaska WI	608-783-7550
Tom Kelly	USGS UMESC Onalaska WI	608-783-7550
Jerry Skalak	Corps Rock Island IL	309-794-5605
Dan Wilcox	Corps St. Paul MN	651-290-5276
John Barko	Corps WES Vicksburg MS	601-634-3654
Fred Kollman	NRCS UMESC Onalaska WI	608-783-7550
Ken Brummett	MO DOC Hannibal MO	573-248-2530
Bob Hrabik	MO DOC Cape Girardeau	573-243-2659
Terry Dukerschein	Wisconsin DNR LaCrosse WI	608-783-6169
John Wetzel	WI DNR LaCrosse	608-785-9994
Walt Popp	MN DNR Lake City MN	651-345-3331
Todd Koel	INHS Havana IL	309-543-6000
Jeff Arnold	INHS Havana IL	309-543-6000
Tim Schlagenhaft	MN DNR Lake City MN	612-345-3365
Tom Boland	IA DNR Bellvue IA	319-872-4976
Mike Steuck	IA DNR Bellvue IA	319-872-5495
Bill Bertrand	IL DNR Aledo IL	309-582-5611
Jim Fisher	USFWS Winona MN	507-452-4232
Pete Redmon	USEPA Chicago IL	312-886-6110

2000  
A-Team

## Final 1/30/01

Comments on Draft 1 of the October 12, 2000 Analysis Team meeting minutes were received by email from Pete Redmon, T. Miller, Tim Schlagenhaft, Steve Gutreuter, Jim Wiener, and John Sullivan, and incorporated into this final version. Final corrections by Ken Brummett and Pete Redmon provided during the January 30, 2001 Analysis Team conference call were incorporated into this final version.

### Meeting Minutes

#### LTRMP Analysis Team

October 12, 2000

U.S. Fish and Wildlife Service Office  
Onalaska, Wisconsin

### Welcome and Introductions

Chairman Ken Brummett convened the LTRMP Analysis Team meeting at 12:00. Following a welcome and introductions, Ken noted that a summary of the April 24, 2000 Analysis Team conference call was distributed to Analysis Team members and other participants by email.

### Administrative Changes within the Corps and the USGS

Scott Whitney announced a number of changes in Corps of Engineers leadership and EMP management. Lieutenant General Robert Flowers is the new Chief of Engineers, following General Ballard. LTG Flowers previously served as Mississippi River Division commander. Dusty Rhodes will be retiring soon. Greg Ruff at MVD has taken over EMP program management responsibilities from Buddy Arnold. Col. Bales is the new Rock Island District Engineer. Gary Loss is now the Deputy District Engineer for Planning and Project management. Leo Foley, EMP Program Manager for Rock Island District, is leaving the Corps to work in the private sector. Theresa Kincaid will assume Leo's role as EMP program manager for coordination with Division and the EMPCC. Scott Whitney will manage the day-to-day activities for EMP habitat work and for the LTRMP.

Scott Whitney reported that John Chick and Mark Pegg of the Illinois Natural History Survey are now the LTRMP field station team leaders at Alton and Havana, respectively.

Scott Whitney introduced Mark Cornish, Laura Abney of Rock Island District, and Eric Laux of St. Louis District, who will be working with the LTRMP in coordination and support capacities.

Ken Brummett said that John Blankenship of the USFWS is moving to Denver with the USFWS, and Charlie Wooley has replaced him as EMPCC co-chair.

Leslie Holland-Bartels announced that Bob Delaney, former LTRMP Program Manager for the USGS, will be moving to Lafayette Louisiana to promote an EMP for the Lower Mississippi River effective October 1. Leslie has the lead for LTRMP policy and budget matters for the USGS. Jim Wiener, Carl Korschgen, and Linda Leake are the UMESC technical leaders. The DOI budget recently signed provides a \$400,000 increase in base USGS funding for further decision support system, endangered mussels, and amphibians research. The UMESC will hire a herpetologist to conduct research on the causes of declines in abundance of amphibians.

