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LONG TERM RESOURCE MONITORING PROGRAM
ANALYSIS TEAM MEETING MINUTES

Draft

January 26-27, 1992³
Bettendorf, Iowa

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at noon on January 26, 1993 at the Holiday Inn in Bettendorf, Iowa. Attending were team members and others from the states of Illinois, Iowa, Minnesota, and Wisconsin, the U.S. Fish and Wildlife Service (Service), the U.S. Army Corps of Engineers (Corps), and the National Park Service. An attendance list is attached.

Bill Bertrand, the new Analysis Team chairman, called the meeting to order. Following a round of introductions, Dan Wilcox was asked to fill in for Bob Clevenstine as secretary. Dan noted that the duties of assistant chairman/secretary have passed on to the U.S. Fish and Wildlife Service following the August 1992 meeting, but agreed to record the proceedings of the meeting.

Minutes of the August 26-27 Analysis Team meeting were reviewed and approved as written.

Analysis Team Membership

Bob Delaney said that the mailing list has grown to a number well in excess of the official members. Bill Bertrand said that the states, the Fish and Wildlife Service, the Corps, Environmental Protection Agency, Soil Conservation Service, and the National Park Service were all agency members according to the first LTRMP Operating Plan. The UMRCC Coordinator was not included as an Analysis Team member in the original Operating Plan. Jon Duyvejonck remarked that official representation by the UMRCC on the Analysis Team would be redundant because the states and the U.S. Fish and Wildlife Service are already represented. The Analysis Team voted to make the UMRCC Coordinator an advisory member of the team. Bob Delaney will revise the mailing list based on the discussion and will mail the revised list to Team members and others for information. Others on the mailing list will be asked if they wish to remain on the mailing list.

Standard Analysis Team Meeting Agenda

Bill Bertrand reviewed the standard Analysis Team meeting agenda. Bob Delaney said that the standard agenda was developed as a check-list of meeting topics. Bob said that conference calls with team members prior to the meetings have served well to set meeting agendas.

Meeting Dates

Bill said that Analysis Team meeting should be held two to three weeks prior to EMPCC meetings, to allow time for Analysis Team members to advise their respective EMPCC representatives on LTRMP matters and for agency positions to be developed before EMPCC meetings. Bob Delaney said that the UMRBA and the EMPCC are now meeting four times a year, and that the number of meetings could be reduced to three times a year. Tom Boland suggested that the Analysis

team plan for four meetings each year, with members to consider the need for each meeting. John Barko emphasized that Analysis Team members inform their respective EMPCC representatives on LTRMP issues in a timely way before EMPCC meetings. John Wetzel recounted earlier Analysis Team agreement to discuss the Annual Work Plan at August meetings, prior year accomplishments in January, and new work in the spring meeting. John questioned the need for four meetings each year. Bob Delaney recounted earlier Analysis Team conclusions that consecutive MRRC/LTRMP field teams/Analysis Team meetings at LaCrosse in April would be desirable for technical information transfer. Bob has asked the MRRC board to consider moving the MRRC annual conference date forward in the week to precede the Analysis Team meeting. Bob said that the MRRC board could not adjust the date of the upcoming annual meeting. The MRRC board will consider changing the date of future meetings. Bill Bertrand set the date of the next Analysis Team meeting for April 20-21 at the Holiday Inn in LaCrosse, prior to the MRRC meeting.

Program Manager's Report

Finalize LTRMP Operating Plan - Bob Delaney reported that the EMPCC agreed at their last meeting that agency signatures are not needed on the document to indicate approval of the Operating Plan. Bob distributed a modified preface to the Operating Plan stating that the plan is endorsed by the EMPCC and the Analysis Team.

Bob explained that budget table format changes were made in response to a request the Corps of Engineers North Central Division (NCD). Don Williams said that NCD needs to account for LTRMP costs at the task level in both the Operating Plan and the Annual Work Plans. Don said that for management purposes, the budget tables in the LTRMP work plans need to be in a format consistent with Corps budget requirements.

Bob recounted that the Analysis Team has approved the Operating Plan pending distribution of the out-years budget table (D-1). Bob explained that the budget table was modified based on FY93 funding available. Changes were also made in presenting overhead costs to accommodate NCD needs, with overhead charges distributed over all tasks to show total task costs.

Bill Donels suggested that the Analysis Team "approve," rather than "endorse" the Operating Plan, and that the preface should be revised accordingly. Tom Boland summarized Analysis Team agreement that the Operating Plan be approved, pending modification of the preface to indicate "approval," and some revision to the wording on the process for changing the plan. The Analysis Team voted unanimously in favor of Tom's motion.

Field Team Leader Attendance At Analysis Team Meetings

Bob Delaney recommended that field team leaders attend all Analysis Team meetings.

Trend Analysis Report

Ken Lubinski described how the resource management process on the UMRS can

benefit from information generated by the LTRMP. Ken emphasized the need for setting objectives for future condition of UMRS resources, exploring management alternatives to attain them, implementing active management measures, monitoring to determine if objectives are met or "action levels" are exceeded, and modifying management activity accordingly. Ken said that the LTRMP trend analysis monitoring work will assist in tracking condition of river resources and setting action levels. Ken emphasized that research, not only monitoring, will be needed to set objectives, explore management alternatives, and to set ecological criteria or action levels for management.

Ken discussed the conceptual ecological modeling that has been underway at EMTC for internal planning purposes. The ecosystem conceptual model and the component models have been updated and used for program direction. Strategic models will be available for Team members prior to the next meeting.

Ken pointed out that in the last Analysis Team meeting minutes, a "multiple-component synthesis" was indicated as a specific trend analysis task. Ken explained that, while not a major work item, a work group within the EMTC is investigating interactions between hydrology, sediment transport, river geomorphology, and aquatic plants.

Macroinvertebrates

Pam Thiel reported on the first year of macroinvertebrate monitoring and distributed some pages on the results. Macroinvertebrates sampled from sediment were most numerous in Pool 13, but generally were not abundant. Don Williams pointed out the need to monitor the benthic community, in light of the zebra mussel invasion. Pam said that in addition to monitoring zebra mussel colonization, and sampling for veligers in the Illinois River, the EMTC is involved with the Corps Waterways Experiment Station in EPA-funded research on the ecological effects on the zebra mussel invasion in the UMRS.

