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Analysis Team Conference Call Minutes

John Sullivan chaired the meeting.

Roll call: John Sullivan – WI rep, Tom Boland – IA rep, Rob Maher – IL rep, Kevin Stauffer – MN rep, Janet Sternberg – MO rep, Marvin Hubbell – LTRMP Program Mgr. USACE, Chuck Theiling – Rock Is. Dist. USACE, Sandra Brewer – Rock Is. Dist. USACE, T. Miller – St. Louis Dist. USACE, Fred Coleman – NRCS, Barry Johnson – USGS, Pat Heglund – USGS, Kirk Lommen - USGS, Linda Ott – USGS, Larry Robinson – USGS, Yao Yin – USGS, Brian Ickes – USGS, Jennie Sauer – USGS, Jeff Hauser – USGS, Jim Fisher – WIDNR, Pete Redmon – USEPA, Bob Hrabik – MODOC, John Chick – INHS, Mark Pegg – INHS, Mike Steuck – IADNR, Terry Dukerschein – WIDNR, Walt Popp – MN DNR.

Minutes from previous A-Team meeting:

A motion to approve passed. Pat Heglund will send any comments that she has.

FY 2004 Budget:

Marvin Hubbell announced that Savings & Slippage had gone up to 22% for FY 2004, an increase of 2%. This left \$14.683 million in EMP for FY'04. It was estimated that this meant that LTRMP would lose another \$100,000 to 120,000. Marv cautioned all that this may not be the final figure for FY'04.

Purpose of the Conference Call:

The purpose of the conference call was to respond to a letter from Leslie that included an attached LTRMP SOW for FY'04 prepared in Sept. and based on an assumption of a \$20 million EMP budget and 16% Savings & Slippage (S&S). A second attachment was an UMESC-proposed revised SOW for LTRMP in FY'04 based on a \$19 million EMP budget and a S&S of 20%. Page 3 is a summary of work that will not be done in FY'04 due to an increase in S&S.

Barry J: What are the A-Team priorities?

John S: The A-Team wants to conduct FY'02 base monitoring. Have we received enough justification to reduce base monitoring?

Chuck T: We don't have enough information to base a decision.

Rob M: Where is the other (UMESC's portion) \$2.3 million going?

Janet S: Agrees with Rob. What are the costs of the various tasks UMESC performs? John S: There is not agreement among the states that we should give up base

monitoring. We don't know how funds are being spent. We can't determine priorities without knowing where the money is going. Winter SRS is coming up. I hope we can resolve this today.

Chuck T: I'm not ready to make a decision on winter SRS. I may want to drop SRS.

Pat H: Most costs are fixed costs – full-time staff and contracts to let out. We need to reduce sampling this year and restructure for the future.

Chuck T: We have no water quality reports to base our decisions on.

John S: We all expected to see more reports at this point. We need them for decisions on changes.

Rob M: There is not enough information to make decisions.

John S: Our priority is FY'02 base monitoring.

Barry J: We'd like to do the FY'02 work, but we can't.

Chuck T: We need to know the costs. It's a priority.

John S: We need to see the fish reports to be able to make decisions about changes to the fish component.

Chuck T: The best performing component is the macroinvertebrate component based on the cost and the number of reports put out. It's very efficient.

Linda O: Will be sending Marv the costs of the various components for UMESC and the field stations.

Chuck T: We need to know how many FTEs and what they are assigned to.

Marv H: What level of detail do we need?

Barry J: Tell us what to add, what to cut, what are the priorities.

John C: It's hard to be creative when we don't know what the costs are.

John S: We need to determine our priorities before we receive funding.

Terry D: The only consistent intact data string in Pool 8 is vegetation. We need to retain all data linkages - past and future.

Janet S: What about bathymetry or GIS products in FY'04?

Barry J: Jim Rogala is only partially on LTRMP funding. There are plans for only a few GIS products in FY'04.

Pat H: The money is tied up in fixed permanent salaries.

Chuck T: What is the breakdown of FTEs by discipline?

Barry J: If we don't get priorities from the A-Team, UMESC will put the numbers down.

Chuck T: Why was the Status & Trends Report cut?

Barry J: It can be included if it is a priority.

Tom B: I have a problem eliminating anything from the data string. It smells like the beginning of the end of the program. The Corps keeps changing the target. We need to see some numbers from UMESC for LTRMP expenditures.

Rob M: I'd like to see UMESC's fixed costs – a list of FTEs paid by LTRMP.

Janet S: I second that request.

John S: We want to see a breakdown of costs for LTRMP by UMESC. Is there a consensus on asking UMESC for the numbers?

Kevin S: Yes from Minnesota. What are the costs of cutting the fish component versus the water quality component?

Pat H: It's complicated to produce those numbers. We need to know the priorities of the states.

Marv H: UMESC's priority is to protect fixed staff. (only part of what he said – missed the rest).