### Role of the Analysis Team and Expectations

Scott Whitney said that the LTRMP is a premier environmental research and monitoring program that others are trying to emulate. Scott noted a need for greater dissemination of information about and generated by the LTRMP. Scott said that primary roles of the Analysis Team should be to increase awareness of the program, and to provide feedback on program success and shortcomings. Scott suggested that an annual EMP conference be held, to highlight both habitat work and the LTRMP. The annual EMP conference could be a forum for both scientific

presentations and an opportunity for the public and EMP partners to learn about ongoing activities. Scott suggested that the Analysis Team might be supplanted by such a conference. The state Team members voiced support for an annual EMP conference, but emphasized a continued need for the Analysis Team to review LTRMP activities and to provide input on program direction.

Ken Brummett observed that the program is running smoothly and that the Analysis Team has been quiet in the last year. Ken asked what should the team be doing? Tim Schlagenhaft recalled that the Analysis Team charter was intended to promote partnership. Tim thought that the Analysis Team is not good at "marketing," and needs to focus on meeting information needs for river management.

John Sullivan said that the Team should be reviewing products and transferring information to resource managers. John thought that the Corps and the USGS should showcase the EMP, and that the Analysis Team can assist. Scott Whitney said that scientific considerations are driving the design of LTRMP work, through the USGS research planning process. Bob Hrabik noted that interpreting scientific results to the public and resource managers is difficult. Resource managers often don't give straight answers when asked about information needed for river management.

Bill Bertrand asked what does the UMESC and the EMPCC expect from the Analysis Team? Bill said that Illinois decision-making for sport fisheries management doesn't rely much on LTRMP data, with most information coming from other sources. Illinois expects the LTRMP to conduct research that they cannot, such as characterizing the main channel fish community. Bill thought that raising public awareness about the UMRS and the LTRMP is very difficult, requiring a major sustained effort.

Ken Brummett noted that state people can't travel much. Rather than a central EMP conference, Ken suggested a state-by-state series of meetings. Leslie Holland-Bartels observed that we don't have a forum to review all of what is going on in EMP. Leslie said that she wants to get more USGS funding directed to the UMRS – the Missouri River is getting lots of attention and funding now. John Barko suggested that it is the responsibility of the Corps and the USGS to set up an annual EMP conference. As far as the Analysis Team role, John suggested attention to separation of responsibilities between budget, policy, administration, and science.

Ken Brummett thought that state Analysis Team representatives have a responsibility to inform others about the LTRMP. Bob Hrabik suggested sending annual LTRMP reports to non-governmental organizations for dissemination to members. Leslie Holland-Bartels said that the EMP Report to Congress was a powerful report summarizing program accomplishments. The annual LTRMP reports change little from one year to the next. A 'lessons learned' section in the annual monitoring summary report would be helpful.

John Sullivan thought that an annual EMP conference can't replace the Analysis Team. Scott Whitney said that he wants an effective presentation of LTRMP work, demonstration of the products, and feedback on them. Pete Redmon mentioned that the International Association of Great Lakes Research annual conference provides the scientific community and the public information about ongoing research. Such a conference would be good for the UMRS. Tim Schlagenhaft said that the Analysis Team had input to the LTRMP strategic plan, which outlines what the partners want. Tim said that he wants to continue to participate in the LTRMP and learn more about the ecology of the UMRS. Greg Ruff thought that presentations by scientists at an annual EMP conference would be valuable, and would provide an opportunity for feedback from the EMP partners on LTRMP activities.

Tom Boland said that the Analysis Team can still play a valuable role for sharing information with others. Tom sees a continuing need for the Team to participate in decision-making about the course of the program. Jim Wiener thought that an annual EMP conference would be valuable in



linking LTRMP and habitat work. Dan Wilcox remarked that the Analysis Team has undergone years of introspection trying to define its role, and challenged team members to translate LTRMP information into river management. Bill Bertrand saw a need for changing management emphasis from sport fisheries and waterfowl hunting toward communities and condition of the ecosystem. John Barko suggested that the role of the Analysis Team should be to provide an interface between science results and management. Leslie Holland-Bartell asked that Team members consider how LTRMP information is being delivered, and to identify how that information transfer can be improved.

Walt Redmon suggested that UMR folks consider something like the SOLEC (State of the Lakes Ecosystem Conference) as a means for information dispersal. SOLEC is biennial, so it reduces the frequency of having to do all that prep work, plus allowing time to build more complete pictures. The key would be to produce a SOREC-type conference that would replace 3 or 4 of the current Mississippi River annual conferences currently held by various groups, with one big information filled conference every two years.