This year, macroinvertebrate monitoring will consist of 125 samples per field station, taken from sediment substrate locations randomly located within different aquatic areas. Samples will be sorted in the field. Additional testing will investigate efficiencies and information gain between coarse vs. fine mesh and standard vs. petite Ponar samples. All the macroinvertebrate work will be done internally, with field station cooperation and reapportioning of EMTC staff time.

Fish

Steve Gutreuter distributed a paper on fixed-point vs stratified-random sampling for fish monitoring. Steve discussed the rationale and statistical implications of both types of sampling schemes. Steve has concluded that much more valid and useful information can be obtained from a stratified-random scheme for LTRMP fish monitoring. Steve recommended that the LTRMP fish monitoring sampling scheme be modified to primarily a stratified-random approach, using the same level of sampling effort as last year. Steve recommended retaining fixed sampling points where rare or endangered fishes have been captured, to continue to monitor their presence at those sites. Sampling logistics and sampling rules will have to be developed with the field

stations. Steve described a field test on Pool 8 for locating randomly-selected sampling points. The field station staff was able to find pre-selected locations fairly quickly from maps, and with reasonable accuracy without using GPS or other navigation equipment. Following discussion, Analysis Team members indicated support for changing the LTRMP fish monitoring to a stratified-random sampling scheme. Concern was expressed that the EMTC appeared to be making a unilateral decision without opportunity for Analysis Team input. Steve pointed out that this subject has been discussed at several previous Analysis Team meetings, that the recommendation to change the sampling approach has been made with careful consideration of statistical and logistical implications, and that he is open to any suggestions for improving the design of the LTRMP fish monitoring effort. In the interest of timely conversion to the revised sampling scheme, work with the field stations should begin soon.

Water Quality

Dave Soballe reviewed the sampling scheme for water quality monitoring employed to date. Dave recommended retaining a limited number of fixed sites, with change to a primary emphasis on stratified-random sampling. The stratified-random sampling scheme will allow spatial extrapolation of water quality conditions. Dave also recommended a change to quarterly intensive spatial sampling. Dave is asking the field stations for their recommendations on water quality information needs, and asked that he receive replies by mid-February. Dave recommended that the pilot phase for the changed water quality monitoring be conducted this spring. Dave recommended that some fixed sites beyond the monitoring pools and river reaches be sampled, such as major tributaries.

A discussion followed on changing the fish and water quality monitoring sampling schemes. Dan Wilcox recalled that the Analysis Team had asked the EMTC staff to review the first two years of monitoring data and make recommendations on refinements to the monitoring designs. Several Analysis Team members said that they need some time to consider the recommended changes and to coordinate with their respective agencies. Bill Bertrand asked that the team members consider the recommended changes to the fish and water quality design and provide written comments to him and Bob Delaney by February 15.

Problem Analysis Research

John Barko reviewed the ongoing research activities at the EMTC and the field stations. Investigations into sediment transport and accumulation, vegetation and sediment resuspension, nutrient:chlorophyll relationships, and ecological effects of zebra mussel invasion are all proceeding, and are dependent at least in part on funding from sources outside the LTRMP budget.

John said that the EMTC should begin new work on navigation effects with Navigation Study funding from the Corps Rock Island District. One study will be on the effects of wave action on aquatic plants. The study will probably involve a literature review and laboratory testing. This year's work will primarily be development of the study design and scope of work. Another

ongoing EMTC effort, generation of pool backwater curves and water surface elevation GIS themes, will be extended to other pools for the Navigation Study. LTRMP monitoring data will contribute to the Navigation Study, along with spatial GIS coverages. John emphasized that the EMTC staff is already committed full-time to LTRMP work, and that additional temporary staff and funding will be required to take on additional Navigation Study tasks.

John reviewed linkages with the HREP program. Studies are ongoing at Finger Lakes in Pool 5, and on the effects of islands. Partial funding is coming from the St. Paul District of the Corps. Other agencies are involved in the studies (USFWS National Fisheries Research Center, Corps Waterways Experiment Station, and Minnesota DNR).

No discussion on Problem Analysis research followed, and the Analysis team adjourned for the day at 5:40.

The Analysis Team reconvened the next morning (January 27, 1993) at 8:20.

Information System Support Division Report

Norm Hildrum reported that the monitoring data processing system has been refined and is working well. A process has been instituted for responding to information requests, with an automated tracking system. A data catalog is being developed, and will be published as a technical report in the third quarter of FY93.

Information system needs for equipment identified in the Annual Work Plan remain unfulfilled.

The GIS land use/land cover theme has been completed for all the monitoring pools and river reaches. The system-wide Landsat coverage is nearly complete. Bathymetric coverages for the monitoring pools are also nearly complete. A zoom transfer scope has been ordered, which will allow mapping of elevation on emergent parts of the floodplain.

Norm said that there are 71 pending reports at present, written and in editing. There are now four categories of LTRMP hard-copy reports. Reprints of reports prepared with LTRMP funding and published by refereed journals are being distributed with a cover letter. Special LTRMP reports are prepared by others than EMTC staff. LTRMP Technical Reports are authored by EMTC staff and subjected to rigorous review and editing. Programmatic reports are now being produced as a separate type of report. The Department of Interior has given approval for publication of the River Almanac newsletter.

Use of LTRMP Products

Barry Draskowski emphasized that the LTRMP needs to hear from the resource management agencies about what specific information is needed for resource management. Barry has asked the field team leaders and the partner agencies for their input. Agency suggestions received by the next Analysis Team meeting could be discussed and fed into development of the next Annual Work plan, which will start in June. John Barko asked for written input from the

agencies by April 1. The package of information needs will be sent to the Analysis Team members prior to the next Team meeting. The information needs will be used to direct the course of the LTRMP research and information sharing. Dan Wilcox noted that the LTRMP research agenda is directed by conceptual ecological modeling, the LTRMP Operating Plan, the availability of outside funding, and ultimately by the information needs of the UMRS resource management community.

Barry reported that costs for information transfer have grown substantially, now that the LTRMP has generated a large body of information about the UMRS. Discussion followed about the need for a policy on information sharing to limit costs and EMTC staff time. A policy on information sharing is emerging, with priority of response to the EMP partner agencies. In future years, automated access to LTRM data and reports may reduce EMTC staff time for responding to information requests.