Chuck T: The first priority is getting the FY'03 reports.

Barry J: The reports exist in draft. If we decide to cut analysis, you won't see final reports.

John S: Are the A-Team reps ready to make a decision today about the FY'04 SOW? **Rob M**: No Tom B: No

John S: When will you be ready?

Chuck T: I'm not sure if what we are seeing in the way of cuts is due to scientific expertise or budget reasons.

Barry J: Both

Rob M: Why does UMESC need \$2.2 - 2.3 million? Where is it going? How is it being used?

John S: How are we going to resolve this? The group needs better accounting of how dollars are being spent.

Linda O: I'll provide numbers to Marv. He has an agreement with Leslie. I didn't realize that the A-Team gets involved in budget decisions.

John S: We need budget figures to make good science decisions. Can you provide us with the cost of running the lab?

Tom B: How did you match costs and cuts in the SOW?

John C: Looking at the SOW makes it seem like we are winding down the program. To be more efficient we need more information. Feel free to swamp our minds with information. The only fixed costs we know are from the field stations. What are the other fixed costs?

Mike S: Provide us with the same level of cost detail that the field stations have to provide to UMESC.

Walt P: Could you provide us with the number of FTEs at UMESC by component? John S: I'm not sure we need that level of detail.

Chuck T. What proportion of the fixed costs are FTEs, equipment and supplies?

Marv H: Transparency is valuable. The Corps is as anxious to view the numbers as are the states.

Tom B: It's not a question of trust. We need information to make good science decisions.

Marv H: UMESC built a FY'04 LTRM program around a fixed number of permanent staff rather than building a program around the FY'02 base monitoring.

Barry J: Yes that's the case.

John S: Good point Marv. All the more reason to get good numbers.

Tom B: We're looking at \$4.5 million or half a million less than the program we want.

John S: I haven't gotten a response from the states as to what they want to continue in FY'04 and what can be cut.

Kevin S: We can get that to you in a few days; we're not ready to do that now.

John S: A-Team reps need to talk to the field stations as to what to add or cut.

Tom B: We want to see where the other 50% of the funds are spent before we make a decision about cuts in FY'04.

John S: I hope we can make a recommendation on water quality winter SRS today.

Jim F: Lab can't gear up in time to do the full complement of the water chemistry. It can do SS, chlorophyll, TN and TP.

John S: What is the savings in not doing the additional chemistry during SRS?

Barry J: Don't know.

John S: Winter SRS is one of the more important events we monitor.

Tom B: I agree.

All of the state reps and Chuck T agreed that winter SRS should be done with the reduced chemistry. John S said that he would submit this request to Leslie in writing along with a request for budget details.

Chuck T: It's not a good idea to drop the Status & Trends Report. He said that he would continue to discuss this.

The next A-Team meeting was set for February 10th somewhere south.

John S presented a summary of the discussion:

- He will ask UMESC for additional information on the budget to be shared with the A-Team;
- There is unanimous support among the states and Corps to do winter SRS.

John S: I'd like to hear from A-Team members in the next week about the FY'04 SOW. He would then share that with all of the states.

Chuck T: Asked about getting a response to the Corps' comments which were sent before Christmas.

Barry J: Will respond to the Corps and states together.

Tom B: We need to see the budget numbers.

John S: We will respond to the proposed FY'04 cuts after we see the budget numbers.

Draft Analysis Team Minutes 02/10/2004

INTRODUTION AND PAST MINUTES: Chairman John Sullivan convened the meeting at 8:05 am. After introductory remarks he distributed minutes and a summary of the January 6, 2004 conference call. Adoption of these minutes was deferred until members have a chance to review them.

Sullivan reviewed background information for this meeting. UMESC distributed budget numbers in an e-mail message from Pat Heglund, and John Sullivan made bar charts and pie charts to summarize these numbers. John Chick sent out an e-mail summarizing Team Leaders' analysis of the budget on February 4, 2004. Marvin Hubbell also sent out general e-mail and attached documents (related to the Status and Trends Report) February 4 which the A-Team received February 9.

BUDGET UPDATE: Roger Perk updated budget information. The 2004 budget has taken some hits and the USACE budget overall was tight. Savings and Slippage was 22%, plus an additional 0.7% rescission due to expenses overseas. Perk said they are making tough choices with shortfalls on both HREP and LTRM sides of EMP. EMPCC at their last meeting made the decision they were not going to transfer any money from LTRM to HREP, and we all need to work within our budget. We need to work together to come up with a plan to implement LTRMP for 2004, and then we can start working on 2005. In 2005 the President's budget is \$28 million—last year it was \$33 million. Perk suggested we look at \$19 million for 2005. We'll work hard with Congress, but Perk was not overly optimistic. It is easier to go up than down, he added. Congress seems to be at \$19 million most consistently. The FY 2004 final savings and slippage plus rescission was 22.7%. Linda Leake will provide more detail at this meeting.

