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Barry.rld

DRAFT

Long Term Resource Monitoring Program
Analysis Team Meeting Minutes
Tuesday, October 26, 1993
Bettendorf, Iowa

1. Welcome and Introductions (Bill Bertrand)

2. Approval of Previous Meeting Minutes (Bill Bertrand)

Amend reference to forest studies to include COE efforts (Gordon Farabee)

Minutes approved as amended.

3. Chairmans Report (Bill Bertrand)

A. EMP-CC Meeting

Bill Donels attended EMP-CC gave A-Team report

B. Other

Robert Delaney states support resulted in receipt of \$179K for water quality equipment

4. Center Directors Report (Robert Delaney)

A. National Biological Survey Status

- Bob Delaney met on Dickey's visit. Went very well. No official feedback. Information on ecosystem management, how would COE approach for UMRS?
- North Central Divison letter of intent to send "initial" funds of \$5,109.
- Now Annual Work Plan (AWP) new funds will do supplement to AWP
- Potential bold \$ will OOH and S/S OF \$1.4 M
- John Wetzel--Can we carry some of \$ into future to handle contingencies?
- Robert Delaney--intent is to expend, but state cooperation could be used.
- want to avoid getting over committed, given inflation and equipment maintenance with extra funds.

B Overhead reduction: FY 1993 got 1.3 M over what's on AWP

FWS	EMTC	38%	= \$786
Pass thru		5.26	= \$112
NBS	EMTC	19%	= \$393
-		5%	= \$107
Extra \$	Savings		= \$398 K available for 94
(Robert Delaney) If LTRMP stays in FWS overhead to "0"			
Savings could be \$898 K if stay in FWS			

C. Over target:

- D-1 Equipment Replacement
- It's agreed should keep control of funds for this
- D-2 Sediment Transport
- Develop SOW
- Key Need
- All contingent on this
- D-2 Pl 25 water level study (Dorrls, Ill Prop)
- D-3 Floodplain trophic level analysis
- D-4 Landscape analysis - system scale
- D-5 Wildlife amend component
- Bias for D-1, D-2, D-3

D. Overtarget categories - RLD Graphic

- LTRMP Monitoring (Graphic)
- LTRMP Navigation (Graphic)
- HREP Studies (Graphic)
- Correct Ill Aef to Pharrs Island to Missouri

Discussion: Peoria and Chautauqua \$ is NCR not LMS

- NBS (Robert Delaney) Slides (get hardcopy) General Background
- Pool 25 Proposal (Bill Donels)
- Problems with implementing Pool 25 control point HREP. Several years to complete. Bill recommends separate study.
- B Donels: 2-year project (difficult) Ret. Pool 9 and 19 "water regulation constraints." Try to use a proactive approach on potential benefits. November study looking at (+) 25. NECC discussion considering structural models to produce F&W benefits. Also consider watersheds levee district, buy-outs, and Ecosystem Management Plans Proto.
- Consider as LTRM project. Include all of our interests, use benefits approach.
- ID Management benefits in report.
- Use as potential Genes Document to COE
 - * Proposed Pool 25 water level report includes November flood sup buy-outs, floodplain, water shed, and UMRCC Ecosystem concept.
- initiate in FY 1994 \$?
- Wisconsin: Jerry Sk-concern on Topt resolution potential for nesting of technologies
- BD Opportunity to evaluate elevation scale.
- Ken Borre-Problem as realestate interest and elevation
- Don Williams-Tom by given COE interest in ecosystem
- Jerry Sk-Balance \$ HREPS currently planned for Pool 25
- Bill D Batch Town only one in design
- 6 state 3 wild refuges in 25
- several creeps
- Primary input from Pool 24
- RLD-Bring in SCS and WGS wi watershed view
- Bill D-will be 1st ced 25 for improvement

- John B - Internal Paradisms- resources are limited by habitat or energy flow. This could be a perfect area to tie with these projects-link these with this study.
- Sequence:
 - (1) Report on background Scoping
 - (2) Hypotheses occupations
 - (3) I.D. data requirements
 - (4) Spatially potentially significant
- fit in trophic and sediment work
- Chuck should look at more than just the control point.
- RLD-Bring this proposal forward to Eros team.
- Bill D-Object is to mimic natural hydrograph in the context of navigation maintenance
- Tim Sch-Possible bring concept of natural, low level hydrograph, and object to extrapolate beyond Pool 25 to other reaches of the river.
- Bill D-Address potential for pool shutdown and drawdown navigation industry typically suggests this use for this type of closure
- John W/JB-Recommend EMTC develop SOW in cooperation
- JB-are an aggressive scoping implementation approval use as a classical planning approach.
- Bill B/JR-Recommend that EMTC addresses in supplement to AWP
- Tim Shl-SOW should include variety of efforts. Tie in future scenarios, water level impacts (historic)

* Potential for bringing in Planner to coordinate these efforts

- Barry Drazkowski/Bill Donels--Assume effort exceeds existing EMTC staff capabilities. Expect EMTC will have to significantly reach out and bring in assistance in both SOW development, but also implementation.

5. Resource Trend Analysis (Ken Lubinski)

A. Improved sampling-Going well credit to team leaders

- * Bugs-creating STAT round site maps
- getting to the sites
- Solutions-case by case for now
- comprehensive map changes
- winter water quality and fish meeting
- Very positively received
- Credit to Team leaders

B. Trend Data Availability

- Historic summary of problems
- Last winter brought in FS involvement
- All opportunities to (For data correction) to field stations by November 20
- Goal-Correct remain data during winter for analysis and report writing prior to next summer
- Change in data flow process

- Contractor entry--Field station corrections-SAS analysis-ORACLE Archive

Discussion: Don Williams-Error correction-during analysis modify the control set.

C. Flood Impacts/Observations/Opportunities

- Monitoring designed to assess flood effects
- Interrupted at lower FS
- Several opportunities-floodplain sampling, fish growth, diet
- Observation:
 - YOU: Largemouth bass, northern pike, Burbot, Black sucker, Skipjack, herring
- Fish distributions
- Bathymetric changes
- Low dissolved oxygen in cornfields
- Discussion:
 - Chuck Theiling--LTRM not set up to respond to environmental changes.
 - Jerry Skalak-How many fixed points were maintained WQ (SOP) some lower frequency, some redistribution.
 - Tim Schagenhaft--Bathymetry many changes in river
 - SOP-Both will continue in 1994
 - John Barko-Flood related efforts-"Hand Out" Work specific to Lake Onalaska
 - Bill Bertrand--Integrating always stated Lock and Dam 19 presented
 - Black sucker and Skipjack upstream, accounted for decline in upper river. This year did get reproduction when da, was ineffective barrier

6. Problem Analysis (John Barko)

A. EMTC Water Quality (WQ) Lab--Update

- Have received 179 K
- WQ is really analytical facility to support all program elements.
- Will assume all LTRM analytical abilities, caution will take several years to get system worked out.
- Will have about 5-1/2 M equipment with life expectancy 10 years, will have maintenance cost similar to computer
- Disams will be able to accept problem analysis samples this spring. Priority on trend
- Tie with WES several for LTRMP. Other efforts maintained.
- Will be able to provide support to November studies
- Dave Soballe--Get-up with minimum of personnel. Automate or mach as possible.
- Will have lab supervisor. Dave Soballe and Mark Depoy
- Will have lab supervisor. SOB
- Ken Barr--Sediment analysis capability?
- John Barko--Yes would have capability
- Tom Boland--Add?
- John Barko--95% complete maintenance update
- Chuck Theiling--Sort of Eau Galle data?

- SOB-Data are accumulating. Students digitizing. No applications to load into data base.

B. Pollander Lake-Paddle Fish Survey (HREP) (Tim Schlagenhaft)

- Concern-effect of project on paddlefish
- Paddlefish good representative species of floodplain
- Interest in funding study, telemetry study where population critical habitats ID? Impacts to HREPS
- PamTheil--Data gap for paddlefish. Proposed partnership for funding.
- Gordon Farabee--General or specific com fish concerns.
- Tim Schlagenhaft-Not sure. Very little info on spp.
- Chuck Theiling- Potential for RC's running HEC model on edy or island.
- Bill Donels--should the NEPA process be used to ID impacts by the district?
- Ken Lubinski--Where from here?
- Tim Schlagenhaft-Worked up SOW looking for cost sharing \$.
- Pam-Potential impact to HREP implementation using phased approach. No pestives that might impact paddlefish.
- RDL-Request from Buffington for studies that prevent listing of spp. Could recommend.
- Avenue to cost to Ecosystem study, look ar syst pp.
- EMTC could provide Jim Milligan info to formulate NBS proposal for funding.

C. HREP Study Update--EMTC (Barko)

- Slides and explanation
- Finger Lakes and Islands studies
- Don Williams-How important is variable -temp to fish? How sensitive?
- Pam and BB-velocity and dissolved oxygen are key variables
- Gordon-? Effects of currents on downstream areas?
- JB-Loss flows, minimal effects
- Lake Onalaska Islands:
- HREP Summaries-Doug B, Chuck,
- Doug-Many flooded out
- Chuck-Sampling opportunities, post-flood analysis.
- LD-Selection of overtarget project. How we allocate
- COE does not think overtarget but is long enough
- Correct lot one item investments.
- Other items are multi-year investments
- Probably consider mix of effort types
- Intent is to get overhead reduced to 0%. Confident this will occur.
- John Barko-agrees-handout of NBS proposal
- John Wentzel Should we also look at Pool in Upper river in context of Pool 25 study.

Adjourn 4:30 p.m.

Long Term Resource Monitoring Program
Analysis Team Meeting Draft Minutes

Wednesday, October 27, 1993

Day Two:

Gordon Farabee:

No living a GIS spec. Potential for linking up. EMTC Issue-landscape classifications summaries (system level). Pike to fly up to EMTC in December to meet with staff.

7. Information Systems Support (Hildrum)

A. Operating Plan Revision--Goal 4

- Operating Plan products based on info types in AWP (1994)
- Reports where IM is going for support
- Receive contract within next week or so
- Simple changes

B. Other:

- Possible 60 Reports-Meet or beat that in 1994. Expect to meet or beat based on what is currently in que.
- Require timely meeting product deadlines
- Ginny Stefanez & Ron Rogers--installing hardware field stations
- Appreciated field station support in fixing data problems.

8. Upper Mississippi River system Sediment Transport Processes and Sedimentation (Wilcox) Reference Scope of Work.

- Eco processes driven by sed processes Gaugual??
- Physical characteristics of habitat driven by geomorphic processes
- Also relate to habitat restoration and Nov
- Summary of SOW
- Need to decide if we want to consider bedload.
- It drives landscape changes. But is difficult to study
- Recommendation: Include in AWP
 - (1) 1994 start
 - (2) Identify agency partnership
- This relates to lansscapes changes both qualitative and quantitative
- Also habitat in quality and quantity
- Habitat vs energy transfer (trophic study)
- Consider all three

Discussion:

- Tim Schlagenhaft--Can we predict what river will look like as a result?
- John Barko--Come out of studies

- Minnesota would support. Needed to define what the river is going to look like.
- Time frame - no dollar limit 10 years - \$2-3 million/year. Models after 5 years.
- Funds If dollars not available than Program direction would have to change.
- Critical variables could be consolidated to reduce costs.
- Ken Barr--Could system be stratified?
- John Barko--Use land cover/use data to stratify cooled statify and collect sediment info
- Richard Astrack--Should not consider November, will do all items listed in SOW. No detailed SOW to accomplish all efforts. Indicates above data could be used.
- Kem Barr--Issue of role of applicaiton
- A team and sediment work group meeting
- Spatial data are key where November/EMTC needs to discuss.
- Also modeling ____ group is key to identify information areas
- Don Williams--SOW mostly data gathering than on Pool 8 GIS predictive effort - leap of faith
- John Barko--Focus on information needs; worry about modeling tasks in future
- Agree task 9 is idealistic. Could involve COE hydraulic models.
- Chuck T--Potential for upland consideration?
- John Barko--Would use existing landcover and TM data.
- Ken Lubinski--Task 3 could relate to uplands
- Chuck Theiling--Could automate tributary sed discharge sampling.
- John Barko--Agree. Could reacceded rapid deal.
- Tim Schlagenhaft--What review and detailed SOW cost?
- JR--?Is who would do work. Workshop to IL coop Don't know have much money. Could be done this FY.
- AWP (24)-Workshop little survey coops money support. This is lower cost. higher cost in out year.
- Gordon--Pool 25 could be good prototype pool. How do you extrapolate to system?
- John Barko--Use soils, landuse discharge
- Tom B--Study only supports efforts. Need to define about what the river will look like. Concern over time and cost.
- Need to look at current information. What can we get from that? Select pilot tribs. Focus on them
- Potential for streamlining. Try looking backwards for answers.
- Need to have information in short term.
- Select features of SOW that can be accomplished quickly.
- Chuck Theiling--HREP's need to be monitoring
- Ken Lubinski--Some pilots on tributaries.
- Barry Drazkowski-- Much of the data may already be available...several pools have signficants of historic information. Maybe able to meet the needs with combination of Pool 25 and existing data.
- Robert Delaney--Many of items in SOW are site speciric studies to validat predictions but predictions could be met withother existing data. Equilibrium could be determined and predictions made based on existing data. Only managemtn actions would require additional studies.
- Bill Bertrand-Workshop will sort out needs

- Don Williams--Highlights need to evaluate the effects of the flood
- Tim Schlagenhaft--Support and highlights need to have information for future management. Thinks this is the most important effort we could under take.
- John Wetzel--Must be systematic approach. Select right parameters. Can not limit to one pool.
- Bill Bertrand--Consenses that team supports 1st year develop included in AWP supplement.
- Overtarget - (Robert Delaney)

Describe current over target list (AWP) \$660,000

- need \$1.4 in supplemental (based on COE ltr).

Suggest: Equipment repair \$50K (35 to interface for water/oxygen)
leaves 18K for remainder of year

• Photos - 4135	Subtotal	185K
• Computer Assistance - 60K		225K
• User Interfaces - 50K		275K
• Sediment - 52K		335K
• PL 25 proto - 51K		398K

- T&M: Consider Wildlife
- John Wetzel--Wildlife, migratory birds, marsh amphibians;
- amendment to COE, consider in November studies
- within a year a detailed definition of wildlife needs. Focus on migratory birdsf by first of year.
- Barry Draskowski--many current systems, habitat, landscape efforts directly related to wildlife.
- John Wetzel--True, but some species do need more study.
- Ask for funding from COE (Rick as package)
- John Barko--Some over targets are one time efforts.
- as long term commitment.
- Bill Bertrand--Need to identify potential commitmentsf, so we can decide if it is something we want to commit to
- recognize difference in over target items
- Ken Lubinski--Also prepare mussel surveys on system scale at a monitoring pool, 50-60K for one year.
- need to finalize. Submit 398 to COE, incread amount 1-3 developed over next three years.
- Pam Theil--Need to consider, in letter to COE, that this is current priority list.
- Tom Boland--Consider expectation currently being developed from river managers.