Additional Product Development

Bob Delaney said that the Corps has requested that additional capability items identified in the Annual Work Plans be identified by products, rather than itemizing "infrastructure" items. The uncertainty of the Corps reorganization plans has prevented a meeting between EMTC and NCD personnel to discuss a format and language for the additional capabilities list. Bob and Don Williams will confer on how this will be done. Bob distributed a draft list of field station equipment needs.

Bill Donels expressed concern about the need to initiate monitoring of additional ecological components. He suggested that additional funding should be directed toward a more complete monitoring program. Bob Delaney explained that additional funds are needed to at least maintain the present program and capabilities.

John Wetzel asked about progress in developing the wildlife monitoring component. Bob Delaney said that the budget crunch last year required cancellation of Carl Korschgen's work on a wildlife monitoring plan.

Pam Thiel Departing

Bob Delaney announced that Pam Thiel has been selected to serve as the USFWS Fisheries Assistance Project Leader for the Winona office, starting in March. Bob expressed appreciation for Pam's service to the LTRMP. The Fisheries Assistance office may move to LaCrosse, so Pam shouldn't be hard to find.

LTRMP Video

The revised and improved LTRMP video was shown. Norm Hildrum said that copies are being produced, and that they will be distributed soon. In response to questions, Norm indicated that there is no problem with providing tapes to local television stations for broadcast.

Other Items

Ken Lubinski reported on progress in planning for the 1994 conference and workshop, Maintaining Ecological Integrity of Large Rivers. Ken also reported on a recent meeting at EMTC with people involved with the HREP program. The EMTC will strive to assist with HREP planning and design process in addition to monitoring efforts.

State Reports

Wisconsin - John Wetzel reminded Team members of the upcoming UMRCC non-game symposium at LaCrosse in August. John expressed appreciation to the EMTC staff for their work in preparing for the Analysis Team meeting, and remarked that the LTRMP has matured and is on track.

Bill Bertrand reported that sampling on the Upper Illinois revealed that unionized ammonia is a larger problem than was thought. Bill said that this problem may be occurring in other parts of the river system and suggested that unionized ammonia should be considered for inclusion in the LTRM water quality sampling program.

The Analysis Team adjourned at 1110.

Respectfully submitted,

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Dan Wilcox

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 January 26-27, 1993
 Holiday Inn, Bettendorf Iowa

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3.C. A-Team

Long Term Resource Monitoring Program
Analysis Team Meeting Minutes

April 21, 1993

La Crosse, Wisconsin

DRAFT

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at 8:00 am on April 22, 1993 at the Holiday Inn in La Crosse, Wisconsin. Attending were team members and others from the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, the U.S. Fish and Wildlife Service (Service), the U.S. Army Corps of Engineers (Corps), and the Minnesota-Wisconsin Boundary Area Commission. An attendance list is attached.

Bill Bertrand, the Analysis Team Chairman, called the meeting to order. Minutes of the January 26-27, 1993 Analysis Team Meeting were reviewed and approved as written.

Chairman Report

Bill Bertrand reported that the LTRMP operating plan approval issue was discussed at the February Environmental Management Program Coordinating Committee (EMP-CC) meeting in St. Louis, Missouri and the Corps had expressed concern with characterization of the Analysis Team's action as approving the plan as opposed to an endorsement. Bill said that after discussion at the meeting the EMP-CC moved to endorse rather than approve the operating plan and that the Analysis Team's action should also be described as an endorsement. Robert Delaney mentioned that a new preface to the Operating Plan would be issued reflecting endorsement of the document by both the EMP-CC and the Analysis Team.

Program Manager Report

Robert Delaney reported that a recent newspaper article dated April 19, 1993, indicated that the Clinton Administration recommended full funding for the Upper Mississippi River Environmental Management Program in the budget request he sent to Congress earlier in the month.

Bob referenced the revised over-target capabilities list (Appendix B of the Annual Work Plan) which was submitted to the North Central Division of the Corps on April 7, 1993 and indicated that an Analysis Team endorsement of the revised over-target list could strengthen a positive response to the request. He requested this be an action item for the meeting.

Pam Thiel recently assumed the duties as the U.S. Fish and Wildlife Service Representative on the Analysis Team from Rick Nelson.

Bob reported that there was no final resolution on the LTRMP property ownership issue. However, an item which needed closer attention by the Field Stations was their immediate reporting to the EMTC of any property purchased. He indicated that although most property reporting was timely by the states that in a few instances several weeks to months occurred prior to reporting property purchases.

Bob said that EMTC has migrated from a budget tracking system at the strategy level to one of tracking at the task level. This makes the budget system totally compatible with the Annual Work Plan and Operating Plan formats. He indicated that EMTC had planned on requesting Field Stations adopt the same system but that EMTC's administrative officer has suggested that the Service, operating under the Federal Guidelines and Regulations governing cooperative agreements cannot impose such a request. Instead, the EMTC will continue to request financial data from the states using the standard budget request form adopted last year. This provides sufficient detail for Annual Work planning.

Robert Delaney reported that Secretary of Interior Babbitt has proposed creation of a National Biological Survey (NBS) to improve the quality and consistency of biological sources in the Interior Department. The NBS will include research and information transfer as well as inventory and monitoring. NBS will work to create a national inventory and monitoring program for the Nations biological resources. The aim is to integrate existing information and increase its availability to both public and private decision makers. Bob reported that at this time the LTRMP is proposed to be included in the NBS. Departmental personnel involved in the creation of the NBS have reassured all affected offices and programs that no impacts will occur to on-going mandated programs. Bob recommended that the Analysis Team closely follow development of the NBS to monitor potential impacts on the LTRMP. He said he would keep members informed of developments as information becomes available.

Bob stated that in a recent conversation with Holly Stoerker of the Upper Mississippi River Basin Association that Holly would need a list of those items that the Analysis Team agreed should be placed on the agenda for the EMP-CC meetings. He suggested that prior to the close of the Analysis Team meeting consensus should be reached on what items should be forwarded to Holly Stoerker for inclusion in the next EMP-CC meeting.