Scott Whitney concluded the discussion by saying that the Analysis Team will continue to meet and provide recommendations about the course of the LTRMP. The Corps and the USGS will make arrangements for an annual EMP conference to provide a forum for presentations on LTRMP and EMP habitat project work to resource managers and the public. The Analysis Team will not meet as frequently as in past years. Future in-person meetings will be held at least twice a year. Conference calls will be held between meetings on an as-needed basis.

#### **Summary of FY00 LTRMP Performance**

Jim Wiener distributed a FY00 progress report detailing all ongoing tasks and their status. Jim said that nearly all the tasks are already completed or are on schedule. Jim praised the LTRMP and field station staffs for excellent work delivered on time. Analysis Team members concurred and expressed appreciation for a clear progress report.

#### **Presentations on LTRMP Projects**

Yao Yin described the vegetation monitoring work. Yao announced that they are in the last year of the 3-year shift from transect-based monitoring to stratified-random sampling (SRS). This phasing in of SRS sampling will provide continuity of monitoring data. Yao described the ongoing model development to predict the spatial occurrence of submersed aquatic plants, and to estimate growth of *Valisneria americana* and *Potamogeton pectinatus*. The growth modeling is being done in conjunction with the Corps Engineering Research and Development Center (ERDC, formerly Waterways Experiment Station).

Dave Soballe reported on water quality monitoring work. Summary reports of past years work are complete. This year's work was reduced in sampling intensity and the amount of laboratory analyses. Both SRS and fixed-point sampling is being conducted. The analytical laboratory was moved from the East Campus to the West Campus, and is up and running. The water quality procedures manual has been completed, undergoing final review. Efficiency of field work and data recording has been greatly improved through the use of laptop computers, digital data sheets, and electronic field data entry instruments. Research on the limnology of backwater areas and development of predictive models is continuing.

Steve Gutreuter reported that following extended refitting of the large trawling vessel, main channel trawling has resumed in Pool 26. The Fishery Resources of Deep Channels research is being jointly funded by the USGS, the LTRMP, and the Corps Navigation Study. Sampling to determine community composition, population structure, biomass, and towboat entrainment mortality is being conducted. Some of the initial results indicate that lotic fishes such as blue sucker, shovelnose sturgeon, channel catfish, blue catfish, and drum do make use of main channel habitat. Fish biomass there is higher than once thought. The research is a long-term commitment. Leslie Holland said that we need to critically ask questions about this work because



the trawling is difficult and expensive, and partner input is needed to ensure that the work is focused appropriately to best meet Program information needs.

Todd Koel reported on the first year of spatial analyses of fish monitoring data collected by active gear. FY00 work included expanded fish sampling with active gear in pools adjacent to LTRMP study pools plus Pool 19. Todd had praise for the field station crews who took on the additional work while keeping up with the routine LTRMP fish monitoring in the study pools and river reaches. The field station team leaders recounted their crew's experience in the expanded sampling effort. Todd said that a couple more field seasons of expanded spatial fish sampling with active gear will be needed to critically examine the LTRMP fish sampling design with respect to spatial coverage and gear types.

Pete Joria described the ongoing research comparing technologies for acquiring land cover/land use data. The UMESC is examining aerial photography and satellite technologies. IKONOS high-resolution satellite data has been acquired for selected UMRS pools.

Jim Rogala reported that no LTRMP bathymetry surveys were conducted in the last year. Effort was devoted to cleaning up existing bathymetry data and serving it up on the UMESC Web site. Many team members applauded Jim's excellent work and the new LTRMP bathymetry Web site.

#### **LTRMP Information Transfer**

Linda Leake said that UMESC has re-designed its Web site with better graphics, much more data being served. The publications editorial staff remains backlogged with many reports. The Center has done considerable work in support of the EMP Habitat Needs Assessment, including development of the HNA Query Tool, the HNA Advanced Model System, and further work on the UMRS Decision Support System. Carl Korschgen said that the DSS has become a framework exported for use in South Florida, the Columbia River, and many USFWS refuges. Carl intends to show the UMRS DSS to Corps leadership and will make presentations to state agencies.

#### **Evaluating Success of the LTRMP**

Scott Whitney closed the day's discussion with his thoughts on evaluating the success of the LTRMP:

- Professional development of individuals
- Effective teamwork
- Tasks completed with good science on time
- Continued monitoring of ecosystem components
- Efficient program management

Scott challenged all LTRMP participants to be critical thinkers about how LTRMP information is developed and applied to river management.