Bill Bertrand--Motion for support to EMTC proposal. First by Tom Boland,
Second by Gordon Farabee. Voted & Support.

- Doug Blodgett--Field Station considering expanding Corp networks. Could that be over target item?
- Upgrade 15-2-K for networks
- Chuck Theiling--Becoming a requisite to have a network, have not been able to adjust budgtet to reflect additional cost-network and water quality.

- Norman Hildrum--Currently not in AWP
- Robert Delaney--Can look at increased FS costs.
- 50K is not enough to meet needsk.
- Can last years funding meet current needs?
- "We make this years budget work."
- Doug Blodgett--We met budget constraints from last year.
- But have realized over target needs.
- Bring up at December Field Station meeting.
- Use existing equipment funds with network
- Robert Delaney--Valid point, funding from 93 will be exhausted this year with network.
- Chuck Theiling--Should consider increased cost at Field Stations, just as at EMTC, potential 5%/yr.
- Robert Delaney--Agreed.

9. Navigation Studies Coordination (Ken Lubinski)

A. Work groups participation (Ken Lubinski, Steve Gutreuter, Linda Leake)

- Adult fish and early lifestyle - 56
- Modeling (Leake)
- Roles, Communication, Continuity

B. NERC:

- Mitigation Issues, Edpoints and spatial ectrap

C. Issue: received data, contract scope of work.

D. Other Points: consideration of no navigation alternative

- beyond EMTC rate
- Identify data users
- John Barko--Ann Kimber completed report on wave effects on vegetation. Report next month. Work group will be driven by modeling work group output.

10. LTRMP Expection/Status (Drazkowski)

- Summary with draft by end of December or/for next A-Team discussion.
- Williams--COE objectives different from current objective or effort.
- will think about COE needs, probably highest need isd coordination of navigation efforts
- Gordon--each of 5 states will hold fisheries, water quality meeting to prioritize state level prioity (if these states will come together (late November) to generate UMRCC expectation list, Fish (gordon) Water Quality (Buchanan), Wildlife (Gulden).
- Problem of developing one list from three. Delaney will work with the A-Team to prioritize water quality, fish and wildle into one list.
- Tom Boland--Reduce list from 111 items to 15 priorities.
- Value to A-Team is guideline based on management need

- Should reflect Operating Plann
- Keep in context of mandates
- Robert Delaney--Reality check on Program direction

12. State and Federal Reports (Bill Bertrand)

Floods impacted state monitoring Mississippi and Rock Rivers.
Interesting findings with diversity of species.

- Considering potential closure of mussel harvest on Illinois River. Not enough data for Mississippi River
- Result of zebra mussel impacts
- Potential for 1994 may extned to Mississippi
- (SRS) Don't know impact on numbers of fish, but more spp.

B. Feel Comfortable with Program direction (Tom Boland)

- Ecosystem concept if amended, need to define. Excited about move in that direction should give ansers on how to manage sgs.
- Good with sampling changes (SRS)
- Chuck Theiling--Still concerned with SBS predictions--year to year changes.
- Doug Blodgett--Jury still out. Fewer numbers (flood) but more species.

C. Hired Tony Spicci, GIS Specialist (Gordon Farabee)

- He will work under different _____ for support. Work on quantifying aquatic habitat (landscape) on Missouri. Will bring up to EMTC.
- Flew Mississippi and Missouri during flood. Slides and video present at St. Louis Flood meeting and used at water quality briefing.
- Working on levee repair with COE
- Lots of calls on dredging in flood response
- Jenny Rundell married, now Jenny Frazier
- Jerry Skalak--May want to stop GIS person at NCR District project relavent.

D. (Wetzel)

- Support Program direction, especially ecosystem perspective
- Non-game conference, important needs on UMRS
- Working on migratory bird needs on River
- Also emergency dredging needs, flood sediment & navigation
- Finger nail clams returned to seasonal areas, Pool 7, 9, and 8
- Follow what happens with zebra impact on Lake Pepin and potential for scaup use. + 20 fish small bass study in pool 7, telemetry all left river and retruned.
- Russ Gent--Also noted in Pool 13 up to 1000 per ponar.
- Pam Theil--Carl Korschgen is getting mixed response.

E. On River during habitat reponse to flood (Tim Schlagenhaft)

- Very dramatic changes in bathymetry.
- Increase in mussel harvest, 300% _____% in harvest
- To get permit had to come up last fall and establish residency
- All 3 recycle about 180,000 pounds

F. Continued Resolution till Monday (Don Williams)

- Reorganization continued
- Int discussion, hopefully can start beneficial efforts
- Headquarters getting cesssner, IWR recommends similar systemic efforts
- Potential COE post flood money. Meeting Thursday to discuss these efforts. Potential aerial photo support.

G. Acknowledge Robert Delaney's efforts to reduce Overhead (Pam Theil)

- Ad Hoc Mussel meeting November 29 at Rock Island Field Office
- Should we close the Illinois River to mussel harvest?
- Continue to solicitate paddle fish funding. Mentioned EMTc partnership.
- Mollie Beatty present, ecosystem main message there in her present overall discussion is EPO/biod in a very response and mission, budgeting on ecosystem basin.

H. Flood impact on reconstruction and EMP budget. (Skalak)

- NCR still being sorted out. Discuss at EMT-CC fiscal performance.
- Team may want to lobby EMP-CC for
- Ken Lubinski--Definition of ecosystem management. In "call to action document."
- Focus on Large Rivers Conference-ecosystem integrity items
- McKnight Foundation, state of the river meeting. Bring habline together in March 1994 to define needs.

Next meeting last week of January 26/27. Conference call for agenda on January 4.

- Look at FY94, overtarget discussion, expectation
- location at Bettendorf Holiday Inn.

Adjourn 11:30 a.m.

Analysis Team Meeting Attendance
10/26/93

Robert L. Delaney	EMTC	608-783-7550
John W. Barko	EMTC	608-783-7550
David M. Soballe	EMTC	608-783-7550
Richard Astrack	COE, St. Louis	314-331-8491
Russ Gent	Iowa DNR	319-872-5495
Gordon Farabee	Missouri DOC	314-751-4115
Tom Boland	Iowa DNR	319-872-4976
Ken Lubinski	EMTC	608-783-7550
Chuck Theiling	INHS-Pool 26	618-259-9027
Jerry Skalak	COE, Rock Island	309-794-5605
John Wetzel	Wisconsin DNR	608-785-9994
Joe Jordan	COE, Rock Island	309-749-5697
Ken Barr	COE, Rock Island	309-749-5349
Bill Donels	Illinois DOC	217-782-3715
Tim Schlagenhaft	Minnesota DNR	612-345-3365
Walt Popp	Minnesota DNR	612-345-3331
Bill Bertrand	Illinois DOC	309-582-5611
Doug Blodgett	INHS, Havana	309-543-6000
Pam Thiel	FWS, Fisheries Research	507-452-4390
Norman Hildrum	EMTC	608-783-7550
Barry Draskowski	EMTC	608-783-7550
Don Williams	COE, NCD	312-886-5470

Long Term Resource Monitoring Program
Analysis Team Meeting Minutes

October 26-27, 1993
Bettendorf, Iowa

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at noon on October 26, 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 July 6, 1993 Analysis Team Meeting were reviewed. Gordon Farabee recommended amending the reference to floodplain forest studies to include the efforts of the Open River field station, and the minutes were approved as amended.

Chairman's Report

A. EMP-CC Meeting

Bill Donels attended EMP-CC and gave the A-Team report.

B. Other

Bob Delaney discussed the importance of the States' support in LTRMP's receipt of \$179,000 for the over-target water quality request.

Center Director's Report

Bob Delaney reported that Acting Assistant Secretary of the Army for Civil Works, Dr. Ed Dickey, recently visited the Environmental Management Technical Center (EMTC). During his visit, discussions and comments on ecosystem management were addressed, as well as questions on how the Corps should approach the Upper Mississippi River System (UMRS).

Bob said the North Central Division letter of intent to send "initial" funds of \$5,109,000 has been received. The EMTC will prepare a supplement to the FY 1994 Annual Work Plan (AWP) for programming of funds not currently addressed in the AWP. The potential exists for an additional \$1.4 million from overhead reduction and the return of savings and slippage. Bob emphasized the intent to avoid overcommitment of recurring cost, given inflation and future equipment and maintenance schedules.

Pool 25 Proposal

Bill Donels said one problem with implementing the Pool 25 change in the control point project as a Habitat Rehabilitation and Enhancement Project (HREP) is the time required to complete the planning process. Bill recommended a separate study to evaluate, at a minimum, ecological benefits of moving the Pool 25 control point from the center pool to the dam. Bill said the logistics of implementing a 2-year planning project are assumed to be difficult, but completing it in a timely manner is important. Referring to the Pools 9 and 19 "water regulation constraints," Bill suggested using a proactive approach in identifying potential benefits. Bill also thought the proposal would be compatible or consistent with the Navigation Environmental Coordinating Committee's (NECC) consideration of structural modifications as viable fish and wildlife measures to consider at Lock and Dam 25. Finally, Bill wanted to consider watersheds, levee districts, buy-outs, and a general ecosystem management approach in developing the study. Bill said identifying management options and benefits would be important in the study. Bill recommended that the study be considered an LTRMP project, since the study concept would fit nicely under the Goal 3 component of the Operating Plan. Bill also recommended FY 1994 implementation, with funding sources identified as the proposal received support.

Jerry Skalak expressed concern regarding the ability to make easement and real estate acquisition determinations based on the resolution of existing topographic data. Skalak also thought this could be a good opportunity to test new elevation determination technologies. This type of project would be of significant interest to the Corps; Don Williams thought the proposal was timely given the Corps' interest in an ecosystem approach to River management. Jerry Skalak recommended relating the existing Pool 25 HREPs in this study. Bill Donels stated that the Batchtown project contains six state management areas, three wildlife refuges, and several small tributaries; it is the only one in design phase. Bob Delaney recommended coordinating the project with the SCS and U.S. Geological Survey to incorporate the watershed perspective. John Barko thought this is an opportunity to test the paradigm (integral to the ecosystem management concept) that resources are limited by habitat or energy flow. He recommended the following study sequence:

1. Report on available background information (i.e., Scoping)
2. Define hypotheses and assumptions
3. Identify data requirements
4. Identify spatial significance
5. Tie into the trophic and sediment efforts

Chuck Theiling thought the project should address a broader range of management options than just moving the control point. Bob Delaney suggested forwarding this proposal to the EROS team. Tim Schlagenhaft suggesting also looking at the concept of natural, low-level hydrography and including the objective of extrapolating beyond Pool 25 to other reaches of the river.

Flood-Related Efforts

John Barko gave a detailed presentation on specific flood effects efforts conducted in Lake Onalaska.

Bill Bertrand noted that Lock and Dam 19 is recognized as an impediment to the upstream movement of ~~black~~ ^{Blue} suckers and skipjack, and accounted for their reproductive decline in the Upper River. This year, reproduction was noted in both species, indicating that the high water negated the barrier effect of Lock and Dam 19.

*Correction
Jan. 1994*

Problem Analysis

John Barko said \$179,000 was received from the Corps to expand in-house analytical capabilities in the EMTC Water Quality Lab. The facility is now ready to support all Program elements, not just the water quality component. The EMTC will assume all LTRMP analytical functions, although we must be conservative in expanding because several years will be required to get the system worked out and functioning efficiently. John said the EMTC will have about \$500,000 in equipment with a life expectancy of 10 years, with some maintenance costs similar to those realized in maintaining the automation equipment. John said the EMTC will be able to start processing problem analysis samples this spring, with top priority placed on trend analysis samples. John also reported that while analytical ties with WES are terminated for LTRMP, joint investigative efforts are being maintained. John said they will be able to provide support to the November studies. Dave Soballe stated that getting operational as quickly as possible with a minimum of personnel is important; the strategy for achieving this is to automate or mechanize as much of the process as possible. Lab supervisors are Dave Soballe and Mark Depoy. Ken Barr asked whether a sediment analysis capability exists, to which John Barko replied that there will be that capability. Tom Boland questions whether that would be added. Chuck Theiling asked about the status of the water quality trend data being analyzed at Eau Galle, to which Dave Soballe replied that the data are accumulating and are being entered into the computer by students. At this time, no applications exist to load the data into the data base.

Pollander Lake Paddlefish Survey (HREP)

Correction Jan. 1994

Tim Schlagenhaft stated that the survey is motivated by concerns that the project could have a negative effect on the paddlefish population. Tim suggested this could be a project funded or co-funded by LTRMP, and it could include critical habitat identification, telemetry work, or population assessment. Pam Thiel stated a significant data gap for paddlefish exists and proposed a potential funding partnership. Chuck Theiling suggested examining the potential of running HEC models on island and eddies to evaluate habitat effects. Barry Drazkowski suggested that the NEPA process would require evaluating this impact, especially if it is being raised by the resource agency. The Corps would have responsibility for addressing the potential problem. Pam Thiel suggested using a phased implementation approach to prevent

Long Term Resource Monitoring Program
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October 27, 1993
Day Two

Gordon Farabee stated that Missouri is hiring a Geographic Information Systems (GIS) specialist. They are interested in the potential for coordinating GIS activities with the EMTC; the priority effort is addressing the issue of landscape classifications and type summaries at the system scale. They would like to fly up to the EMTC in December to meet with the GIS staff.

Information Systems Support (ISSD)

Norm Hildrum said simple revisions to Goal 4 of the Operating Plan are being made to reflect changes in the future direction of ISSD. Norm would like any comments within the next two weeks.

Norm said the EMTC published 60 Reports, and he expects to meet or exceed that in 1994. He also reported that Virginia Stefanez and Ron Rogers are installing hardware at field stations. Norm indicated that he appreciated the field stations' support in reviewing and correcting trend data.

Upper Mississippi River System Sediment Transport Processes and Sedimentation

John Barko discussed the sediment transport scope of work developed by Dan Wilcox. The effort is based on the assumption that all riverine ecological processes are driven by sediment processes. Bob Gaugush will coordinate this effort at the EMTC, which will attempt to relate these physical processes to the information requirements of navigation studies and habitat restoration projects. One issue that must be resolved in defining the scope of this effort is the consideration of bedload. This consideration is critical in evaluating landscape changes but is very difficult to evaluate. John recommended including the effort in the supplement to the FY 1994 AWP, with identification of agency involvement. John also discussed the Pool 25 pilot project, which relates to evaluating landscape and habitat changes in both a qualitative and quantitative context. It also involves addressing the issue of trophic dynamics or habitat versus energy transfer hypothesis.