Resource Trend Analysis Report

John Barko summarized the current status of trend analysis efforts, emphasizing that changes in the design of fishery and water quality sampling programs from a fixed point approach to a stratified randomized approach was contentious, but necessary. John reported that these changes were in the process of being implemented. The macroinvertebrate monitoring effort was discussed in some detail, with input from the field station team leaders in attendance at the meeting. Since zebra mussels are presently entrenched in the river system, it was agreed that velliger sampling could be dispensed with during this upcoming field season. John noted that several minor changes had been made in the soft sediment invertebrate sampling program, and suggested that details of these changes could be referenced in minutes of the last Analysis Team meeting (January 26-27, 1993) in Bettendorf, Iowa. Some concern was expressed in relation to current methodology for sampling fish in main channel habitats. Steve Gutreuter indicated that he would investigate the possibility of improving this methodology.

Problem Analysis Research Report

John Barko provided an update on current research activities at the EMTC, noting that the update reflected essentially a continuance of activities reviewed during the last Analysis Team meeting (January 26-27, 1993) in Bettendorf, Iowa. There was some discussion related to mechanisms/policies driving the formulation of research initiatives. Discussion ensued also in relation to the prioritization of these initiatives. Bob Delaney and John explained that research was driven by a combination of factors that needed to be considered in a balanced fashion. Foremost among these factors were financial support and the availability of EMTC staff time. It was generally agreed that it would be desirable to work closely with the field stations in both the development and implementation of research agendas. Theoretically, a greater percentage of the resources now devoted to trend analysis activities should eventually be available for other sorts of research. John reported that HREP investigations were progressing very well, and that an interim report on the Finger Lakes project was in progress. John also reported that the EMTC had completed the development of a detailed scope of work for Island investigations. John reported that the only involvement on the part of the EMTC with the navigational studies initiative this fiscal year would be in helping the Corps develop technical work groups. Bob Delaney added that the EMTC would also have responsibility this year for monitoring the contract to be let soon with the Illinois State Water Survey.

Information System Support Division (ISSD) Report

Status of Data Availability

Norm Hildrum began the discussion by introducing Linda Leake, Frank D'Erchia, and Terry D'Erchia. He indicated that these individuals would make presentations for ISSD.

Linda Leake provided a update report on data availability. Linda explained the status of each years worth of data for fish, water quality, invertebrates and vegetation. A flow chart was provided depicting the data process flow from the data sheet initiated at the field station to the loading of the data, review by field stations and the final storage of the data for use by Program partners.

The data review process was explained which includes distribution, modification and availability. Linda explained stand-alone applications were being developed for use by the Field Stations to review and modify the collected data in a timely and efficient manner.

A diagram portraying the EMTC computer environment was distributed. Some of the highlights mentioned were the addition of SUN Unix Systems to support analysis and data management, networking capabilities, E-mail, the migration from the Prime Computer to the SUN Unix system, and the SAS migration from DOS to windows.

Status of Geographic Information Systems and Remote Sensing Applications

Aerial Photography

Frank D'Erchia mentioned that the 1992 aerial photography has been interpreted by field station vegetation specialists under guidance of the EMTC photo interpretation specialists. The La Grange interpretation is incomplete and the new vegetation specialists will be trained when the position is filled. The 1993 aerial photography mission is planned for July 15 - August 15 for Pools 4-9, 13, 19, 26, and the La Grange corridor. If there are other areas of interest the EMTC GIS Branch should be notified as soon as possible.

Digitization/Automation

Frank D'Erchia said that conversion of aerial photography into a GIS data base will be implemented for HREP sites and special study areas. Other areas will be prioritized for automation as requested. A terrain elevation pilot project will be conducted with leaf-off photography taken in the fall due to high water this spring.

Satellite Imagery

Frank mentioned that Mark Laustrup has the classified systemic image in the final verification process. A technical report with map products and summaries will be completed by June 30. A draft technical report on change detection will be published by September 30.

Field Station Support

Frank said that training has been offered for the EPPL7 GIS software through an introductory course developed by the GIS Branch. Courses were held this fiscal year on November 16-20, 1992, March 15-19, 1993. The next course will be held at EMTC on July 15-19, 1993. Anyone interested should notify the GIS Branch. A training manual has been published by the EMTC. An advanced course is being developed and will be offered in the fall. This course will cover accuracy, scales, analysis, and the creation of slides. An ARC/INFO course has also been developed and a manual published by the EMTC. This course was offered on January 5-7, 1992 and May 6-8, 1993. Data conversion for the field station is up to date and other data will be converted upon request or as it becomes available. A technical report will be prepared on the use of global positioning systems. A standard operating procedure document is in preparation for the Magellan GPS.

Data Themes Available

A list of available data was distributed with a memorandum in October 1992. A spatial data catalog and metadata manual is in preparation and will be available by July 15, 1993.

Spatial Data Access

Internet connections are in the testing stage. A remote access pilot project is underway with the Alton Field Station. The EMTC has developed a spatial data library interface and other tools to allow remote users to access and view spatial data.

GIS Applications

Several projects are underway in the GIS Branch at the EMTC:

- Levee Alignment Model for Calhoun Point (St. Louis COE, Alton F.S./EMTC)
- Oil Pollution Act Data Development (UMRBA)
- Migratory Bird Habitat Models (UMRNFWR/FWS Region 3)
- Systemic Diversity Modeling/Change Detection - Satellite Imagery
- Custom Interfacing to EMTC-GIS
- Vegetation Mapping Procedures

Status of LTRMP Reports

Terry D'Erchia gave the current status of LTRMP report production. Significant efforts have been made to increase the number of Program reports being produced. As of April 1993, 44 reports have been completed in Fiscal Year 1993. Team members expressed satisfaction with this progress.

Water Level Management

During the lunch break, Joe Wlosinski made a presentation titled "The Corps water level management plan and how well it is met," based on preliminary work preformed by himself and Lara Hill of the EMTC. This work was in addition to that listed in the 1993 Annual Work Plan. It was performed because of comments received by the EMTC concerning water levels on the Upper Mississippi River. The presentation was based on the analysis of only a few pools. Wlosinski mentioned that all methods for the analysis are finished, and that all pools can be analyzed if the river community is interested in seeing the work done.

Fiscal Year 1992 Annual Report

Barry Drazkowski said production of the draft Fiscal Year 1992 Annual Report is delayed several weeks. A draft will be mailed simultaneously to the Analysis Team and the Corp's North Central Division in mid-June.