The Analysis Team adjourned for the evening at 4:30. Most of the Analysis Team members and some UMESC staff attended a gathering at John and Jane Barko's home overlooking the Black River near Trempealeau, in recognition of John Wetzel's impending retirement and many years of service with the Wisconsin DNR. The Team reconvened Friday the 13th at 8:00.

#### **Proposed FY01 LTRMP Work**

Leslie Holland-Bartels reported that the core LTRMP program budget for FY01 is \$5.3 million.

This will include:

- component monitoring
- an annual monitoring summary report
- research on fish in deep channels
- statistical analysis and interpretation of monitoring data
- a critical evaluation of monitoring designs
- bathymetric survey work in support of habitat projects

- characterization of the hydrologic regime
- development of year 2000 land use/land cover data for the LTRMP study areas
- investigation of remote sensing technologies for obtaining land use/land cover data
- integrated analysis of fish monitoring data
- modeling aquatic vegetation distribution and biomass.

Monitoring and analysis will command about 90 percent of the LTRMP budget. An adjustment of 3% was used to account for inflation between FY00 and FY01. The budget includes small increases for field stations and limited equipment replacement. Further HNA query and modeling tools will be funded through planning for EMP habitat projects. Tim Schagenhaft asked how the program will ramp up to the authorized \$8.3 million/y budget. Scott Whitney said that we need to conduct the planned work well, and demonstrate the capability to do more.

### **Decision Process for New Starts and Changes**

Jim Wiener explained changes and proposed new starts. Jim emphasized the UMESC philosophy about good science, well-managed:

- scientific defensibility
- relevance to river management
- utility
- efficiency

Jim said that they must look critically at redirection of program resources. Large amounts of additional funding may not be forthcoming. There are many requests for expanded spatial coverage, and requests for expanded program scope. There are many ongoing activities in LTRMP fisheries work:

- fish component monitoring
- fish in deep channels
- spatial analysis of fish data collected by active gear
- integrated analysis of fish monitoring data
- limnology of backwater areas
- fish passage through dams

Questions about the fish component monitoring design include:

- Can active gear provide the information needed to assess trends and patterns?
- What information would be lost by elimination of monitoring by passive gears?
- Can (lost) information be gained by focused studies?

Jim described a scenario for redirecting the \$1.3 million/y fish component work. Assume a reduction in personnel time of 50 percent by eliminating monitoring with passive gear. This frees up \$0.6 million/y for staff time to be applied to other things such as out-of-study-pool work. Some guiding principles for considering changes to the LTRMP monitoring program design include:

- No 'entitlements'
- Non-threatening to program partners
- Increased efficiency will free peoples time to do other work
- A decision to continue the status quo is a decision not to do something else

Bill Bertrand remarked that he doesn't see the LTRMP doing work on fish community, and habitat factors that may be limiting fish population size. Bill said that he would like to see a synthesis/analysis of the effects of habitat changes on the fish community. Todd Koel said that the integrated analysis of LTRMP fish monitoring data is ongoing. John Sullivan asked that a report on this subject be prepared before changes are made. John Crick asked if a decision to change the fish monitoring design has already been made. Jim Wiener said that a decision to change the monitoring design has not yet been made. There will be further consultations, but Jim noted that the decision will not necessarily be democratic. Leslie Holland-Bartels said that

change in the fish monitoring design is proposed for FY01, to gain information being collected. Todd Koel explained that efficiency analyses shows that passive gear can be dropped with no great sacrifice of information. Day electrofishing is best for species detection. Tom Boland and Terry Dukerschein expressed concern about continuity of data. Scott Whitney remarked that change is good, provided that is driven by good science, not anecdote and rumor. Leslie said that regardless of funding level, there's a need to clarify information needed for river management, refine the questions, then examine efficiency.

Steve Gutreuter explained that the present LTRMP monitoring program is complex. There is no master multi-year 'index.' Reducing gears can make the monitoring data more amenable to analysis. Power analysis has revealed that about 10 fish species would go unmonitored by dropping passive gear. The real questions are about what is driving condition of the river ecosystem, not what are the year-to-year changes. Continuing in the same mode of monitoring denies resources for other work.