Tim Schlagenhaft asked if we will be able to ^{Forecast}~~predict~~ how the River will appear as a result of this effort. John replied this information would come from the studies. Tim said Minnesota would support the efforts. He said defining how the River will appear in the future is important. John said the time frame for total implementation could approach 10 years, costing about \$1 million/year. Models would be available after five years. Costs could be reduced if critical variables were consolidated. Ken Barr asked if the system could be stratified to reduce costs. John thought land cover/use data could be used to stratify the system and collect sediment data. Richard Astrack stated that we should not expect navigation studies to fund items listed in the SOW. No detailed Scopes of Work exist that define how to accomplish the ^{Correction}

2. Aerial Photography - \$135,000
3. Computer Assistance - \$60,000
4. User Interfaces - \$50,000
5. Sediment - \$52,000
6. Pool 25 Pilot - \$51,000

Total - \$398,000

Tom Boland recommended that the EMTC consider some support to wildlife. John Wetzel suggested that the Corps consider wildlife, migratory birds, and amphibians in the navigation studies. Tom also thought that within a year a detailed definition of wildlife needs will be available from the wildlife management community. This year the focus is on migratory birds. Barry Drazkowski commented that many of the current system, habitat, and landscape efforts are directly related to wildlife, and although not formally implemented as a component, relevant information is being developed. John Wetzel agreed but thought some species need more study. John Barko wanted to clarify that some over-target items are one-time efforts, whereas others are long-term commitments. Bill Bertrand stated we need to identify potential commitments so we can evaluate how valid they are and also recognize the difference in the over-target items. Ken Lubinski proposed mussel surveys at monitoring pools for a one-year cost of \$50,000 to \$60,000. Bob Delaney stated we need to finalize our effort and submit a \$398,000 request to the Corps. A request for the potential increased amount will be developed over the next three months. Tom Boland stated that the EMTC should consider the input being prepared in the river management communities as LTRMP product expectation efforts. Bill Bertrand recommended a motion to support the EMTC proposal as presented by Bob Delaney. Tom Boland moved to accept the motion, and Gordon Farabee seconded the motion. Doug Blodgett suggested considering in the new over-target list the installation of computer networks at the field stations. Chuck Theiling followed, with the comment that the network is becoming a requisite for communication and operation. The cost is approximately \$15,000 to \$20,000 for networks. Bob Delaney asked if the field stations can make last year's budget work this year, to which Doug Blodgett responded, stating the field stations met last year's budget constraints but continue to have very real over-target needs. The December Field Station Meeting will be a good forum for discussing additional needs and the applicability of including them in the new over-target list. The field stations could use existing equipment funds to purchase the networks.

Navigation Studies Coordination

A. Work group participation

- Adult fish and early lifestyle - Steve Gutreuter
- Modeling and Data Management - Linda Leake

Gordon Farabee said the State of Missouri has hired Tony Spicci, GIS Specialist. His initial and primary objective is to quantify and define aquatic habitats (landscapes) on the Missouri River. Gordon stated he hopes to bring Spicci to the EMTC to coordinate their activities. Gordon flew flood reconnaissance of the Mississippi and Missouri Rivers during the flood, and thus he has slides and video coverage from the flight, which were used in a presentation at the St. Louis Flood meeting and at the water quality briefing. The State is working on levee repair with the Corps.

There were many calls on dredging as flood response. Jenny Rundell was recently married and is now going by Jenny Frazier.

Wisconsin (John Wetzel)

- John added his support for the current Program direction, especially as related to developing an ecosystem perspective.
- The nongame species conference was held in early September. John stated it is important to consider these needs for the UMRS.
- He stated he is involved with developing the migratory bird needs for the River.
- The Corps has been conducting emergency dredging as a result of the flood.
- Fingernail clams seem to have returned to some areas, including Pools 7, 8, and 9.
- The Wisconsin DNR used radiotelemetry to track 20 smallmouth bass in Pool 7. All the fish left the River for tributaries and returned.

Minnesota (Tim Schlagenhaft)

- Tim stated he was on the River during the flood and noted very dramatic changes in bathymetry.
- Minnesota has noted an increase in mussel harvesting. The number of permits is up by 300.0%

Correction Jan. 1994

Corps of Engineers (Don Williams)

- The Corps is operating under a Continuing Resolution until Monday.
- The Washington Headquarters seems to be getting greener.

Analysis Team Meeting Attendance
10/26/93

Robert L. Delaney	EMTC	608-783-7550
John W. Barko	EMTC	608-783-7550
David M. Soballe	EMTC	608-783-7550
Richard Astrack	COE, St. Louis	314-331-8491
Russ Gent	Iowa DNR	319-872-5495
Gordon Farabee	Missouri DOC	314-751-4115
Tom Boland	Iowa DNR	319-872-4976
Ken Lubinski	EMTC	608-783-7550
Chuck Theiling	INHS-Pool 26	618-259-9027
Jerry Skalak	COE, Rock Island	309-794-5605
John Wetzel	Wisconsin DNR	608-785-9994
Joe Jordan	COE, Rock Island	309-749-5697
Ken Barr	COE, Rock Island	309-749-5349
Bill Donels	Illinois DOC	217-782-3715
Tim Schlagenhaft	Minnesota DNR	612-345-3365
Walt Popp	Minnesota DNR	612-345-3331
Bill Bertrand	Illinois DOC	309-582-5611
Doug Blodgett	INHS, Havana	309-543-6000
Pam Thiel	FWS, Fisheries Research	507-452-4390
Norman Hildrum	EMTC	608-783-7550
Barry Drazkowski	EMTC	608-783-7550
Don Williams	COE, NCD	312-886-5470

Consolidated Input from the UMRCC Fish Technical Section

Problem Identification and Analysis - Navigation (Commercial and Recreational), Sedimentation, Water Level Fluctuations

- Evaluate Habitat Rehabilitation and Enhancement Projects (HREPs).
- Develop, modify and/or verify WHAG, AHAG, and HEP models for selected fish and wildlife species on the Upper Mississippi River System (UMRS).
- Evaluate the potential of expanding monitoring activities beyond the key pools (with the use of stratified random sampling).
- Quantify habitat loss and existing conditions.
- Define major factors causing changes in resource trends.
- Bathymetric and topographic mapping.
- Evaluate sedimentation rates and impacts.
- Evaluate impacts of floods and draughts on floodplain habitats (i.e., impact of lock and dam construction).
- Using a pre-settlement model, assess social and environmental cost associated with all activities on the UMR.
- Develop a comprehensive cost/benefit analysis of navigation, including environmental impacts.

Information Transfer - Publications, Data Access, GIS Data, etc.

- Develop a good set of base maps for UMRS (land-water, vegetation, development, bathymetry, habitat).
- Educate public on river issues and ecosystem management to help develop a common vision for the UMRS.
- Develop an information management and access system to entire data base, including products.
- Develop a management driven approach to define research priorities.

Resource Trend Analysis - Expand Spatial Scale and Add Components (Wildlife, Recreation, Bluffs, etc.)

- Continue to gather current and historical data to determine trends, impacts, and interrelationships (e.g., water quality, fish, vegetation, wildlife, invertebrates and others).
- Define the frequency and significance of resource changes (e.g., habitat, water quality, floodplain characteristics, etc.).

LTRM Priorities
Water Quality Section's Top 25

- Bathymetric and topographic mapping.**
- Evaluation of sedimentation rates & impacts.**
- Quantify cumulative habitat loss through development, diking and drainage, navigation & sedimentation.**
- Assess methods for evaluating impacts of floodplain; specifically the impact L&D construction had on 100-yr. flood stage....**
- Publication of available data sets, incl. spacial & trend data. ID contact person.**
- Prioritize data accessibility.**
- Develop good set of current base maps for the UMRS.**
- Develop on-line data access function, including dial-in & download functions.**
- Develop a status of the river publication.**
- Expand land cover data base to include UMR watersheds.**
- Monitor river resources to determine trends, impacts, & interrelationships.**
- Define changes in rel. abund. & distribution for UMRS species.**
- Gather & analyze current & historical data on hydrology, fisheries, vegetation, substrates, wildlife, water quality, etc. for UMRS.**
- Define how the distribution & abundance of habitats is changing.**
- How does the change in habitat distribution and abundance affect populations?***
- Use historical info. to describe effects of human-induced changes, & predict future conditions under various mgmt. scenarios.
- Conduct a public survey on their vision of the future river.
- Evaluate the current method of managing the river (multiple use) & determine use thresholds where uses conflict with one another.
- Document the spread and effects of zebra mussels.
- Component integration.
- Define spacial distribution & abundance of habitats.
- Define point sources & their impacts.
- Develop an info. mgmt. & access system to data collected.
- Develop report on the status of projects...
- Develop land cover data for the UMRS at a scale applicable to regulatory activities.

Bold = higher priority.

DRAFT

Summary of State/Federal Partners' Long Term Resource Monitoring Program Expectations and Needs, by Program Area.

Note: Each entry is a brief summary of responses received from the State/Federal partners. Numbers in parentheses are the number of times the response occurred. PIA numbers reference the tasks in the Problem Identification and Analysis Report's section on the top 20 priority investigations.

Problem Identification and Analysis - Navigation (Commercial and Recreational), Sedimentation, Water Level Fluctuations

- 3 * Evaluation of HREPS. (6) PIA 1.1 and 1.3.
- 2 * Quantify the cumulative effects of increasing recreational boating development and activities. Create a data base of recreation access sites. Create recreation use maps. Define ecological carrying capacity for this type of development. (4)
- 2 * Bathymetric and topographic mapping. (4) PIA 2.1 and 2.5
- 3 * Evaluation of sedimentation rates and impacts. (3) PIA 1.1 and 1.3
- 2 * Define major factors causing changes in resource trends. (2)
- 1 * Develop a management-driven approach to defining research priorities. (2)
- 1 * Provide support to the navigation studies as defined in the IPMP and the Midterm Evaluation. (2) PIA 2.5, 3.1, 3.3, 3.5, 3.7
- 2 * Quantify cumulative habitat loss through development, diking and drainage, navigation, and sedimentation.
- 1 * Measure effects of navigation on ice-covered backwaters during periods when critical habitats are limited.
- 1 * Analyze the loss rate and distribution of islands lost due to erosion throughout the UMRS.
- 2 * Assess methods for evaluating impacts of floodplain; specifically, the impact L&D construction had on the 100-year flood stage and on floodplain development and sedimentation.
- 1 * Develop a presettlement ecological model to assess the impact of development within the UMRS.
- * Using the presettlement model assess the social and environmental costs associated with all activities on the river.
- * Define point sources and their impacts.

Information Transfer - Publications, Data Access, GIS Data, etc.

- 1 * Publication of available data sets, including spatial data and trend data. The name and number of a contact person should be listed. (6)
- * Prioritize data accessibility. (6)

DRAFT

- * Develop land cover map for Odessa Complex in Pool 18.
- * Develop land cover data for the UMRS at a scale applicable to regulatory activities.
- * Provide metadata and metadata standards to District.
- * Develop coordination standards between the District and the EMTC.
- * Create floodplain elevation model.
- * Create water surface elevation model.
- * Create a predicted land cover map of Pools 1-10.

Resource Trend Analysis - Expand Spatial Scale and Add Components (Wildlife, Recreation, Bluffs, etc.)

- 3 * Wildlife monitoring activities. (6)
- 1 * Monitor river resources to determine trends, impacts, and interrelationships. (2)
- 2 * Expand monitoring efforts into leveed areas (Trempealeau Refuge, Spring Lake, Green Island, etc.). (2)
- 1 * Define the frequency and significance of resource changes.
- 1 * Define changes in relative abundance and distributions for UMRS species.
- 3 * Gather and analyze current and historical data on hydrology, fisheries, vegetation, substrates, wildlife, water quality, etc. for the UMRS.
- 3 * Create historical vegetation maps.
- 1 * Use historical information to describe effects of human-induced changes, and predict future conditions under various management scenarios.
- 1 * Design monitoring program to be sensitive to changes like the introduction of zebra mussels. Zebra mussel investigations should not be a priority.
- * Conduct a public survey on their vision of the future river.
- * Evaluate the current method of managing the river (multiple use) and determine use thresholds where uses conflict with one another.
- * Define population trends for flathead catfish, blue catfish, and channel catfish, including size distribution and catch rate.
- 1 * Develop population trend data on species identified by the states as "management emphasis species."
- * Develop population trend data on R&E species.
- * Develop population trend data on species that could become R&E.
- * Define statistically significant sampling methods for sport and commercial fishes.
- * Document the spread and effects of zebra mussels.
- * Maintain a reference herbarium.
- 1 * Develop a vegetation succession model from the vegetation data.
- * Conduct recreation use forecasts.
- * Conduct recreation conflicts assessments.
- * Develop a product awareness program to facilitate utilization and awareness of availability.

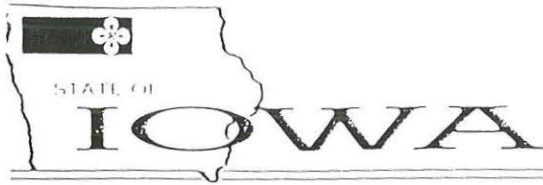
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Program Operation

- * Use the UMRCC technical section meetings to discuss management needs, which in turn could help define research priorities.
- 1 * Distribute River research. Spread the work around. Do not need to stay in key pools.
- 2 * Priority should be placed on support to the UMR Strategy for Improving Migratory Bird Management. The Refuge is willing to stimulate this involvement through cost-reimbursable activities.

Contracted Services: Digitizing, Photography, Equipment, Field Surveys

- * Assistance in conducting habitat literature reviews.
- * Access to GPS technology. Loan program to use GPS receivers.
- * Access to and sharing of water quality equipment.
- * Define coordinates for Iowa's sediment monitoring stations and the compass bearings of related transects.
- * Collect current velocity data for channel maintenance activities.
- * Provide, under contract, field monitoring assistance.
- * Create digital ownership coverage for Pools 1-10.
- 1 * Create land use coverages for Pools 1-10.
- * Provide meeting facilities.
- * Provide color copying services.
- * Complete land cover mapping for the District's unmapped reaches of the UMRS.



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LARRY J. WILSON, DIRECTOR

TO: Barry Drazkowski, EMTC
FROM: Art Roseland, Iowa DNR
DATE: November 3, 1993
RE: LTRMP priorities

Dear Barry:

I've reviewed the LTRMP priorities list you organized from the LTRMP Partners' comments. This 'one-person' review for the DNR Wildlife Bureau does not permit enough time to prioritize each entry. Instead I've noted entries of special interest, provided some perspective, and suggested other considerations. I hope these comments will be useful in your review.