Wildlife

Drazkowski presented an overview of wildlife related activities. There is no LTRMP funds available to initiate wildlife monitoring at the field stations. EMTC is looking at no net increase in cost alternatives to support existing wildlife monitoring within the Upper Mississippi River System (UMRS). This could include data base management support and/or GIS support and analysis. In addition, EMTC is working under contract with the Upper Mississippi and Mark Twain Refuges to create additional land cover data sets and develop

species habitat coverages. These efforts are in support of the Refuge's pilot Migratory Bird Management Strategy project.

LTRMP Products and Cooperators Needs and Expectations

Drazkowski described the process of soliciting through the Analysis Team the expectations and needs cooperators have of the LTRMP. The preliminary summary of that feedback was distributed and discussed. It was discussed that this process will provide another mechanism for the Analysis Team to provide input in the development of the LTRMP's Annual Work Plan. EMTC still needs to develop and define the process, given the variety of needs and expectations, to prioritize research within the Program.

Tim Schlagenhaft recommended that each member review and re-coordinate their States input to the list. There was some differences in the nature and resolution of responses. Re-coordinating the summarized list would develop both a better understanding of the scope of expectations, and continuity in the types of responses.

John Wetzel suggested that the UMRCC technical sections be used to prioritize the coordinated list. That would insure most resource managers have input to this process.

The motion to involve the UMRCC technical sections in review and prioritization of LTRMP needs and expectations was passed.

The final agreed on review and coordination process was as follows:

Drazkowski will consolidate the current list into a summarized, non-redundant list. He will also relate the priority PIA tasks to the applicable responses.

The summarized list will be sent to the Analysis Team for their review and coordination with appropriate State managers. Responses will then be returned to Drazkowski for consolidation.

The coordinated list will be sent to the UMRCC Coordinator for distribution to the Technical Sections. Sections will review and prioritize using a high, medium, and low scheme. Section responses will be returned to Drazkowski by August 18, 1993.

Drazkowski will summarize UMRCC input and distribute summarized document for discussion at the fall Technical Section meetings.

A final summary report will be prepared and distributed to the Analysis Team by the winter meeting.

Bertrand will report on this process and schedule to the EMP-CC.

Analysis Team Report to EMP-CC Meeting

Bertrand led a discussion on which topics discussed at the meeting should be reported at the EMP-CC meeting. A consensus was reached on the following topics:

- Applications/uses of LTRMP products
- Fish sampling in main channel habitat
- Data availability
- Support for over-target request

The meeting adjourned at 4:00 pm.

Analysis Team Meeting Attendance

April 21, 1993

<u>Name:</u>	<u>Affiliation</u>	<u>Telephone:</u>
Pam Thiel	FWS-FAO	507-452-4390
Deb Southworth	FWS-Refuges-RO-SS	612-725-3924
Chuck Theiling	INHS-LTRMP-POOL 26	314-753-2221
Doug Blodgett	INHS-LTRMP-Havana	309-543-6000
Bob Hrabik	MO-DOC-Cape Girardeau	314-290-5734
Walt Popp	MN-DNR-Lake City	612-345-3331
Bill Donels	IL-DOC	217-782-3715
Tom Bolland	IA-DNR	319-872-4976
Don Williams	USACOE-North Central Division	312-886-5470
Jerry Skalak	USACOE-Rock Island District	309-788-6361
Joe Jordan	USACOE-Rock Island District	309-788-6361 X:6697
Robert Delaney	FWS-EMTC	608-783-7550 X: 51
Norm Hildrum	FWS-EMTC	608-783-7550 X: 49
Eric MacBeth	MN-WI Boundary Area Commission	715-386-9444
Jerry Rasmussen	FWS-MICRA Coordinator	314-876-1911
Linda Leake	FWS-EMTC	608-783-7550 X: 13
Bill Bertrand	IL-DOC	309-582-5611
Russ Gent	IA-DNR-Bellevue	319-872-5425
Gordon Farabee	MO-DOC	314-751-4115
Jon Duyvejonck	USFWS-UMRCC	309-793-5800
Ken Barr	USACOE-Rock Island District	309-786-5349
Dan Wilcox	USACOE-St. Paul District	612-220-0276
John Barko	USACOE-WES/FWS-EMTC	608-783-7550 X: 50

Jim Fisher	FWS-UMRNWFR-Complex Winona	507-452-4232
Rick Astrack	USACOE-St. Louis District	314-331-8481
Barry Drazkowski	FWS-EMTC	608-783-7550 X: 52
Frank D'Erchia	FWS-EMTC	608-783-7550 X: 11
Joe Wlosinski	FWS-EMTC	608-783-7550 X: 56
Lara Hill	FWS-EMTC	608-783-7550 X: 46

LONG TERM RESOURCE MONITORING PROGRAM
ANALYSIS TEAM MEETING MINUTES

July 6-7, 1993
Bettendorf, Iowa

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at noon on July 6, 1993 at the Holiday Inn in Bettendorf, Iowa. Attending were team members and others from the states of Missouri, Illinois, Iowa, Minnesota, and Wisconsin, the U.S. Fish and Wildlife Service (USFWS), and the U.S. Army Corps of Engineers (Corps). An attendance list is attached.

Bill Bertrand, Analysis Team chairman, called the meeting to order. Minutes of the April 23, 1993 Analysis Team meeting were reviewed and approved as amended to include addition of Tim Schlagenhaft and John Wetzel to the attendance list.

EMPCC Meeting

Bill Bertrand reported on items the Analysis Team referred to the recent EMP-CC meeting. There was discussion on program funding assessments, and a resolution for the Corps to try to return funds retained for savings and slippage to the LTRMP program earlier in the fiscal year. The Fish and Wildlife Service and the Corps agreed to forward an amended memorandum of agreement to their respective headquarters offices which would address among other things, a reduced overhead rate. The EMP-CC was told that main channel fish sampling methods were being investigated. The LTRMP FY93 over-target funding items list had been endorsed by the Analysis Team and was further discussed. Delegation of approval authority for small HREP projects was discussed.