Tim Schlagenhaft said that change is good, that he just wants to see the data and rationale supporting proposed changes. Carl Korschgen noted that the present sampling design is not amenable to integration of component data. Dan Wilcox recalled the long-standing intent of the LTRMP participants to shift program emphasis from monitoring toward applied research and management applications as the program matures. John Sullivan said that the scientific rationale for changing the LTRMP monitoring design should be developed by the UMESC staff.

Leslie Holland-Bartels said that changes won't be by unilateral decision. The field station structure is critical, but funding for field station work is now minimal. The intent is not to decrease field station budgets, but to redirect work to gain information and efficiencies. Leslie asked that LTRMP participants send recommendations to her directly. She will raise the subject with the EMPCC in November. Leslie said that they will send out results of analyses and rationale for proposed changes, and will apprise the EMPCC.

#### **John Wetzel's Outgoing Remarks**

John Wetzel thanked John and Jane Barko for hosting the previous evening gathering and for the fine wine. John remarked that the program is making great progress. John thanked Analysis Team members and UMESC staff for their friendship and good work.

#### **Planning EMP Habitat Protection and Restoration**

Scott Whitney described the institutional arrangements for planning and implementing EMP habitat projects. Scott said that the Corps is considering forming a System Ecology Team of highly qualified scientists and engineers to provide technical support for development of pool-scale plans for future EMP habitat protection and restoration. Scott noted that the WRDA 99 legislation re-authorizing EMP contained language calling for a Scientific Advisory Committee.

John Sullivan asked about the proposed EMP Information Needs Assessment. Scott said that a decision was made to defer that initiative until next year, given that the HNA is just being completed.

#### **Agency Reports**

Wisconsin – Terry Dukerschein reported that the WI LTRMP field station is doing some vegetation survey work in support of the Capoli Slough habitat project. The WIDNR has updated their Web site. They are working with Dave Soballe on winter limnology of backwater areas. They plan to deploy a net and video camera under ice to determine the distribution of fish within temperature, DO, and current velocity gradients. They have been tracking diurnal changes in backwater areas this summer with data-logging sensors. Andy Bartels completed a report on historical changes in fish in Pool 8 (available via the LTRMP Web site). Jim Wiener noted that Andy was recognized for excellent work on that report by the WIDNR.

Minnesota – Walt Popp announced that Todd Koel has accepted a position with the USEPA in Duluth MN. Tim said that the decision to place Todd at Lake City MN was good. Todd did excellent work for the LTRMP in analysis of fish monitoring data as well as in leading the fish monitoring work for the field station. Tim said that he is looking forward to participating in pool scale planning for habitat. Information developed through the HNA will help in that process. Walt Popp reported that the Metropolitan Council Environmental Services has purchased a solar-powered water quality profiler/data logger which is now installed in Lake Pepin near the Lake City field station. That equipment will provide detailed information on limnological conditions in Lake Pepin.

Illinois – Bill Bertrand said that the Analysis Team meeting was good for bringing LTRMP activities into focus. Bill emphasized the need for more community analysis. Many resource managers are of the old school and need information and guidance on ecosystem restoration and management.

Mark Pegg, John Crick, and Jeff Arnold gave credit to field station staff during the leadership transitions. They kept the work going on schedule. All three introduced themselves as Fisheries Cooperative Research Unit veterans used to working in large groups. They see the program working well.

Iowa – Tom Boland said that he sees a continuing need for an Analysis Team. Tom expressed appreciation for Scott Whitney's enthusiasm, but admonished against burnout. Tom is encouraged by the increased program funding, redirection of the LTRMP fish monitoring, and appreciates the opportunity to provide input on decisions about change. Mike Steuck said that he appreciates the energy in the UMESC and EMP program management.

Missouri – Ken Brummett said that they have formed the River Resources Action Team (RRAT, and inter-agency river management team) and will begin pool- and river reach- scale planning for habitat protection and restoration. Bob Hrabik said that things are going well with the field station and the future looks good. The present staff has been cross trained among disciplines and has been engaged in research efforts as well as monitoring work. An experimental trawl that they developed has been effective in capturing benthic fishes in deep channels in the Mississippi, Missouri, and Platte Rivers. Bob recommended this trawl as an LTRMP active gear for fish monitoring.