PROGRAM AREA RESOURCE TREND ANALYSIS

Wildlife Monitoring Trend Analysis is designed to track changes in the physical, chemical and biological characteristics reflecting condition of UMR resources. Trend data gained from tracking water quality, vegetation and macroinvertebrates is MOST essential to achieving basic understanding of the river ecosystem. Extending monitoring to vertebrate species however, facilitates understanding fish and wildlife populations dynamics as functions of the river ecosystem especially as relative other characters monitored. The Fish Component reflects these objectives.

The absence of a Wildlife Component will handicap, or at least retard, the ultimate RTA product of improved understanding of the river ecosystem evolving to action programs for UMR management. Also, wildlife species are 'high profile' components of the UMR ecosystem and have much capacity to influence public policy. Wildlife species are important components and are quantifiable barometers of river conditions and impacts of intrusions.

A Wildlife Component should be developed and initiated.

Expand Monitoring Efforts In Leveed Areas Leveed areas managed by Partner agencies should be fully integrated into the RTA Pools and Reaches (Green Island/Pool 13 for example) monitoring. These areas are ecologically a part of the UMR. Although flow regimes are altered, water fluctuations may more closely approximate natural river hydrology than the river proper. These areas often contain very significant aquatic resources. Results of monitoring may provide useful comparison with other river environments. These areas are a functional part of the UMR ecosystem and are no less representative of the UMR than some characters of the river proper.

PROGRAM AREA

MULTI-COMPONENT SYNTHESIS, ETC.

Entries of special interest include:

Integrate waterfowl surveys and GIS land cover data into habitat use information.

Wood duck production habitat assessment.

Woodland corridor assessment relative migratory birds including defining extent of contiguous woodlands.

Species/habitat matrices, habitat distribution maps (both fish & wildlife), UMRS habitat models (WHAG/HEP).

Define spatial distribution and abundance of habitats.

Develop UMRS-specific habitat/species models, include literature summaries, in support of habitat project planning, evaluation and review.

Define factors that describe and maintain a natural community on the UMRS.

PROGRAM AREA

PROGRAM OPERATION

Distribute river research

Research should reflect the spatial diversity of UMRS characters.

PROGRAM AREA

DEVELOPING ALTERNATIVES TO BETTER MANAGE UMR

This program area was not listed in your priorities summary.

Prediction of Future Conditions Without Change Prediction of future conditions with current management, and predicted physical, chemical and biological characteristics will eventually be necessary. This need is a frequent topic in UMR discussions, Coordination on the Mississippi and Illinois River Navigation study is a current example.

Although not identified in the priority list for comment, accelerating this program would benefit eventual assessment of management alternatives.

PROGRAM AREA

DEVELOPING MANAGEMENT OBJECTIVES/ALTERNATIVES

The development of management objectives followed by formulations of alternatives and ACTION is THE GOAL for river management. LTRM's PIA, RTA and synthesis products are planned, and needed, for sound development of most management objectives and alternatives. Meanwhile however, the UMR and the ongoing process of making management decisions keep rolling along. Decisions on HREP's, woodland management, management of leveed area, navigation structures, dredge spoil disposal, permit applications and land acquisition are examples.

Management authorities can and do make decisions relative management of the UMR. Opportunities to use available LTRM products, though they may be interim or not fully developed, should be identified and pursued. This assistance has been available and useful but more effort should be made to integrate existing products and available services into current programs.

2. B. Ateam

LONG TERM RESOURCE MONITORING PROGRAM
ANALYSIS TEAM MEETING MINUTES

January 26-27, 1994
Bettendorf, Iowa

X

Day 1 - January 26, 1994

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at 1:00 p.m. on July 6, 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 (FWS), the National Biological Survey (NBS), the U.S. Geological Survey (USGS), 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 October 27, 1993 Analysis Team meeting were reviewed. Four corrections were recommended, as indicated below, and the minutes were approved as amended.

Corrections to October 1993 Minutes:

page 5 - blue (not black) suckers
Polander Lake

page 7 paragraph 4 - Change second sentence to: The effort is based on the realization that riverine conditions are largely driven by hydrologic and sediment transport processes. Delete the fourth and fifth sentences referring to river sediment bedload.

page 7 paragraph 5 - Replace "predict" in the first sentence with "forecast."

page 11 - Change the second sentence in Minnesota report item 2 to: The number of permits is up by 300 percent.

Chairman's Report

Bill Bertrand reported on the recent Environmental Management Program Coordination Committee (EMP-CC) meeting. The use of Habitat Rehabilitation Enhancement Project (HREP) funds for land purchase was discussed. The EMP-CC has urged the Corps to allow this use of HREP funds. Don Williams said that Corps Headquarters has been asked to consider this change in policy, but there has not yet been a reply on this issue.

Corps representatives to the EMP-CC made clear that PL 84-99 funds can be used to repair flood control projects, but not EMP-HREP projects.

The Corps has delegated HREP project approval authority to the North Central Division for projects under \$2 million.

There will be a meeting on February 1, 1994 in Ellsberry, Missouri, to discuss ecosystem management for Pool 25 and to discuss modifying the river regulation strategy for Lock and Dam 25 to improve habitat conditions. The LTRMP study into Pool 25 river regulation will be separate from the ecosystem management strategy, at least initially.

USGS Information Available

Steve Blanchard, USGS-Illinois, distributed a number of USGS publications pertinent to the UMRS, including reports on agricultural chemicals in water, precipitation patterns, and reports on the Mississippi River sampling cruises. Steve announced that the USGS has scheduled study of the lower Illinois River as part of the National Water Quality Assessment, starting next year. The first year (1995) will be a planning year, followed by four years of data collection, and two years of report preparation. A liaison committee is being established. Some (mostly biological) work will be contracted out. The initial planning meeting will be on March 4 at the Pierre Marquette Hotel in Peoria, Illinois.

Interagency Cooperative Ecosystem Management Work Group (ICEM)

Barry Drazkowski explained that ICEM originated from the Environmental Round Table, an Upper Midwest interagency environmental coordinating group that has met annually at Lake Geneva, Wisconsin. ICEM prepared a proposal to conduct an Upper Midwest Biodiversity Assessment, to help set ecosystem management objectives. The proposal has been sent to Vice President Gore for funding consideration, but there has not been a reply. Some biodiversity assessment work is proceeding, primarily with terrestrial landscape analysis. Barry noted a need to incorporate the aquatic environment into ICEM planning for ecosystem management. Barry also reported that ICEM is aware of the UMRCC ecosystem management pilot initiatives for Pools 8, 13, and 25.

Center Director's Report

Bob Delaney announced that the EMTC is now officially a part of the National Biological Survey in the Department of Interior (NBS). Bob distributed briefing literature on the NBS, and an organizational options letter prepared by the Acting NBS Regional Director to NBS headquarters. Bob distributed a book prepared by an advisory committee of the National Research Council to Interior Secretary Babbitt, which contains recommendations on the formation and mission of the NBS. Dr. Loren Nevling, Chief of the Illinois Natural History Survey, was a member of the advisory committee. The advisory committee will continue to review the formation and work of the NBS, and may make further recommendations to Secretary Babbitt.

The NBS is being organized into four Ecoregions. The EMTC will be located in the Eastern Ecoregion. Bob Delaney concurs with the recommendation by the Acting Regional Director that the state of Missouri be included in the Mid-Continent Ecoregion, in order that the existing Columbia Research Center may serve as the primary research center for the Missouri River.

Bob also supports an immediate combination of the EMTC and portions of the National Fishery Research Laboratory (NFRL) at LaCrosse into an Upper Mississippi Center. The combined laboratory would have a primary mission of ecosystem research, with continued work on registration of fish health chemicals by the NFRL. Bob's recommendations for such a combination included incorporation of the NFRL river ecology section, the Columbia Labs field station contaminants section currently housed at the NFRL, and the Pautuxent wildlife field station also currently housed at the NFRL into the new Upper Mississippi Center.

Bob reported that the organization of the combined laboratories remains unresolved, and that no funding for EMTC has been forthcoming from NBS. Bob said that NBS members will attend the next EMPCC meeting on February 16. Bob emphasized that the LTRMP will continue, with the Analysis Team as the first line of partner coordination. Bob said that the Upper Mississippi River System is one of ten regional ecosystems in the U.S. identified by the NBS for analysis, and that the EMTC with its field stations represents a prototype biological science center which can fully meet the emerging NBS mission.

A number of Analysis Team members expressed concern about NBS plans and the lack of consultation to date with EMP partner agencies. A resolution directed to NBS leadership supporting the EMTC was discussed, but tabled. Tom Boland recommended waiting to hear about NBS plans at the EMPCC meeting, and for the Analysis Team to consider providing specific recommendations to NBS leadership later. Don Williams stated that the EMPCC would be a better vehicle for this message because the Analysis Team is technically oriented. Bob Delaney said that Holly Stoerker of the Upper Mississippi River Basin Association has already expressed concerns about the integrity of the role of EMTC in the NBS in a letter inviting an NBS spokesperson to the upcoming EMP-CC meeting.

EMTC Personnel

Bob Delaney announced that Dr. Yao Yin has moved to EMTC from the Pool 26 field station. Yao is not an NBS employee, but is being supported by the EMTC through the University of Tennessee, where Dr. Yin is an adjunct professor. Yao will continue his research on floodplain forest ecology with EMTC vegetation ecologist Sarah Rogers, expanding from Pool 26 to the entire river system. Bob expressed appreciation that we now have Yao's services at EMTC with no major increase in program costs, thanks to Missouri's willingness to transfer his support cost back to the EMTC.

Annual Work Plan Supplement

Bob Delaney distributed the Annual Work Plan Supplement for 1994. Bob explained that the work items included were based on a list approved by the Analysis Team. The funding for the supplemental work resulted in a decrease of overhead assessed the program from 38% to 19%, releasing \$398,000 for product development. Don Williams reported that with approval of the annual work plan supplement, FY 94 LTRMP program funding from the Corps is on the way. Don asked when an over target work items list can be provided to the Corps. John Barko said that more work items will be identified for over-target funding when the scopes of work for the Pool 25 river regulation study

and the sediment transport and geomorphology effort are developed. Bob Delaney said that the proposed over-target work items will be provided to Analysis Team members for review prior to the next meeting.

Floodplain Studies

Bob Delaney reported that two EMTC staff members are presently serving on the White House sponsored floodplain study Science Assessment and Strategy Team, working for 60 days in Sioux Falls, South Dakota. Bob distributed literature on the Administration's floodplain study. Spatial data on UMRS floodplains that is being developed by the team will prove valuable to the LTRMP. The EMTC has acquired two volunteers to continue the LTRMP work activities of the two staff members on detail in Sioux Falls.

Peter Jura, a former USFWS employee from Anchorage Alaska, is presently doing volunteer service at EMTC. Mr. Jura is an experienced GIS technician and is helping to cover for EMTC staff who are presently serving on the floodplain study in Sioux Falls with SAST or FEMA funding. Dan Hill, a forester recently employed by the Corps of Engineers is also providing some volunteer work on development of GRASS GIS data bases.

The Corps Omaha District is contracting for a test of LIDAR technology (laser radar) for conducting terrain elevation surveys of the floodplain of the downriver portion of the UMRS and Missouri River. SAR (synthetic aperture radar) technology will also be tested. Results of this test should be available in late March or April, 1994.

1993 Budget

Bob Delaney distributed a spreadsheet of FY 1993 LTRMP expenditures by Annual Work Plan category. A total of \$5,699,739.65 was spent last fiscal year, with obligations and expenditures very nearly 100 percent of the total allotted.

Resource Trend Analysis

Norm Hildrum reported that field station data handling is being streamlined. During February, data corrections will be applied, and the data will be returned to the field stations. The data checking applications are working. In response to an inquiry by John Wetzel, Norm reported that the data entry contractor has resolved problems, and the quality of data entry is now high. John asked about the turn-around time for data processing. Norm said that the monitoring data handling process will be modified this year. Dave Soballe explained that presently, the data goes from field stations --> data entry contractor --> EMTC --> field stations --> EMTC --> field stations. The process will be streamlined to: field stations --> data entry contractor --> field station --> SAS --> EMTC. John Barko said that data checking and handling will be greatly simplified using SAS (Statistical Analysis System).

John Wetzel asked when field stations will begin using electronic data loggers in the field, rather than hard copy data sheets. Dave Soballe said that the field stations will begin using data loggers this year in conjunction with the new Hydrolab water quality equipment. Eventually, field station staff will

perform on-the-spot error checking, and electronically transmit monitoring data to the EMTC.

John Barko noted that the monitoring data may continue to contain small errors that will only be revealed when the data are statistically analyzed. John said that monitoring data can be provided to others prior to analysis for the annual monitoring reports, with the caveat that the data are provisional.

Tom Boland asked how access to the field station data can be improved. Norm Hildrum said that monitoring data has been released on request, on a "case by case" basis. Tom said that resource managers and others need to know what is available and how to access it. John Barko said that the ideal would include annual reports where the monitoring data are analyzed with interpretation of results and identification of categories of available data. Access to the data at EMTC could then be through the Internet. Tim Schlagenhaft and Tom Boland emphasized that resource managers need to know, perhaps through the River Almanac, about 1) data available, 2) formats available, and 3) request procedure. Norm Hildrum said that this information will be in the March newsletter. Chuck Theiling reminded Team members of the recently-produced metadata catalog on LTRMP spatial information.

1993 Program Performance

John Barko reviewed Goal 1 accomplishments, following the 1993 Annual Work Plan.

Sediment research - A methodology for rapid characterization of sediment physical properties (penetrometer) was developed for use on the UMRS. Sediment surveys were accomplished at a number of sites, with intensive investigation of sediment type distributions in Lake Onalaska, in Pool 7.

Effects of navigation - Work is underway at the Illinois State Water Survey analyzing data previously collected on physical effects of commercial vessel passage. The work is being performed for the Corps Navigation Study, under an agreement between the EMTC and the Illinois Water Survey. Work under this agreement is proceeding on track. Ann Kimber, of Iowa State University, prepared a literature review and report on the effects of vessel-generated waves on aquatic plants as part of EMTC assistance to the Corp's Navigation Study. The report will soon be published as an LTRMP technical report. Ken Barr stated that to date the EMTC has been very responsive to Navigation Study needs. As the biological studies are scoped in detail, additional other opportunities to benefit from EMTC capabilities will be identified.

Hydrology - The study evaluating the relationships between water surface elevations in backwater areas with water surface elevations in the main channel and the calculated pool backwater curves was initiated. The study will be continued this year, in order to gain data during low flow periods.

Aquatic habitat analysis - The 1993 work focused on the Finger Lakes HREP area. An application for visualization and analysis of aquatic habitat was developed. 1994 work will expand to include Lake Onalaska, in conjunction with the HREP Biological Response study of islands.