Program Manager's Report

Bob Delaney reported that most, but not all, of the items on the FY93 over-target items list were funded by the Corps. The FY93 over-target funding amounted to \$369,000 for three specific tasks and \$35,000 received in April for accelerated production of reports. After USFWS overhead assessments, \$21,700 was available for use in report production. Bob said that by the end of the fiscal year, 49 reports are expected to be published, approximately one a week this fiscal year.

\$232,000 of the \$369,000 was distributed to the six state field stations to offset costs associated with implementing the statistically-improved monitoring of resource components.

An additional \$80,000 was funded for further development of the land use/land cover data base. Following USFWS 38% overhead assessments, the remaining \$49,600 was used to purchase a zoom transfer scope, which will allow rapid digitization from aerial photographs and mapping of terrain elevation. A listing of specific products and their schedules associated with this purchase was discussed.

The accelerated development of systemic data base interfaces was funded for \$57,000, which accounted for the balance of the \$369,000. Following overhead assessment, the remaining \$49,600 was used to hire a temporary computer programmer, pay for overtime, and additional travel to field stations. The "interfaces" are computer software programs which allow field station staff to efficiently display, review, and edit monitoring data as a primary element of the QA/QC process. The interface programs are being tested by some field stations now and are scheduled to be completed soon.

Other Fund Transfers to LTRMP

Bob reported that, in addition to LTRMP funding, the Corps Rock Island District transferred \$249,000 of Navigation Study funds to the EMTC for the Illinois State

Water Survey to analyze physical effects of vessel passage data collected under previous LTRMP contracts. The work is being conducted by Dr. Nani Bhowmik in support of the Corps Navigation Study. The EMTC retained \$11,000 for contract management over the next 24 months. Other funds were received for HREP monitoring, zebra mussel studies, and a number of other tasks. The total of additional funding to the LTRMP program this fiscal year is \$939,000.

Budget Overview

Bob Delaney described the proposed budget included in the FY94 work plan mailed out to Analysis Team members last week.

Bob reported that the program is scheduled to receive \$5,955,000 in FY94. Following assessments for Corps savings and slippage, Corps coordination, USFWS, State, and University overhead, \$3,945,000 will be available to fund program activities. The six State field stations will receive a total of \$1,662,000 (\$2,052,583 minus state overhead), of which \$1,437,000 (86.5%) will go to salaries. The EMTC will use 2,283,000, with \$1,819,000 (80%) going to salaries. Bob noted that after salary cost and other fixed cost (utilities, rents, etc) that there is not much "discretionary" funding to work with. Discretionary spending at field stations and EMTC averages less than 5% of available funds.

Bob said that an additional \$250,000 to \$300,000 is potentially available in FY94, if USFWS overhead assessments are reduced from the present 38% to 16%. Additionally, a potential \$600,000 may be available if Corps savings and slippage is returned to the Program for task accomplishment.

Proposed National Biological Survey (NBS)

John Wetzel asked about the impact of formation of the NBS to the LTRMP program. Bob Delaney said that he has been discussing this subject with Department of Interior officials who are planning the NBS, and went to Washington to describe the LTRMP to them. Bob said that the LTRMP should be in a NBS section that is national in scope, with a focus on large rivers monitoring and research. Bob emphasized to Interior officials that NBS must provide base funding and FTE's (full time equivalent positions) for work beyond the presently authorized and funded LTRMP program. Bob explained that the Interior secretary presently has the authority to administratively create a NBS, but is proceeding cautiously because of the potential effect on many existing agencies and interests. Senate and House bills have been introduced for creation of a NBS, and hearings will be held. Bob said that he has been advised by Interior officials that the scope and funding of the LTRMP program would not be impacted by formation of a NBS. Bob distributed a handout of questions and answers about the NBS proposal and said he would keep the Analysis Team informed of the proposed LTRMP migration into the NBS.

Field Station Budgets

Bob asked the field stations to submit budget proposals for FY94 with no increase from FY93. Budget proposal format was standardized. The State field station budgets for FY94 are proposed to be close to FY93 funding levels. Some (Lake City and Bellevue) were granted modest increases. A total increase of \$34,904 among the six field stations is proposed for FY94.

The increase in allocations to field stations was made by reprogramming proposed FY94 aerial photography to be an over-target item.

Program Manager's Report (continued)

Bob Delaney distributed a recently-prepared list of over-target items (Appendix B to the FY94 LTRMP Annual Work Plan), a letter from USFWS Region 3 to the Corps North Central Division describing products and schedules of over-target work, and a Corps memorandum clarifying responsibility for LTRMP property and property excessing.

Bob reported that the Corps and Interior have similar versions of a new EMP Memorandum of Agreement going to Department Assistant Secretaries for signature. The new agreement includes reducing the USFWS overhead assessment on LTRMP funding from 38% to a standard 16%. In addition, fiscal performance of the LTRMP will be considered separately from the HREP program in considering savings and slippage.

The systemic land use/land cover data base is complete. Example maps have gone out for review and comment. A technical report on this subject is undergoing technical review and will be published soon.

Bob noted that the FY92 annual report is an administrative document, and that he is considering publication of an annual report on the state of the UMRS for popular consumption, similar to the TVA River Pulse condition report on the Tennessee River System. Team members agreed that such a publication would be of value for public information.

Trend Analysis - Goal 2 Monitoring

Ken Lubinski said that the Goal 2 portion of the FY94 Annual Work Plan is the same as in previous years, with exceptions for vegetation and floodplain habitat. Ken explained that the aerial photography for vegetation monitoring is contingent on over target funding. A study plan for floodplain terrestrial vegetation was developed by the Pool 26 field station last year, and will be expanded to other sites. For floodplain habitat monitoring, remote sensing pilot studies are proposed using high resolution areal photography.

Goal 1 Research

John Barko recounted the proposed research activities in the FY 94 Annual Work Plan. John Wetzel asked if a sediment budget for a pool will be developed. John said that sediment transport work is being conducted as part of the Islands Study, and that sediment budget work on one or more LTRMP monitoring pools will be conducted in later years. John said that Bob Gaugush of EMTC is working with Corps Waterways Experiment Station scientists on an approach to sediment type surveying using hydroacoustic technology. If that approach proves successful, UMRS sediment types may be surveyed in conjunction with bathymetric surveys.