EPA – Pete Redmon announced that the EMAP program has scheduled the Mississippi River Basin Assessment for FY 2004. There are no EMAP funds for the Mississippi River Basin this fiscal year.

USGS – Leslie Holland-Bartels said that the presence of the EMP partnership was a primary reason for obtaining funding from the USGS to study amphibians. Carl Korschgen said that they may be able to work with the LTRMP field stations on amphibian surveys.

Corps - Dan Wilcox said that the HNA Summary Report is nearly complete, and will be published soon. The St. Paul District and the Fish and Wildlife work group have been working on initial pool-scale habitat planning.

T. Miller said that in St. Louis District, Mike Thompson (HNA and EMP project manager) is leaving for long-term training. Eric Laux will be the biologist working with LTRMP and EMP habitat projects. St. Louis District used the Missouri fine-mesh trawl successfully in the Mississippi River and found many small channel catfish, blue catfish, and shovelnose sturgeon.

John Barko thought the meeting was productive, and hoped that the Analysis Team can continue to provide good input to the LTRMP.



**Next Meeting**

Following some discussion, the Analysis Team meetings will be on a bi-annual schedule, in the spring and fall. Conference calls will be arranged in between. The next conference call will be in January.

The Analysis Team meeting adjourned at 12:00.

Respectfully submitted,  
Dan Wilcox

Attendance List  
 October 12, 2000  
 U.S. Fish and Wildlife Service Office  
 Onalaska, Wisconsin

<u>Name</u>	<u>Agency, Location</u>	<u>Telephone</u>
Leslie Holland-Bartels	USGS UMESC LaCrosse WI	608-783-6451
Carl Korschgen	USGS UMESC Onalaska WI	608-783-7550
Jim Wiener	USGS UMESC Onalaska WI	608-783-7550
Barry Johnson	USGS UMESC LaCrosse WI	608-783-6451
Dave Soballe	USGS UMESC Onalaska WI	608-783-7550
Steve Gutreuter	USGS UMESC LaCrosse WI	608-783-6451
Jim Rogala	USGS UMESC Onalaska WI	608-783-7550
Randy Burkhardt	USGS UMESC Onalaska WI	608-783-7550
Jennie Sauer	USGS UMESC Onalaska WI	608-783-7550
Yao Yin	USGS UMESC Onalaska WI	608-783-7550
Linda Leake	USGS UMESC Onalaska WI	608-783-7550
Linda Ott	USGS UMESC Onalaska WI	608-783-7550
Tom Kelly	USGS UMESC Onalaska WI	608-783-7550
Brian Ickes	USGS UMESC Onalaska WI	608-783-7550
Fred Kollman	NRCS UMESC Onalaska WI	608-783-7550
Scott Whitney	Corps Rock Island IL	309-794-5386
Mark Cornish	Corps Rock Island IL	309-794-5385
Laura Abney	Corps Rock Island IL	309-794-5557
Eric Laux	Corps St. Louis MO	314-331-8148
T. Miller	Corps St. Louis MO	314-331-8458
Gregg Ruff	Corps MVD Vicksburg MS	601-634-5928
Dan Wilcox	Corps St. Paul MN	651-290-5276
John Barko	Corps ERDC Vicksburg MS	601-634-3654
Ken Brummett	MO DOC Hannibal MO	573-248-2530
Terry Dukerschein	WI DNR LaCrosse WI	608-783-6169
John Wetzel	WI DNR LaCrosse	608-785-9994
John Sullivan	WI DNR LaCrosse	608-785-9995
Tim Schlagenhaft	MN DNR Lake City MN	612-345-3365
Walt Popp	MN DNR Lake City MN	651-345-3331
Todd Koel	MN DNR Lake City MN	651-345-3331
Bill Bertrand	IL DNR Aledo	309-582-5611
Jeff Arnold	INHS Havana IL	309-543-6000
Mark Pegg	INHS Havana IL	309-543-6000
John Crick	INHS Pool 26 IL	618-466-9690
Tom Boland	IA DNR Bellvue IA	319-872-4976
Mike Steuck	IA DNR Bellvue IA	319-872-5495
Bob Hrabik	MODOC Open River FS	573-243-2659
Jim Fisher	USFWS Winona MN	507-452-4232
Pete Redmon	USEPA Chicago IL	312-886-6110