Aquatic vegetation - Research into the causes of vegetation declines on the URMS included a conclusion of laboratory work initiated in 1993. A paper on findings of the study has been submitted to the Journal of Lake and Reservoir Management for publication and will become a LTRMP reprint.

Sarah Rogers of EMTC and Stan Nichols of the Wisconsin Geological Survey began a study of the distribution of Eurasian Water Milfoil.

Don Williams performed an analysis of the relationships between macrophyte distribution, water depth, and underwater light in Pool 8, a LTRMP report will result from this work.

The LTRMP supported a study by a UW-LaCrosse graduate student on effects of carp on aquatic macrophytes. A LTRMP report will be produced this year.

Zebra mussels - Doug Blodgett reported that zebra mussel monitoring was limited by the '93 flood, which made monitoring substrate recovery difficult. Diving teams obtained quantitative samples. Reports on zebra mussel colonization of the Illinois River have been submitted to technical journals for publication.

Bill Richardson, of the National Fishery Research Laboratory -LaCrosse, is working with Steve Gutreuter in the development of a bioenergetics model approach for evaluating the effects of grazing by freshwater drum on zebra mussels. Tom Boland recommended that Steve Gutreuter and Bill Richardson contact Larry LaJeone at the Quad Cities Nuclear Generating Station, where a 20-year record of drum growth rates has been assembled. Chuck Theiling noted that the LTRMP may need to modify fish sampling procedures to capture larger size classes of drum. Bill Bertrand recommended contacting Mr. Gary Mensinger, a commercial fisherman at Comanche, Iowa, who effectively captures large drum.

Analysis of commercial fisheries data - John Barko reported that Steve Gutreuter shelved the effort because the data are uninterpretable.

HREP projects - John said that the Finger Lakes and Islands studies are going well. Field stations are participating in other HREP Biological Response studies and in routine monitoring of a number of HREP projects and LTRMP reports will result from these efforts.

John Barko concluded his review of 1993 research efforts by noting that the EMTC is now writing scopes of work for all research efforts, and is obtaining assistance from outside sources in development and review of research scopes of work.

Trend Monitoring - Dave Soballe reported that the change to stratified random sampling has gone well, and most logistical problems have been resolved. Dave said that the flood conditions affected some of the water quality sampling schedules last year, and that the schedules this year will be more uniform.

EMTC Analytical Laboratory - Dave Soballe said that the lab is gearing up to take over analytical work from the Corps Waterways Experiment Station. All of

the major pieces of analytical equipment are in place, and Dave and Mark Deploy are working out the bugs in the equipment and analytical process. A recent accidental freeze-up of the Corps Eau Galle laboratory has increased the urgency for getting the EMTC lab functional. Dave said that the first priority is to stabilize the operation of the lab for processing trend analysis samples, then expand support to field stations and the EMTC for analysis of additional types of samples.

Walt Popp asked when the water quality monitoring data will be available. Dave Soballe said that the analytical backlog is nearly gone, data are being processed, and that SAS files should be provided to the field stations by the end of February. Dave is compiling LTRMP water quality data from the Eau Galle laboratory, the Waterways Experiment Station laboratory in Vicksburg, Mississippi, and from the EMTC.

Sediment Transport Processes and Geomorphology

Dan Wilcox reported that a draft scope of work was prepared to expand LTRMP research in this field, with the intent of quantifying sediment transport processes in the URMS, and forecasting the future configuration of the channels and floodplains. EMTC systems ecologist, Bob Gaugush, has been assigned as study manager. A workshop was held on January 19 and 20 at EMTC with a number of scientists and engineers experienced in river hydraulics, sediment transport, and geomorphology. The scope of work will be revised based on recommendations from the workshop. The revised scope will be provided to work group members for review. A synopsis of the workshop and the scope of work will be prepared by mid-March. Some of the tasks in the scope of work that emerges will be included in the LTRMP over-target list for this year. The scope of work will be provided to NBS, Corps, USGS, and Illinois State Water Survey program managers and others, with a view toward developing an interagency effort to accomplish the work.

Ecosystem Management and Multi-component Synthesis

John Barko said that Ken Lubinski from EMTC is working with three groups of resource managers considering ecosystem management pilot efforts for Pools 8, 13, and 25. The groups are considering what ecosystem management means, and what kind of planning effort can lead to more effective and ecosystem oriented management of the river environment. John emphasized the need to develop clearly stated objectives for management.

John reported that multi-component synthesis of monitoring results will be performed, with discussion of both known and suspected causal factors of measured conditions. Chuck Theiling said that synthesis efforts are needed to make use of the spatial and monitoring data that is now available. For example, spatial data on the distribution of aquatic vegetation that has been interpreted from aerial photography can be used to evaluate the distribution of macroinvertebrates. Chuck recommended that a number of such multi-component syntheses should be included in the list of over target work items for this year. Barry Drazkowski mentioned that scopes of work for such synthesis efforts are being prepared at EMTC, for inclusion on the over-target list.

Pool 25 Water Level Management

John Barko described a new LTRMP research effort into the effects of river regulation on Pool 25. Ken Lubinski has been assigned to be study manager. A meeting will be held on February 1 at Ellsberry, Illinois to discuss the scope of the investigation. Work this year will include developing the scope of the planning and research effort in conjunction with the States, USFWS, and Corps, and some initial data compilation.

Corps Navigation Study

John Barko reported that the EMTC contract with the Illinois State Water Survey for analysis of hydraulic data collected during vessel passage events is proceeding well. The products of this work are being passed on to the Corps for use in developing predictive hydraulic models for assessing the physical effects of commercial vessel traffic.

John will facilitate a technical work group for the Navigation Study, to develop a detailed scope for assessing the effects of vessel-generated waves on aquatic plants. The literature review and report prepared on this subject by Ann Kimber of Iowa State University is a part of this study.

Ken Lubinski is presently attending a workshop at the Corps Waterways Experiment Station, for hydraulic classification of backwater areas on the UMRS. The classification will be used to select sites for study, and for extrapolating estimates of backwater sedimentation induced by vessel-resuspended sediment.

Linda Leake is participating in the Math Modeling and Data Management work group. Linda has provided the Corps with an inventory of data available at the EMTC, and is working with the Corps to identify data management requirements for the Navigation Study.

The Analysis Team adjourned for the evening at 4:45 P.M.

Day 2 - January 27, 1994

The Analysis Team meeting convened at 8:00 A.M.

Information Systems Update

Norm Hildrum distributed a literature package of EMTC Information System Support Division accomplishments, and reviewed FY 1993 work accomplishments by AWP tasks. Don Williams emphasized a need for generation of more reports originating from EMTC work. Norm said that EMTC staff are poised to generate a number of EMTC technical reports, based on research initiated one to three years ago. Tim Schlagenhaft noted a need for abstracts or summaries in EMTC technical reports. Norm Hildrum said that only the earlier reports did not have an abstract. All current and subsequent reports will have an abstract. Dan Wilcox remarked that the EMTC publication pipeline is now flowing, and recommended that there be a shift in emphasis from quantity of reports to quality of content. Don Williams agreed, noting a need to support the EMTC

senior scientists in their publication needs. John Wetzel voiced appreciation for EMTC distribution of reprints of papers published elsewhere that were prepared with LTRMP funding. John Barko cautioned that there will be a temporary decline in the number of reports generated, now that the publication backlog has been cleared.

LTRMP Partner Agency Expectations and Information Needs

Barry Drazkowski distributed a compilation of results and reviewed his survey of agency information needs, expectations of LTRMP products, and EMTC actions. John Wetzel recommended that this subject be an agenda item for the next Analysis Team meeting. Dan Wilcox noted that this is the third or fourth such survey for the LTRMP, and that agency information needs and LTRMP activities have converged. Dan said that it is clear that the LTRMP is now effectively responding to the majority of agency expectations. John Wetzel expressed a need for more integration of information, and for extrapolation of estimates throughout the river system. John Barko cautioned that specific questions and information needs must be developed, and LTRMP field station work may have to be modified to cover other portions of the river system. Tim Schlagenhaft recommended that the Analysis Team members consult with their respective agencies and develop more specific information needs and questions to be addressed prior to the next Team meeting.

State and Federal Reports

Tim Schlagenhaft said that the Minnesota DNR is working with the Wisconsin DNR and the USFWS on a study of paddlefish in Polander Lake, Pool 5A. The study had its origins in a proposed HREP project at Polander Lake, which could affect the habitat conditions where paddlefish have been historically captured by commercial fishermen. The study will involve mark and recapture, and possibly radiotelemetry to investigate paddlefish habitat use and movements.

Don Williams restated that the Corps has delegated HREP approval authority to North Central Division for projects under \$2 million. The Spring Lake (Wisconsin, Pool 5) HREP project has been approved, and construction should be completed this year. The St. Paul District has been given the lead for the Corps Floodplain Management Assessment of the Upper Mississippi and Lower Missouri Rivers.

Jerry Skalak said that Rock Island District is conducting GIS floodplain mapping for FEMA. Jerry noted that the Corps Districts should provide input to EMTC on their information needs and expectations for LTRMP products.

Dan Wilcox reported that the St. Paul District Corps of Engineers has merged its Planning and Engineering Divisions. The District has released version 2.0 of the Riverine Emergency Management Model (REMM). REMM is a menu-driven software program which can be used for river spill response planning and event management. The initial REMM application was developed for the State of Minnesota for the Mississippi River upriver of the Twin Cities. The model computes downriver travel time of spilled material under different discharge conditions, with and without ice cover, and estimates concentration and

duration of spilled material passing points downriver. REMM contains files of landmarks by river mile, a database of chemical properties, and a database on potential spill containment and diversion sites. REMM is available from the St. Paul District on request. The District is preparing a long-term channel maintenance plan for lower Pool 2, which may include use of dredged material for a HREP - type modification of Spring Lake.

Jon Duyvejonck said that the USFWS in Region three is considering reorganizing toward ecosystem goals, but that the future organization is unclear at present.

Next Meeting

The next Analysis Team meeting will be on April 27, in La Crosse/Onalaska, the day prior to the Mississippi River Research Consortium meeting.

A developing winter storm made Team members eager to depart and limited discussion. The meeting was adjourned at 9:30.

Respectfully submitted,

Dan Wilcox

Attendance List
LTRMP Analysis Team Meeting
January 26 - 27, 1994
Bettendorf, Iowa

<u>Name</u>	<u>Agency, Location</u>	<u>Telephone Number</u>
Bill Bertrand	Illinois Dept. Cons.	309-582-5611
Bill Donels	Illinois Dept. Cons.	217-782-3715
Doug Blodgett	Illinois NHS Havana	309-543-6000
Chuck Theiling	Illinois NHS Pool 26	618-259-9027
Russ Gent	Iowa DNR	319-872-5495
Tom Boland	Iowa DNR Bellevue	319-872-4976
Tim Schlagenhaft	Minnesota DNR Lake City	612-345-3365
Walt Popp	Minnesota DNR Lake City	612-345-3331
John Wetzel	Wisconsin DNR LaCrosse	608-785-9994
Terry Dukerschein	Wisconsin DNR Onalaska	608-783-6169
Robert Delaney	NBS EMTC	608-783-7550
John Barko	USCOE-WES/EMTC	608-783-7550
David Soballe	NBS EMTC	608-783-7550
Norm Hildrum	NBS EMTC	608-783-7550
Barry Drazkowski	NBS EMTC	608-783-7550
Jon Duyvejonck	USFWS Rock Island	309-793-5800
Ken Barr	USCOE Rock Island	308-794-5349
Joe Jordan	USCOE Rock Island	309-794-5697
Jerry Skalak	USCOE Rock Island	309-794-5605
Dan Wilcox	USCOE St. Paul/EMTC	612-290-5276
Don Williams	USCOE NCD	312-886-5470
Steve Blanchard	USGS Illinois District	217-398-5353

LONG TERM RESOURCE MONITORING PROGRAM
ANALYSIS TEAM MEETING MINUTES

April 27, 1994

Holiday Inn, La Crosse, Wisconsin

Chairman Bill Bertrand called the Analysis Team meeting to order at 8:30 a.m. Team members and others from the five Upper Mississippi River System (UMRS) states, the U.S. Fish and Wildlife Service (FWS), National Biological Survey (NBS), U.S. Army Corps of Engineers (COE), and the National Park Service (NPS) attended the meeting (attendance list attached).

Following a round of introductions, Bill recommended agenda changes, moving the discussion of overtarget funding items to follow the Center Director's report.

Bill asked Bob Delaney to emphasize the following points in his Program Manager's report:

- Overtarget, supplemental, and other sources of funding
- Discuss use of overtarget funding for field station support
- Focus of overtarget work
- How overtarget work can contribute to multi-component synthesis and ultimately to ecosystem management

Bill said that the information package was not distributed in a timely way, making preparation for this Analysis Team meeting difficult.

REVIEW OF MEETING MINUTES

Minutes of the previous Analysis Team meeting were reviewed. No changes were proposed, and the minutes were approved as written.

PROGRAM MANAGER'S REPORT

Bob Delaney suggested that the conference call for setting the agenda for upcoming Analysis Team meetings be moved to about one month ahead of meeting dates, to allow time for Environmental Management Technical Center (EMTC) to prepare information and mail it to Analysis Team members in a timely way. He indicated that the conference call preceding this meeting was only two weeks in advance and the nature and extent of materials to be assembled made it impossible to mail with two weeks lead time. Bob Delaney apologized for the late mailing of the information package for the meeting.

Bob noted that EMTC staff members are now spending more time on developing overtarget funding proposals than on the Annual Work Plan development. Bob said that this year he requested overtarget funding proposals from the field stations and also received proposals from other sources. A total of 78 overtarget funding proposals were reviewed, and an EMTC overtarget funding proposal package of 20 high priority items were recommended for coordination with the Analysis Team and COE. Bob reported that in future years savings and slippage assessments need to be eliminated for the Long Term Resource

Monitoring Program (LTRMP), allowing budgeting up front in the Annual Work Plan and eliminating the need for time consuming overtarget funding requests. The outlook appears good for obtaining a return of savings and slippage funds this fiscal year and \$615,000 is potentially available.

Bill Donels emphasized the need to keep the LTRMP monitoring function strong.

Bob Delaney explained the chronology of this fiscal year's LTRMP budget process. The authorizing legislation provides \$5,955,000 for the LTRMP. The FY 1994 Annual Work Plan includes planned expenditures of \$5,340,000 with \$615,000 retained for savings and slippage. An overtarget items list, coordinated with the Analysis Team, was included in the Annual Work Plan. When the NBS reduced overhead assessments from 38% down to 19%, an Annual Work Plan supplement was prepared in January 1994, identifying additional priority expenditures of \$398,000 from reduced overhead. The overtarget work items to be discussed at this meeting were developed to use the \$615,000 potentially available from saving and slippage.