John Barko described LTRMP Goal 1 work on effects of navigation. The EMTC will conduct research into the effects of waves on aquatic plants, which will contribute to the Islands Study, the Corps Navigation Study, and to understanding conditions affecting aquatic plant growth in the UMRS. EMTC scientists will be involved in developing study plans for the Corps Navigation study, and the EMTC is managing a contract for analysis of previously obtained physical effects data. Ken Lubinski is serving as a liaison between the EMTC and the Corps for the navigation study. Bill Bertrand asked what navigation effects research work will be funded by LTRMP and what work will be funded by the Corps Navigation Study? Bob Delaney said that the LTRMP Annual Work Plan includes only LTRMP-funded tasks. Don Williams noted that the FY94 Annual Work Plan budget includes a line item (1.2.2.1) for reviewing POS work units...a task no longer needed. Dave Soballe said that item will be deleted.

John Barko said that Strategy 1.2.3, Effects of water levels and discharges, refers to other work units and should be clarified.

For Strategy 1.3.3, New Problems, John described a number of research activities. Development of techniques for inventory, mapping, and analysis of aquatic habitat will be approached in phases. The UMRS aquatic habitat classification system will be applied with data from the Finger Lakes Study first, then interdisciplinary studies of aquatic habitat will be conducted on Lake Onalaska, using Islands Study data. An interdisciplinary study of habitat conditions and biota in selected areas of Pool 8 will be initiated. A study of the relationships between habitat conditions and fish distributions will be initiated, associated with the Pool 8

aquatic habitat study. John briefly described a number of research efforts studying the processes affecting aquatic vegetation, and zebra mussel assessment. Doug Blodgett noted that the field stations are participating in Goal 1 research and Goal 3 HREP monitoring activities, but that field station costs are not shown in the Goal 1 budget. Bob Delaney said that all field station costs are lumped into the Goal 2 monitoring portion of the budget presented in the Annual Work Plan. Bob said that the field station costs which contribute to other than monitoring should be included in Goals 1 and 3 parts of the Annual Work Plan, and that next year, they will be displayed in that manner.

Information System Support

Linda Leake said that report publication is proceeding at a rate of about one per week. A status sheet on report publication is continuously updated and available from EMTC upon request. Joe Jordan asked how many report copies are made for distribution. Joe has been receiving a number of requests for LTRMP reports. Bob Delaney said that the EMTC has a mailing list for report distribution, and additional copies of reports are made to fill requests. Most LTRMP technical reports are being sent to NTIS (National Technical Information Service) for listing and distribution. Future requests for those reports can be handled through that agency. Gordon Farabee asked if LTRMP reports are being submitted to scientific journals. John Barko said that there have been a number of papers on LTRMP-associated work published in scientific journals and distributed by the EMTC as reprints. John said that publication in technical journals is a lengthy process and that he anticipates an increase in the number of LTRMP papers being published.

A zoom transfer scope has been purchased with FY93 over-target funds and a schedule of products developed. The 1992 fish and water quality monitoring data have been provided to the field stations for quality control checking. The new data checking applications are undergoing testing at field stations and should be completed this fiscal year. In response to a question by Don Williams, Linda described the R-base programs developed for field stations use in checking monitoring data.

Funding for information system support has been distributed across Annual Work Plan Goals 1,2,and 3 on a pro-rated basis based on labor costs. The budget for information system support proposed for FY94 is essentially the same as this year.

Linda reported that outside access to the EMTC network and LTRMP data is being developed, through interface programs and a pilot FTP (file transfer protocol) file server arrangement.

Pam Thiel recommended that the Annual Work Plan include previous years and out-year budget schedules from the LTRMP Operating Plan, so that reviewers could compare annual plans with the longer term schedule.

Over-Target Capabilities

John Barko said that the first items on the Appendix B over-target list were higher priority. Item 1, aerial photography of monitoring pools and HREP sites, is highest priority for funding.

Item 2, expansion of water quality monitoring, was a FY93 over target request to the Corps which did not receive funding. The request was clarified and has been resubmitted. In response to a question from Russ Gent, John explained that the additional funding would allow increase in the number of water quality constituents monitored, and to further develop analytical laboratory capabilities at EMTC. A temporary laboratory manager has been hired, and a permanent manager assisted by several students is needed.

Over target item 3 is production of a hard copy systemic base map atlas. An example map was distributed for review, with comments requested by July 23. Russ Gent and Jon Duyvejonck said that resource managers would need digital files in EPPL to make

most use of the data. Bill Bertrand said that the addition of physical structures such as wing dams would increase the utility of the maps.

Team members discussed utility of hard copy and digital forms of the systemic data, applications, and the appropriate frequency for redeveloping the systemic coverage. Gordon Farabee said that aquatic areas maps are needed for fish habitat assessment, planning and management. Tim Schlagenhaft identified the need to predict future geometry of the floodplain and associated habitat conditions. Dan Wilcox recommended that post-flood bathymetric surveys be considered for FY94.

Jon Duyvejonck noted that wildlife monitoring is zeroed out in the FY94 work plan, and recommended that some wildlife monitoring be included in the over-target list. Ken Lubinski reported that Barry Drazkowski is working with USFWS Region 3 on gap analysis and migratory bird protection strategies. John Wetzel remarked that funding from Refuges and Wildlife in Region 3 for this work would contribute to UMRS wildlife management.

Bob Delaney and Dan Wilcox emphasized the need for the LTRMP to focus on sediment transport and fluvial geomorphology. John Barko said that the EMTC needs to develop plans for study of sediment transport and for predicting future geometry of the floodplain. Tim Schlagenhaft noted that this information would be critical in predicting future conditions of this river. John said that plans for this could be developed in time for the next Analysis Team meeting in the fall.

John Wetzel recommended that over target item 6, (event-triggered aerial photography), be combined with item 1, (aerial photography of monitoring pools and HREP sites), because they address the same type of work. Following John's motion and second by Tim Schlagenhaft, the Analysis Team voted unanimously to recommend combining these two over-target items in Appendix B of the FY94 Annual Work Plan. Bob Delaney remarked that the EMTC needs to be consistent in charging Corps districts for aerial photography products. Some Corps districts have been charged, and others have not.

Ken Barr and Don Williams asked why Item 4, study of the effects of navigation-induced waves on aquatic plants, was included in the over target list. John Barko said that because funding is forthcoming from the Corps Navigation Study, that item will be deleted from the over target list.