Bob related that Congressman Gunderson of Wisconsin has recently testified that savings and slippage assessments are a burden on the LTRMP, and that there may be some resolution to this matter forthcoming. There may also be a reduction in the 19% NBS overhead rate.

Bob reported that after five years into the program there is a strong need for replacement of equipment at field stations and the EMTC. A detailed assessment of equipment needs and a long-term program for equipment replacement and upgrades is being developed. Field stations have been asked to provide a detailed equipment upgrade/replacement list for the FY 1995 Annual Work Plan process.

SAST AND NAVIGATION STUDY DATA

Bob Delaney recounted information in a handout paper listing known SAST data sets that are under development. Bob recommended that some of these should reside at EMTC, building toward greater systemic analysis ability.

Appropriate navigation study data will also reside at EMTC. The added costs to the EMTC in handling the navigation study and SAST data will be mainly for increasing computer storage capacity. Bob reported that in addition to navigation funds the NBS may also provide funding to increase data storage capacity at EMTC.

Norm Hildrum said that SAST data may amount to several hundred gigabytes, and the Navigation Study data may reach 50 gigabytes. Norm thought that the data handling for both will involve combinations of archival storage and some on-line accessible data.

Jerry Skalek asked how much LTRMP funding is going to SAST participation. Bob Delaney said that the LTRMP has funded two EMTC staff persons for over two months, with travel and per diem paid by SAST. Gordon Farabee asked if EMTC will train people to access SAST data. Bob Delaney said that such training has been proposed for overtarget funding. Norm Hildrum said that the EMTC

will list SAST data in the LTRMP metadata catalog, and that SAST data will be treated like other LTRMP data for outside user access. Frank D'Erchia said that SAST and the EROS Data Center plan meetings this summer to inform non-SAST agencies about data available. Frank said that the EMTC will publish an update of the metadata catalog for spatial data to include the additional SAST data. Appropriate Missouri River SAST data is proposed to reside at the Columbia, Missouri, NBS facility.

FY 1995 ANNUAL WORK PLAN

Robert Delaney reported on Annual Work Plan development. A draft will be prepared by July 1, for submittal to the COE. The initial draft will be reviewed this summer by the Analysis Team. The final plan will go to the COE in September. Bob displayed an overhead with a figure (also provided on hard copy) of factors driving the Annual Work Plan process, and selection criteria for Annual Work Planned activities, including new initiatives. Bob asked Analysis Team members for any additional thoughts on this process. Tom Boland remarked that the figure looks good.

NATIONAL BIOLOGICAL SURVEY UPDATE

Bob Delaney has recommended that NBS delay merger of the EMTC and La Crosse labs until the new NBS regional director has a chance to meet with the UMRS states and agencies. Bob estimated that it may be several months before a NBS regional director is in place. In the meantime, Bob said that EMTC is cooperatively working with the North Central Ecology Research Group (Carl Korschgen), Section of Ecology (Jim Wiener), and the Contaminants Field Research Station (Columbia LaCrosse Laboratory). Bob reported that NBS had named Dr. Ron Pulliam agency director last week.

Gordon Farabee emphasized the need to maintain the LTRMP monitoring function, that research is fine, but that monitoring should remain first priority.

Don Williams asked about LTRMP expenditures for EMTC/NBS coordination. Bob Delaney reported that the EMTC has received no funding at all from NBS to date. Bob noted that he has already served for two weeks as acting NBS regional director, and is slated to serve again soon. He hopes to recoup EMTC/NBS coordination costs when NBS funding begins. Bob estimated that once the regional agency structure is established, NBS funding should be forthcoming. Chuck Theiling asked how NBS funds will be applied. Bob Delaney said that initially, NBS funding will be used to recoup LTRMP costs for EMTC/NBS coordination, and to archive SAST data. Tom Boland asked who will NBS contact for coordination with the states? Bob thought that NBS may already be communicating with state Department of Natural Resources commissioners. Bob has recommended that the first line of coordination take place at the Analysis Team level.

LTRMP ANNUAL REPORT

Bob Delaney reported that the field station input for the Annual Report is due to EMTC on May 2. The EMTC is planning to have a draft by May 15, and a copy

to the COE shortly thereafter. The format will be similar to the annual reports prepared by the Illinois State Water Survey.

Pam Thiel asked about the proposed "State of the River" report. Bob Delaney said that analysis of trend data is essential, and is driving the schedule for that report. The "State of the River" report is presently scheduled for completion this fall. Don Williams asked Bob Delaney if the EMTC still intends to include information about effects of the 1993 flood in the "State of the River" report. Bob replied that they do intend to include flood effects information in the report.

OVERTARGET FUNDING ITEMS

Bill Bertrand said that the states appreciate the opportunity for the LTRMP field stations to submit proposals for overtarget funding. Bill was concerned about EMTC prioritization of overtarget funding proposals prior to consideration by the Analysis Team. Bob Delaney explained that in previous years, the EMTC prepared a set of overtarget proposals in priority order for coordination with the Analysis Team and the COE. This year, Bob said that he solicited proposals from the field stations, and additional proposals were received from other sources, resulting in a total of 78 overtarget funding proposals. The EMTC reviewed the proposals, and prioritized the 78 into the top 20 (approximately \$1.2 million) for coordination with the Analysis Team and the COE. Bob referred to the handout (page A) for selection criteria, which are essentially the same as for new initiatives in the Annual Work Plan development process, except that most overtarget items should be one-time efforts that can be completed in one year.

DIAL-IN ACCESS TO EMTC DATA

During a break in the meeting, Norm Hildrum and Linda Leake demonstrated dial-in access to LTRMP data on a personal computer set up in the meeting room. The Ecological Resource Information Access System (ERIAS) provides LTRMP partners with the ability to independently access program data.

OVERTARGET FUNDING ITEMS (Continued)

Bill Bertrand asked if the outside funding sources indicated on the overtarget funding list are committed. Bob reported that the U.S. Geological Survey has committed to funding \$75,000 toward sediment and geomorphology research for this year, but the other outside funding sources are not certain. Bob said that there have been discussions with other agencies on this subject, and outside funding is likely.

Tom Boland recommended that the Analysis Team review the overtarget funding proposals, starting with the "top prioritized 20", to get a sense of Analysis Team support for them.

Bill Bertand agreed, and proceeded to lead discussion on the proposals, starting with the beginning of the EMTC list of the top 20 (not numbered in any order of priority).

1. UMR and Illinois River Zebra Mussel Investigations

Bill reported that the UMRCC has endorsed the proposed work by letter to the Analysis Team. John Barko recounted a recent meeting hosted by the COE North Central Division office in Chicago as a central location to coordinate ongoing zebra mussel work. John said that the meeting was productive and that LTRMP supported UMRS work on zebra mussels was proposed to include:

- Monitoring - Andrew Miller (COE Waterways Experiment Station) will continue work with plate samplers and will expand monitoring. WES, EPA, and LTRMP funding will contribute to this effort.
- Unionid demography - Andrew Miller will continue quantitative mussel monitoring, and will expand work to include two additional stations.
- Veliger sampling - Doug Blodgett reported on Illinois State Natural History Survey plans to sample veliger drift in the Illinois River this spring and summer. Samples will be collected about twice a week to investigate timing of veliger drift.
- Ecological effects - John Barko described plans for LTRMP funded work by Bill Richardson and Steve Gutreuter of NBS La Crosse to investigate the effects of zebra mussels on seston and consumption by fish in mesocosm experiments. NBS would contribute to this effort.

Dan Wilcox noted that the over-target funding proposal does not include spatial surveys of Unionid distribution that would be needed to assess the effects of zebra mussel infestation on Unionid populations.

Doug Blodgett reported on a proposal for \$15,000 of work to be funded by the shell buyer's association to experimentally examine the effects of handling and culling of mussels by commercial clammers.

Tim Schagenhaft emphasized the need for data on effects of commercial exploitation of mussels. Don Williams cautioned about LTRMP involvement in state regulatory matters.

A motion was made to support the zebra mussel work as a high priority item for overtarget funding. The motion passed.

2, 3. Augment Sediment - Related Research

Bill Bertrand asked if the proposed work would overburden the field stations. John Barko said that another overtarget proposal would include the outfitting and staffing of another shallow draft boat for bathymetric surveys, and for the conduct of sediment type surveys by penetrometer. John thought that the field stations may be able to assist with sediment surveys in the key pools in support of this proposal.

Pam Thiel said that the other EMP partners should contribute more to the sediment and geomorphology research effort. Tim Schlagenhaft emphasized the importance of this work for informed river management, and said that the work should be accomplished as soon as possible. Gordon Farabee said that these overtarget funding work items are not "all-or-nothing" proposals contingent on funding by other agencies. John Barko and Dan Wilcox recounted the sediment and geomorphology research planning process, the work group that was convened, and the study plan that has been developed. John Wetzel was pleased that the LTRMP research is proceeding on this subject, and made a motion to support the overtarget funding proposal, with an emphasis on cost sharing by other agencies. Following a second by Gordon Farabee, the motion passed unanimously.

4. Integrate Component Data With GIS

Norm Hildrum and Frank D'Erchia explained that the proposed work would develop a GIS interface for spatial coverages and monitoring data. Tom Boland remarked that this kind of GIS interface was intended to be developed all along. Norm said that the GIS interface would be a tool for sophisticated spatial analysis. Jerry Skalek remarked that it would be important for HREP monitoring, and that training (over target item 20), should be included. Don Williams recommended that the work description be clarified. Don wondered if the GIS interface would include the ability to access SAST themes, and SAS statistical applications. Bob Delaney advised that the proposal be rewritten for clarification and because of its high priority be included in the Annual Work Plan for next year.

5. Systemic Dredged Material Data Base

Tom Boland said that development of this data base should be funded by the COE, given the COE' channel maintenance responsibilities. Tom thought that this kind of work can result in diversion of EMTC staff from more essential LTRMP activities. Bob Delaney remarked that although a dredged material data base is one of the central systemic information needs, that this proposal should be coordinated closely with the COE Districts for possible O&M funding and that it would be included in the FY 1995 Annual Work Plan. Don Williams said that this kind of data base should be carefully designed to meet the needs of the users.

6. Increase EMTC Report Production Capability

Bill Bertrand and Doug Blodgett emphasized a need to catch up on the backlog of LTRMP reports, rather than spend time issuing reprints of already published material. Bob Delaney said it cost little in time and funds to publish reprints and this wasn't reducing efforts of publishing other LTRMP reports. Tom Boland asked how the proposed overtarget funds for accelerating report production would be applied. Norm Hildrum explained that the funds would be used to hire student staff help, a temporary editor, and to defray publication costs. John Barko said that a number of EMTC papers submitted to professional journals will have publication expenses. Bob Delaney recommended that this overtarget item

be tabled for the time being but cautioned that without increased financial emphasis the current backlog cannot be reduced.

MIGRATORY BIRDS PROJECT

Jim Fisher described a joint FWS, WDNR, MDNR, and NBS initiative to analyze and visualize migratory bird habitat on the UMRS and adjacent flyway corridor. The work included:

- Literature search to identify life requisites for habitat
- Development of GIS habitat maps from LTRMP land use/land cover data
- Refinement of habitat maps based on habitat requirements for different guilds of migrating birds
- Literature search on the physical habitat needs of floodplain vegetation

Jim said that this effort produced a system for evaluation and visualization of habitat availability that can serve as a standard approach that is applicable to other portions of the UMRS, and for other species. Dan Wilcox noted that the approach Jim described is sensible and quite applicable to floodplain terrestrial habitat analysis, but that aquatic habitat is much more complex and dynamic. Dan explained that the EMTC has developed an approach for aquatic habitat classification, and is developing an approach for analysis and visualization of aquatic habitat. Dan emphasized the need for acquisition of bathymetric and other spatial data to allow analysis of aquatic habitat.

7. Fish Use of Floodplain Habitats

Bob Delaney said that this proposal for over target funding is to recoup added costs for field station facility rental incurred because of the 1993 flood. Chuck Theiling said that the additional funds would provide the ability for the Pool 26 field station to keep staff on and finish work on fish data collected from the Illinois River floodplain during the flood. Bill Bertrand moved to support the proposal as a priority item. The motion was seconded by John Wetzel. No vote was taken.

8. Accelerate Completion of UMRS Land Cover/Land Use Database

The Analysis Team discussed the pros and cons of expanded land use/land cover database development. Bill Bertrand emphasized the need for greater emphasis on GIS development for analysis of aquatic habitat, especially bathymetry data. Bill Donels expressed concern about proposed items for LTRMP overtarget funding that are needed and should be funded by the COE navigation study. John Duyvejonck said that the COE is finally getting down to identification of specific spatial data needs. John Wetzel thought that acquisition of additional GIS coverage of land use/land cover data would contribute to analysis of habitat availability for wildlife. Tim Schlagenhaft moved to support overtarget item No. 928 Accelerate Acquisition of Bathymetric Data, in conjunction with No. 8 Accelerate Completion of UMRS Land Cover/Land Use Database. The motion was seconded by Bill Bertrand, and the motion passed.

9. Accelerate Analysis of Pool 25 Water Level Alternatives

Ken Lubinski described the ongoing work to evaluate alternatives for river regulation at Pool 25. The Team did not indicate support for this proposal by vote.

PRIORITY OF OVERTARGET PROPOSALS

Bill Bertrand asked Team members to provide him with rankings of overtarget proposals, and that he will forward the compiled rankings to EMTC. Bill asked for input from team members by May 4. Bill summarized discussion of overtarget proposals. Items number 1, 2, 3, 7, 8, that were discussed received support as priority items. Items number 4 and 5 need rewriting to more accurately reflect the proposed work activity, were removed from consideration for overtarget funding for this year, and item number 6 was tabled. Bill Bertrand asked Team members to provide recommended sources of outside funding in addition to the priority rankings for LTRMP overtarget funding. Bob Delaney said that all NBS-originated proposals are being proposed for funding by NBS. Discussion continued on overtarget funding proposals.

11. Flood Effects on Floodplain Vegetation

Don Williams thought that it would be worthwhile to undertake field surveys to assess the effects of the 1993 flood. The proposal includes funding for Yao Yin travel and equipment to conduct field surveys in the open river reach. Bob Hrabik said that Yao plans to do this work regardless of overtarget funding, and thought that the \$49,000 funding proposal might be a typographic error. The Team did not indicate support for this proposal by vote.

COE FLOODPLAIN MANAGEMENT STUDY

Bob Delaney reported that Barry Drazkowski has met with St. Paul District COE people about information needs for the COE Floodplain Management Study. Don Williams said that a new study plan will be distributed soon. Public meetings are scheduled. The COE has met with SAST and EMTC about data needs. Don reminded Team members of a conference sponsored by the Society of Wetland Managers to be held June 20-23, in St. Paul, Minnesota. The conference will focus on floodplain river management.

TREND REPORTS

Ken Lubinski said that guidance has been provided (handout page B) to field stations for further refinement of monitoring data handling procedures. John Barko said that monitoring data are being evaluated, and reports are in preparation at EMTC. Pam Thiel asked if a 5-year systemic synthesis report might be prepared. John said that such a report will be considered for next year.

INFORMATION SYSTEMS

Norm Hildrum reported that monitoring data is now available, and that a user access interface (ERIAS) is now operational. Dial-in access is available (demonstrated during the Analysis Team meeting) and a pamphlet describing the system and how to use it was provided to team members.

PARTNER'S EXPECTATIONS

Barry Drazkowski asked at the last Team meeting for specific expectations to be developed for each of the specific high priority information needs identified by the program partners. He said he has not received these items. Barry distributed a handout with a compiled list of high priority information needs. Barry said that the EMTC would like to have further input on specific information needs prior to the next EMP-CC meeting. Don Williams noted that the COE has and will continue to provide input on information needs. Barry agreed, and said that the sentence to the contrary will be removed from the introductory paragraph of the handout. Team members agree to send specific informational needs to Barry.

AGENCY REPORTS

Gordon Farabee reported that Missouri Department of Conservation (DOC) is acquiring floodplain properties; 1,500 acres on the Des Moines River, and four other tracts along the Missouri River. A new National U.S. Fish and Wildlife Refuge has been established - the Big Muddy Refuge. Gordon said that the Missouri DOC is working with The Nature Conservancy on acquisition of floodplain properties.

Dan Wilcox said that Navigation Study activities are increasing, with an upcoming NECC meeting and technical work group meetings. John Duyvejonck said that state and FWS-NECC members will meet on May 2, to discuss Navigation Study issues.

NEXT MEETING

The next meeting date was set for July 25 and 26, starting at 1:00 p.m., on the 25th and ending by noon on the 26th in the Quad Cities area. A conference call between EMTC and Analysis Team members to set the agenda will be held on June 28, 1994, at 10:00 a.m.

The meeting adjourned at 4:35 p.m.

Respectfully submitted,

Dan Wilcox

Attendance List
LTRMP Analysis Team Meeting
April 27, 1994
Holiday Inn, La Crosse, Wisconsin

<u>Name</u>	<u>Agency, Location</u>	<u>Telephone Number</u>
Bill Bertrand	Illinois Dept. Cons.	309-582-5611
Bill Donels	Illinois Dept. Cons.	217-782-3715
Doug Blodgett	Illinois NHS Havana	309-543-6000
Chuck Theiling	Illinois NHS Pool 26	618-259-9027
Russ Gent	Iowa DNR	319-872-5495
Pam Thiel	USFWS Fisheries Winona	507-452-4390
Tom Boland	Iowa DNR Bellvue	319-872-4976
Gordon Farabee	Missouri DOC	314-751-4115
Bob Hrabik	Missouri DOC Field Sta.	314-290-5730
Tim Schlagenhaft	Minnesota DNR Lake City	612-345-3365
Walt Popp	Minnesota DNR Lake City	612-345-3331
John Wetzel	Wisconsin DNR La Crosse	608-785-9994
Terry Dukerschein	Wisconsin DNR Onalaska	608-783-6169
Andy Bartels	Wisconsin DNR Onalaska	608-783-6169
Lisa Hodge Richardson	Wisconsin DNR Onalaska	608-783-6169
Heidi Langrehr	Wisconsin DNR Onalaska	608-783-6169
Robert Delaney	NBS EMTc	608-783-7550
John Barko	USCOE-WES/EMTC	608-783-7550
David Soballe	NBS EMTc	608-783-7550
Ken Lubinski	NBS EMTc	608-783-7550
Norm Hildrum	NBS EMTc	608-783-7550
Linda Leake	NBS EMTc	608-783-7550
Frank D'Erchia	NBS EMTc	608-783-7550
Eileen Kirsch	NBS PWRC La Crosse	608-783-6451
Carl Korschgen	NBS PWRC La Crosse	608-783-6451
Jim Fisher	USFWS Winona	507-452-4232
Jon Duyvejonck	USFWS Rock Island	309-793-5800
Joe Jordan	USCOE Rock Island	309-794-5697
Jerry Skalak	USCOE Rock Island	309-794-5605
Dan Wilcox	USCOE St. Paul	612-290-5276
Don Williams	USCOE North Central Div.	312-886-5470
Rich Astrack	USCOE St. Louis District	314-331-8491
Steve Blanchard	USGS Illinois District	217-398-5353
Rich Kuklas	National Park Service Omaha	402-221-3603

DRAFT

LONG TERM RESOURCE MONITORING PROGRAM ANALYSIS TEAM MEETING MINUTES

DRAFT

July 25-26, 1994
Bettendorf, Iowa

Day 1 - July 25, 1994

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at 1:00 p.m. on July 25, 1994, 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 (USFWS), the National Biological Survey (NBS), the U.S. Geological Survey (USGS), 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 January 26, 1994, Analysis Team meeting were approved.

Chairman's Report

Bill Bertrand reported on the recent EMP-CC meeting. The discussion centered on proposed language changes to the Water Resources Development Act. Concerns expressed by Tom Boland and Bertrand were potential impacts to LTRMP and sources of funds to pay for any new legislative initiative. Boland wanted to know why HREP funds cannot be expended for habitat projects before considering HREP funds as support for a new initiative. Barko commented that EMTC is a "bird in the hand" and we should not compromise or give that up for some unknown. He stated that Goal 3 as defined in the Operating Plan is ecosystem management. We do not need new legislation to implement this concept. John Wetzel agreed that Goal 3 is almost the same thing. If implemented properly, no legislative changes would be required.

Program Manager's Report

Bob Delaney discussed the Annual Work Plan (AWP) Schedule, AWP Focus, and an NBS update. He commented that no decision has been made as to merging the La Crosse Lab and EMTC. The Regional Director positions have been advertised and are now closed. Approximately 90-100 applications were received for each of the Regional Director positions.

Annual Work Plan Schedule

Delaney discussed the AWP and stated that written comments should be sent to EMTC by August 20. The final AWP is scheduled to be mailed to the Corps on or about September 5, 1994. He stated that available funds from the NBS overhead reductions will be prioritized based on field station equipment replacement needs, RTA needs, emphasis on sedimentation and water level studies, and integration efforts under Goal 3. The FY 1995 AWP focus is on several areas: trend data analysis, synthesis and reporting, field station equipment replacement, integrative studies, Navigation Study support, continued support to analysis of HREPs, increased emphasis on sediment transport and water level analysis, and development of a State of the River report.

Annual Work Plan Goals 1-4

Goal 1 discussion focused on sedimentation and Navigation Studies. John Barko stated the final scope of work for the sediment evaluation will be sent out shortly. Delaney mentioned that the Illinois State Water Survey is being contracted to prepare a sediment report on the Illinois River. Barko mentioned that under the navigation effects topics the effects of waves on plants are being evaluated. He also commented that until the "natural impacts" to the system are evaluated, the navigation effects cannot be sorted out.

Tom Kevin made a point to thank EMTC for Steve Gutreuter's participation and assistance in development of the fish effects SOW for the Navigation Studies.

Barko stated that Navigation Studies listed in the AWP are contingent upon EMTC receiving funds from the Corps to support those efforts.

Barko also discussed monitoring and integration activities. Delaney said that annual trend reports and synthesis reports will be out this year. A State of the River report will be published following the trend and synthesis reports. Delaney said a report summarizing the effects of the 1993 flood also will be produced this year.

National Biological Survey Update

Delaney presented an update on NBS activities related to the EMTC. He discussed the three activities receiving funds: \$25,000 to support publishing the Large Rivers Conference proceedings, \$100,000 for staff and hardware support to the Upper Midwest Gap Analysis Program, and \$150,000 for hardware to make certain Scientific Assessment and Strategy Team data on the UMR available. Delaney mentioned that NBS was providing \$150,000 to Illinois for a State partnership initiative.

Day 2 - July 26, 1994

Frank D'Erchia summarized annual aerial photography efforts. The entire system is being flown this year. Part of this effort is being funded by the savings from reduced NBS overhead.

D'Erchia discussed information sharing activities. He stated that the ERIAS continues to be developed, and Internet access is being implemented through Corps dedicated lines. The Center's home page can be accessed through the Mosaic interface with the Internet. The address is www.emtc.nbs.gov. Development continues on field station access and connectivity. The last *River Almanac* had a section on the types of data access servers available at EMTC. He also stated that 35 reports are scheduled for FY 1995. The LTRMP video will be updated.

An update on VON FTS telephone service to the field stations was provided by Linda Leake. The service establishes the long distance carrier as FTS, which in turns charges the Federal Government. She also stated that Bellevue, Alton, and Havana should be on line by September 1994.

A brief component data update was provided by Leake; all data are available through 1993. The 1994 data are being processed in the same fashion as the previous year.

In the area of technology transfer, D'Erchia discussed the annual training schedule. EPPL7 and ARC/INFO have been very popular classes. Approximate class composition has been 50% partners and 50% non-partners. Leake commented that her staff has made two visits per year to the field stations for training, installation, and maintenance.

AWP Budget Issues

Bob Delaney discussed the historical perspective on the Program's fixed budget, overhead, inflation, etc. Any additional funds realized from reduced overhead, savings and slippage, etc., must be considered as a buffer against inflation and maintenance costs and not dedicated to Program expansion. Savings and slippage cannot be guaranteed.

Tom Kelly presented cost figures per component and total budgets for the field stations. He stated there are three field station budgets that are yet to be finalized.

John Wetzel brought up the issue of long-term Program cost projections. The A-Team needs the same type of data presented for the Program as it has for the field stations before it can provide guidance on trade-off decisions.

Tim Schlagenhaft asked for clarification on the internal process for balancing costs between different task. Delaney responded that resource trend monitoring has priority before allocation for priority research can be made.

Wetzel asked about potential increases in the workload due to NBS. Delaney responded that NBS priorities must be secondary to the LTRMP. Delaney stated that NBS would be providing dollars to support the Program but could not commit to anything at this time. The primary Program issue is restrictions on FTEs.

Wetzel commented that the Team needs to know how much outside dollars are coming in, where they are from, potential effects, whether they are hard or soft dollars, etc. The Team needs this information if they are to assist in making Programmatic decisions. Delaney said that he would provide this information at the next A-Team meeting, as he has in the past.

Pam Thiel asked if the extra efforts (HREP, Navigation studies, NBS, etc.) have put a strain on the staff, diluting their capability to support LTRMP. John Barko responded by saying that all Navigation and HREP efforts fit in nicely with EMP research needs and what has been done so far for NBS is also within the purview of EMP. Cooperative agreements established with local universities are helping keep FTEs from being a Program limitation.

Program Data Needs/Schedules

Delaney discussed the need to continue development of the systemic land cover database. He mentioned EMTC efforts, funded by the Fish and Wildlife Service, in support of the Migratory Bird Strategy as representing an excellent start on initiating a Wildlife Component.

Barko stated that one database we are critically lacking is elevation and bathymetry data. This information is just as important as, if not more important than, the land cover data being collected. Wetzel commented that we do not currently have the technology to collect cost-effective elevation data; otherwise, he would totally agree. He also commented that the 1891 land cover coverage is very valuable in temporal analysis of land cover changes.

Schlagenhaft stated that both the land cover and the elevation data are important and pointed out that both should receive funding in the AWP.

Delaney stated that two professors from Iowa State are putting together a phased proposal to address landscape patterns, biodiversity, habitat diversity and distribution, etc. The database developed under the Migratory Bird Strategy project will directly support this effort. Outside funding support would be necessary to initiate any landscape work.

Carl Korschgen presented a mockup of the Upper Mississippi River Migratory Bird Strategy pamphlet to give the A-Team an idea of its breadth. He stated that it is endorsed by Region 3 of the Fish and Wildlife Service (FWS) for publication.

Expectations Report

Barry Drazkowski explained that the Partner Expectations process has reached an endpoint as to further EMTC involvement. He asked for direction on "what next" from the Team as to linking State expectations with management needs. He summarized the expectations as supporting ecosystem efforts and reflecting multi-scales, both temporally and spatially. The State expectations have clearly become more focused over time, from site-specific evaluations to system-level assessments.

John Barko asked what the overriding management questions are. He stated that development of management goals and objectives should be the next step.

Tim Schlagenhaft commented that the lack of an overriding management plan to work from is a critical problem. Pam Thiel thought that the emerging FWS Region 3 plan, even though it will have some unresolved issues, will provide some focus. John Wetzel stated the underlying support to all this is Goal 3, development of management alternatives. Gordon Farabee commented that there are a number of management plans being developed and the ETMC should be involved in plan development. It is imperative that through that involvement the uncoordinated plans be brought together. The next step is for some group to assume a leadership role in developing an overall management plan at this time. Bill Bertrand said he didn't necessarily support one organization being responsible for an overall management plan. He said that several states and

agencies like the Fish and Wildlife Service and NBS are developing ecosystem plans. He thought that once these are completed then a logical next step would be to compare the different plans for similarities and use them as a start for an overall plan.

Bob Delaney asked what the group thought about this. Schlagenhaft stated that the lead needs to be in management not in research. The UMRBA may be an appropriate choice. Thiel thought it logical to form a committee from the FWS effort, tribes, ASCS, SCS, NGOs, and others potentially involved.

The Team felt the current Partner Expectations process should be summarized in an appendix to the Annual Work Plan for reference. Ken Lubinski felt it important that it be able to be referenced. Wetzel suggested revisiting the list in a year to assess status and perception of needs. Schlagenhaft suggested referencing Work Plan tasks to the expectations list. Delaney stated the expectations list will be included as an appendix to the AWP.

Other NBS Presentations

Jim Wiener and Carl Korschgen each presented a summary of their research station operations. Korschgen discussed wildlife research projects within his Patuxent Field Station, located at the National Fisheries Research Center-La Crosse. They include developmental work on the Management Strategy for Migratory Birds, habitat and guild analysis for migrant and resident birds on the UMR, telemetry systems development for tracking migratory birds, numbers and distribution of double-crested cormorants, ecological relationships between zebra mussels and diving ducks in the Great Lakes, survival and habitat use of mallard and canvasback ducklings, and causes and timing of mortality of ducklings from hatching to fledging. Korschgen also discussed the need for additional duckling ecology studies. Specifically, he suggested work on environmental factors influencing duckling survival.

Wiener discussed the major work units within his group at the Section of Ecology, National Fisheries Research Center-La Crosse. The five major areas include factors influencing benthic food chain organisms in the UMR, ecology of zebra mussels in rivers and impacts on native fauna, environmental and biological factors limiting fish production in large rivers, distribution of sedimentary mercury and its bioavailability to benthic food chain organisms in a contaminated river, and life history, movement, and habitat use of paddlefish in the Upper Mississippi River.