John Barko explained that item 5 is to have new interface programs developed for SAS (Statistical Analysis System), making use of SAS easier by EMTC and field station staff.

Linda Leake said that over target items 7 and 8 are for development of outside user access to LTRMP data.

John Barko said that funding over target item 9 would allow interpretation of 1989 aerial photography and mapping of land cover and aquatic areas for the rest of the UMRS beyond the LTRMP monitoring pools.

Motion by John Wetzel, and second by Tom Boland to recommend that Appendix B, Over-Target Capabilities List, modified as described above, be added to the FY94 Annual Work Plan. The list and the rest of the draft Annual Work Plan will still be subject to Corps and other agency comment.

FY92 Annual Report

Bill Bertrand recommended that the format of LTRMP Annual Reports be the same as the Annual Work Plans, with paragraphs added to describe accomplishments and products. Bob Delaney said that the FY92 Annual Report was made concise to avoid excessive time and cost in preparation of another administrative document, but that it would be easy to follow the work plan format as recommended, and this will be done. Bob said that in addition to the formal annual report, a "river status" document,

similar to the TVA River Pulse publication, will be published in 1994. Don Williams noted that the Annual Report would be more useful, if provided according to agreement, in February.

There was no discussion of FY92 accomplishments or products.

Main Channel Fish Sampling

Ken Lubinski said that a decision was made last year to curtail main channel trawling for LTRMP monitoring until more suitable gear could be found. Ken reported that Chuck Theiling from the Pool 26 field station, Steve Gutreuter, and he attended a meeting about main channel fish sampling held to plan assessment of bendway weirs. Biologists from the Corps, U.S. Fish and Wildlife Service, States, and EMTC all were cooperative in volunteering equipment and services to investigate alternative gears. The USFWS will obtain a "rockhopper" trawl used on the Columbia River, and electrified trap will be developed. These gears will be tested along with drifted gill or trammel nets. The Corps St. Louis District may make the survey launch Pathfinder available for deploying an electrified trap and the rockhopper trawl. Chuck Thieling is preparing an experimental design for the gear testing with assistance from Steve Gutreuter. Depending on the outcome of gear testing, main channel sampling could again be included in LTRMP fish monitoring.

Corps Use of LTRMP Information

Don Williams is compiling responses from Corps districts on Corps applications of LTRMP products.

LTRMP Participation in Corps Navigation Study

Ken Lubinski is developing a "tracking tool" to report on Navigation Study environmental activities to the NECC (Navigation Environmental Coordinating Committee) and others. The "tracking tool" will display status of activities, products, and relationships between the different impact assessment work units. Ken will assist the Corps in recruiting Technical Coordinating Committee and Technical Work Group members, and will provide the Corps with summaries of past LTRMP navigation effects studies information. John Barko is facilitating a technical work group on the effects of waves on aquatic plants. John has recruited the work group member scientists. Ann Kimber, a PhD candidate from Iowa State University, will be working at EMTC this summer. She will prepare an annotated bibliography on the effects of waves on aquatic plants.

Call for Action - UMRS Ecosystem Management

Ken Lubinski reported on the UMRCC Call for Action proposal. The proposal calls for development of a plan and institutional framework for implementing ecosystem management on the UMRS. The draft has been endorsed by the UMRCC executive committee. UMRCC members participating in the ad hoc committee on this subject will meet next week in Moline to discuss the next steps in promoting the concept.

Response to 1993 Flood

Bill Bertrand asked what changes in EMTC and field station activities have been made or are being considered in response to the present flood. Ken Lubinski said that the field stations are modifying their sampling as necessary to accommodate flood conditions. In Pool 13 and above, the field stations are continuing their sampling in close to routine fashion. In the lower pools and on the Illinois, some changes are being made in close coordination with EMTC component specialists. Changes are being made on a station-by-station basis. John Barko reported that EMTC staff are tracking spatial and temporal changes in water quality and phytoplankton in Lake Onalaska and Pool 8. Field work on the Islands Study has been postponed due to high water. Russ Gent said that the Pool 13 vegetation monitoring is being modified.

Team members discussed flood effects and opportunities for monitoring. Gordon Farabee recommended that a conference or workshop be held in late 1994 or 1995 where presentations could be made on the subject of the effects of the 1993 flood.

Next Analysis Team Meeting

Team members agreed that the FY94 Annual Work Plan has been thoroughly discussed, and that with the recommended modifications, the Work Plan should be acceptable. The fall EMPCC/UMRBA meeting is scheduled for November 15-17, so team members agreed tentatively to hold the next Analysis Team meeting October 26-27 in the Quad Cities.

A pre-meeting conference call will be held October 5 at 9 A.M. to discuss the need for a meeting and to develop an agenda if necessary.

The meeting adjourned at 11:55.

Respectfully submitted,

Dan Wilcox

Attendance List
 LTRMP Analysis Team Meeting
 July 6-7, 1993 Bettendorf, Iowa

<u>Name</u>	<u>Agency, Location</u>	<u>Telephone Number</u>
Jon Duyvejonck	USFWS Rock Island	309-793-5800
John Barko	USCOE-WES / EMTc	608-783-7550
Gordon Farabee	Missouri Dept. Cons.	314-751-4115
Russ Gent	Iowa DNR	319-872-5495
John Wetzel	Wisconsin DNR, LaCrosse	608-785-9994
Ken Barr	USCOE Rock Island	308-794-5349
Ken Lubinski	USFWS EMTc	608-783-7550
Joe Jordan	USCOE Rock Island	309-794-5697
Jerry Skalak	USCOE Rock Island	309-794-5605
Don Williams	USCOE NCD	312-886-5470
Robert Delaney	USFWS EMTc	608-783-7550
David Soballe	USFWS EMTc	608-783-7550
Bill Bertrand	Illinois Dept. Cons.	309-582-5611
Pam Thiel	USFWS Winona FAO	507-452-4390
Doug Blodgett	Illinois NHS	309-543-6000
Linda Leake	USFWS EMTc	608-783-7550
Tim Schlagenhaft	Minnesota DNR Lake City	612-345-3365
Tom Boland	Iowa DNR Bellevue	319-872-4976
Dan Wilcox	USCOE St. Paul / EMTc	612-220-0276