Agency Reports

Terry Dukerschein reported the fishery crew is collecting a large amount of young-of-year (YOY) carp. They are also noting a significant return of several types of aquatic vegetation from previous years.

Walt Popp reported that they caught their first lake sturgeon and are also catching large numbers of YOY carp. He noted that mayflies are small this year and that zebra mussel sightings are spotty.

Russ Gent noted that large numbers of YOY freshwater drum are showing up in their collections.

Doug Blodgett stated that zebra mussel densities seem lower than last year. They are not seeing the mats forming like last year. They have initiated investigations of the relationship between zebra mussels and dissolved oxygen concentrations.

Bob Hrabik reported his fishery crew is collecting significant data on YOY fish. Zebra mussels seem to be gone this year in the open river. He noted post-flood tree mortality is primarily distributed between willow, cottonwood, and silver maple.

Jerry Skalak noted that HREP physical performance evaluation work is needed; however, it is not clear how it will be accomplished. It is possible for EMTC to assist in writing evaluation reports and in development of digital datasets.

Don Williams stated that it is possible for WES to perform a systemic HREP physical performance evaluation. He noted that a 50%/50% cost-sharing for HREP land acquisition is being considered. He stated that Dudley Hanson is the acting chief of Planning and Engineering.

Pam Thiel commented that the new emphasis on Goal 3 is good, that the component reports need to be out this year, and the resource community needs to take action now using the currently available data.

John Wetzel stated he supports increased priority of Goal 3 analysis. The Program needs an integrated approach across LTRMP disciplines.

Next Meeting

The next meeting is scheduled for November 9-10 in the Quad Cities. An A-Team conference call is scheduled for October 11 at 9:00 a.m. to establish an agenda for the meeting.

Submitted by
Barry Drazkowski

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LTRMP Analysis Team Meeting
Bettendorf, Iowa

<u>Name</u>	<u>Agency, Location</u>	<u>Telephone Number</u>
John Barko	USCOE-WES/EMTC	608-783-7550
Ken Barr	USCOE Rock Island	308-794-5349
Bill Bertrand	Illinois DOC, Aledo	309-582-5611
Doug Blodgett	Illinois NHS Havana	309-543-6000
Tom Boland	Iowa DNR Bellevue	319-872-4976
Frank D'Erchia	NBS EMTC	608-783-7550
Robert Delaney	NBS EMTC	608-783-7550
Barry Drazkowski	NBS EMTC	608-783-7550
Terry Dukerschein	Wisconsin DNR Onalaska	608-783-6169
Gordon Farabee	Missouri DOC, Jefferson City	314-751-4115
Russ Gent	Iowa DNR Bellevue	319-872-5495
Robert Hrabik	Missouri DOC, Cape Girardeau	314-290-5730
Joe Jordan	USCOE Rock Island	309-794-5697
Tom Kelly	NBS EMTC	608-783-7550
Tom Keevin	USCOE CELMS, St. Louis	
Carl Korschgen	NBS NFRC	608-783-6461
Linda Leake	NBS EMTC	608-783-7550
Walt Popp	Minnesota DNR Lake City	612-345-3331
Tim Schlagenhaft	Minnesota DNR Lake City	612-345-3365
Jerry Skalak	USCOE Rock Island	309-794-5605
David Soballe	NBS EMTC	608-783-7550
Chuck Theiling	Illinois NHS Pool 26	618-259-9027
Pam Thiel	USFWS Winona	507-452-4390
John Wetzel	Wisconsin DNR LaCrosse	608-785-9994
Jim Wiener	NBS NFRC	608-783-6461
Dan Wilcox	USCOE St. Paul/EMTC	612-290-5276
Don Williams	USCOE NCD Chicago	312-886-5470

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LONG TERM RESOURCE MONITORING PROGRAM
ANALYSIS TEAM MEETING MINUTES

August 29, 1994
Bettendorf, Iowa

A meeting of the Long Term Resource Monitoring Program (LTRMP) Analysis Team convened at 12:00 p.m. on August 29, 1994 at the Holiday Inn in Bettendorf, Iowa. Attending were team members and others from the states of Illinois, Iowa, Minnesota, Wisconsin, the National Biological Survey (NBS), and the U.S. Army Corps of Engineers (Corps). An attendance list is attached.

Bill Bertrand, Analysis Team chairman, called the meeting to order. Bill said that the purpose of the meeting was to review the draft 1995 Annual Work Plan. The plan was amended with budget information since distribution of the first draft.

Center Director's Report

Bob Delaney distributed an agenda for the meeting. Bob explained that the budget information in the draft Annual Work Plan includes funding withheld as savings and slippage in previous years. Bob distributed written Corps and Wisconsin comments received on the draft Annual Work Plan.

Bill Bertrand reported that Pam Thiel had called and said that the U.S. Fish and Wildlife Service needed more time to review the draft Annual Work Plan. Bob Delaney said that the original draft was released in late June, and the current draft was available for two weeks for review, and comments would be accepted at EMTC for several more days before a final plan is provided to the Corps for approval and funding.

Bob distributed a detailed listing of tasks that will be funded using the formerly-retained savings and slippage funds. Bob presented a summary of the requested funding for the state-operated field stations. The field station budgets (FY 1994 and requested FY 1995) are as follows:

Field Station	FY 1994 Budget	FY 1995 Budget	Difference
Minnesota	\$328,000	\$349,000	+\$20,000
Wisconsin	\$320,000	\$350,000	+\$23,000
Iowa	\$361,000	\$360,000	-\$1,000
Missouri	\$350,000	\$352,000	+\$2,000
Ill. Havana	\$338,000	\$405,000	+\$67,000
Ill. Alton	\$332,000	\$435,000	+103,000
		Total difference	+\$215,000

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Bob said that a couple of the field station budgets will need to be reviewed to determine if the requested increases are warranted. Bob said that the one year increase in field station budgets are unsustainable, and that he will be asking for multi-year field station budget forecasts prior to the next Analysis Team meeting. Terry Dukerschein reported that her initial forecast of the Wisconsin field station budget, including a conservatively low average 3% annual salary increase and \$10,000 in annual capital equipment replacement costs, resulted in a very large increase in the annual field station budget by the year 2002. Terry said that there is a need for advance forecasting now to avoid future fiscal problems. Bob Delaney remarked that the issue of a lack of cost indexing of program funds may need to be included in the EMP report to Congress.

Bill Bertrand remarked that the NBS overhead appears substantial and asked if it will be reduced. Bob Delaney said that overhead for the LTRMP under the Fish and Wildlife Service was 38% and this was reduced to 19% under the National Biological Survey. This made an additional 298,000 available to the LTRMP and these funds are available every year for the remainder of the program. Bob said that the NBS is working on a cost recovery policy which may result in a further reduction of the overhead rate. Bob noted, however, that the states are, on the average, assessing higher overhead rates for field station operations.

Bob said that EMTC had sent out a copy of the Sediment and Geomorphology planning document with the Analysis Team meeting announcement. Bob said that work on this subject is proceeding, and that coordination between LTRMP and Corps Navigation Study efforts will yield complimentary advances in understanding sediment processes in the UMRS.

Bob noted a letter (also sent out with the Analysis Team meeting announcement) from Dr. Michael Church, University of British Columbia, conveying his positive views on the recent LTRMP-sponsored rivers conference.

Annual Work Plan Review - Goal 1

Ken Lubinski asked for member comments on Goals 1 and 2. Bill Bertrand noted that proposed Goal 1 research funding is down 24% from FY 1994, while navigation-related funding is up 150%. Bill expressed concern that navigation-related work is capturing an inordinate share of LTRMP research funding and EMTC staff time. Ken Lubinski explained that a decision was made to devote a limited amount of EMTC staff time to navigation research efforts (Ken Lubinski ~15%, Steve Gutreuter ~10%, and Sara Rogers ~10%). Ken explained that this level of commitment to navigation research is consistent with the LTRMP Operating Plan. Ken further explained that in addition to salary cost estimates, administrative costs were proportionally added to each task in the FY 1994 Annual Work Plan, at Corps insistence. Ken emphasized that beyond this level of EMTC staff commitment to navigation research, additional funds from the Corps of Engineers Navigation Study are being used for execution of navigation-related work. Bob Delaney stated that the FY 1995 Annual Work Plan included all LTRMP funds (savings and slippage, and overhead reduction) and to compare the FY 1995 Annual Work Plan with FY 1994 you must add the task list

in the mid-year supplement numbers 1 and 2. He said these apparent funding changes are then nearly equal.

Tom Boland remarked that the LTRMP budget is becoming more complex, and that there are a number of new research initiatives. Tom said that the Analysis Team should be reviewing scopes of work for the navigation research, and should have some input into the study design. Ken Lubinski said that the Corps Navigation Study plans are being coordinated with the states and other agencies through the Navigation Environmental Coordinating Committee, and are being designed by technical work groups of invited experts.

Dan Wilcox recommended a briefing on the Corps Navigation Study at the next Analysis Team meeting.

Bill Bertrand noted that the FY 1995 Goal 1 research budget is down 24% from FY 1994. Bob Delaney said that EMTC management had to reduce program funding in some areas to make up for the \$215,000 increase in field station budgets.

Bob Delaney reported that Corps North Central Division comments on the draft Annual Work Plan recommended format changes that would allow tracking of tasks. Bob said that the Annual Work Plan for next year will be modified accordingly.

Tim Schlagenhaft asked why there is no funding indicated for Goal 1 Strategy 1.1 Plan Research? Ken Lubinski explained that new research initiatives are developed using the conceptual model of the UMRS ecosystem, in response to opportunities for outside funding, from suggestions by the States, from the information needs survey, and from the LTRMP Operating Plan. Ken said that planning new research is ongoing, and was not provided separate funding in the Annual Work Plan.

Dan Wilcox noted that the narrative for Task 1.2.3.4 Water level management sounded a bit ambitious. Bob Delaney agreed, and said that the text would be changed.

Annual Work Plan Review - Goal 2

Ken Lubinski explained that there were no major changes in the text of the Goal 2 portion of the Annual Work Plan from the previous year. Tom Boland asked that the states have more input into the annual monitoring reports. Ken thought that the outlines of the monitoring component portions of the report could be coordinated. Ken said that the same could be done for the five-year synthesis reports.

Ken said that the Corps commented on the proposal to drop calibration of fish sampling gear for the purpose of estimating fish density. Ken explained that gear calibration was dropped because of technical difficulty and the unacceptable destructive sampling (rotenone) needed to calibrate fishing gear. Dan Wilcox mentioned that much information is gained with the present fish monitoring program with emphasis on community composition and relative abundance, and that quantitative investigations of fish populations are being conducted as separate LTRMP research (eg. Finger Lakes HREP Biological

Response Study). Analysis Team members agreed that the present LTRMP monitoring of fish community composition and relative abundance does not need calibration of fishing gear to allow estimates of fish density.

Annual Work Plan Review - Goal 3

Bob Delaney pointed out the addition of the user expectations survey proposed under Goal 3. Dan Wilcox explained that this task is from the Operating Plan, and that it would involve a design of a public survey and the forecasting of river user expectations. Dan cautioned that the work would probably take more than one year. Bill Bertrand asked about the scope of the survey. Dan said that the survey would cover recreational uses, not uses such as water appropriations, waste assimilation, hydropower, etc.

Annual Work Plan Review - Goal 4

Bob Delaney noted that Recreation Site Mapping was moved from Goal 4 to task 2.2.10.4, and \$9,500 was added to the cost for the task. Dan Wilcox said that the mapping work will directly contribute to the Corps Navigation Study effort to assess the effects of recreational boating.

Proposed Change to LTRMP Annual Work Plan Development Process

Ken Lubinski proposed streamlining the process of preparing Annual Work Plans. Ken proposed to:

- 1) EMTC staff will focus on year-to-year changes. An overview summary will be provided to the Analysis Team for consideration in April.
- 2) Following Analysis Team review and consensus on proposed changes, EMTC will prepare Draft Annual Work Plan and send it out for review.

Analysis Team members agreed that Ken's proposal would streamline the process, and that it should be done. Tom Boland emphasized the need to identify progress on each task in the Annual Work Plans.

Discussion of Galloway Floodplain Management Report

Tim Schlagenhaft asked about the impact of the Galloway floodplain management report on the LTRMP. Bob Delaney said that a special team is reviewing the recommendations contained in the Galloway Report, and the team will propose administrative actions needed by mid-September or October. Legislation is being proposed by members of Congress (Baucus). Bob said that the SAST report was due out last March, and understands that it is still weeks from being released. The EMTC has been provided \$150,000 by NBS for hardware and software to maintain on-line certain SAST data on the UMRS. The Columbia, Missouri, NBS Center will maintain on-line certain SAST data on the Missouri River.

NBS Update

Bob Delaney reported that NBS management has decided to administratively combine the two La Crosse NBS facilities (EMTC and the National Fisheries Research Center). Bob said that the position of Center Director will be advertised, but that this process may be delayed because of a procedural complaint.

Bob summarized funding received by EMTC from NBS to date:

- \$25,000 for publication of scientific platform papers from the floodplain rivers conference in a peer-reviewed special publication of "REGULATED RIVERS"
- \$150,000 for making certain SAST data available
- \$53,000 to initiate cooperative work with the NFRC and others on a contaminants data base for the UMRS

Summary

Bob Delaney summarized points agreed upon during the meeting:

- The final Annual Work Plan preface will explain that administrative and support costs are allocated across all tasks.
- EMTC will present an overview of proposed changes in the FY 1996 Annual Work Plan to the Analysis Team at the April meeting for consensus prior to preparation of the draft FY 1996 Annual Work Plan in early July.
- Bob will ask the field stations to forecast their budgets through the year 2002. Field station budgets will be a topic of discussion at the next Analysis Team meeting.
- The Corps will provide a briefing on the Navigation Study at the next Analysis Team meeting.
- The next Annual Work Plan will document status of past work under each proposed task to aid in review.
- A budget table will be included in the final FY 1995 Annual Work Plan to show cumulative spending on each strategy and this will be detailed to the task level in the FY 1996 Annual Work Plan.
- The proposal to drop calibration of fishing gear and the attempt at quantifying fish density as part of LTRMP monitoring is acceptable to the Analysis Team.
- Prepare outline of 5 year trend status reports for discussion at next Analysis Team meeting so a determination can be made of usefulness to management.

Next Meeting

The next Analysis Team meeting will be on November 9 and 10, 1994 in the Quad Cities, at a location to be announced.

Chairman Bill Bertrand adjourned the Analysis Team meeting at 3:30 p.m.

Respectfully submitted,
Dan Wilcox

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LTRMP Analysis Team Meeting
Bettendorf, Iowa
August 29, 1994

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