Janet Sternburg asked to have Savings and Slippage (S&S) clarified. Perk explained that in conference committee the House and Senate agree on line items that they want to get done. If the total of all line items in the Energy and Water appropriation ends up higher than the bottom line number, savings and slippage is taken out. If a project ends up in the language of the bill, they are prioritized as line items and don't have Savage & Slippage taken out. It is very difficult to get an appropriation as a line item—typically someone on the committee must strongly support it and push it through. Once it is set to a specific amount as a line item, the receiving agency can't move the money around, so it also limits flexibility. There is a different S&S for each one of the appropriations—it depends on how many line items in each are set out for each year. Janet Sternberg asked if it was a possibility to get it set aside. Perk explained there has to be money to give back to the project to get it set aside. Lately there is very little such money, and very little chance. John Sullivan asked where EMP fits in terms of the Corps funding distribution. Perk explained there are 3 different appropriations-O&M (Operation and Maintenance), CG (Construction General), and GI (General Investigations). S& S is lower for some of those. John Sullivan commented that EMP is a management activity dealing with environmental construction on the river. It should be treated equally with O&M. Perk explained that congressionally they are 2 different pieces-different appropriations. In O&M they draw a cut line and say these things aren't going to happen. Sullivan made

the point we have an environmental side trying to maintain the balance. That's where there is concern.

Chuck Theiling commented there is wisdom to keeping it separate, because if O&M and EMP are together in one appropriation, O&M will get money first for navigation, and there is a risk of not getting it for the environment.

SCOPE OF WORK (SOW): Linda Leake detailed changes in funding since the last reduction (a 0.7% rescission). The new number for the appropriated LTRMP is \$4.39 million. In the e-mail to A-team, banked dollars are those remaining in Coop agreements with states and USGS, and these total \$193 K. The new bottom line with the banked dollars is \$4.59 million. Last year, the total program was 3.9 million and in FY2002 it was \$5.2 million. The starting assumptions were that all Permanent staff would be retained, and no Field Stations (FS) closed, and then taking technical guidance from the FY03 A-team priorities and discussion with FS and Principle Investigators (PI's) trying to hear priorities within the program. When they put it together, the target was trying to get back to the FY02 sampling. A couple things had to happen, however-they had to go through FS and UMESC and eliminate temporary staff within the program and also reduce operating expenses. It was tough, and while they were doing that, they used the chart with staffing patterns [sampling schedules] blocked in for field collections as another tool to help put that SOW together. The bottom line they arrived at was a \$4.66 million suggested SOW. It takes more money than we have, Leake explained, and in Iowa, there were also budget salary errors. Iowa could not find any efficiency to cover that, so the suggested SOW is now \$68K in the red. In addition there is the 0.7% rescission of \$27K, so we end up with \$4.398 million as the money available. Several things are going on. This brings us to a common starting spot.

Linda Ott explained the facilities and common services charges which stem from new business practices government-wide. The guidance given by USGS was to go back to the FY02 budget and determine how much administrative support and common services were taken at a Bureau level of 16% in FY02 and 11% in FY 04. In FY02 it was \$964K, and in 04, \$867K. "Facilities" is defined as your rent line item. Everything else is common services—postage, copy machines, telephones, etc. Another point was that COE has been concerned about this from the beginning of this program's time and wanted more clarification with the new process. The bottom line after these discussions was that COE and USGS have agreed now and they have a clear understanding of common business practices and no further discussion was needed.

"Do common services include FS indirect?" Chuck Theiling asked. "Yes," Linda Ott replied, "It varies among partners."

John Chick asked how it could be that it was \$4.25 million originally, then \$4.398, and now \$68K in the hole. Linda Leake explained why it didn't add up—the budget Bellevue submitted was an additional FS charge. "At this point in time we're in the hole," Linda Leake said. Linda Ott also did an assessment of UMESC common services in facilities by FS and USGS. UMESC is right in the middle, between FS. Linda Leake summarized that the way the information is packaged has changed. The Onalaska FS is in UMESC's facility rate. Linda Ott also explained that once the move is done, there will be a reduction on the facility rate for next year, but did not have an exact amount estimated.

Janet Sternburg asked if they were pro-rating facilities and common charges for all the various programs at UMESC. "It is prorated based on labor," Linda Ott explained.

John Sullivan received e-mail along with everyone else that laid out what Team Leaders are asking for. The bottom line of their evaluation was that there appeared to be sufficient money to carry out the 2002 work (the field effort). "Why does field effort have to be curtailed if there is sufficient money to carry out the work?" Sullivan asked. "There seems to be a disconnect," he added.

John Chick explained the process team leaders went through. They asked the question, "How far off are we from having enough to complete 02 work? UMESC's total for the FS to do the work was 2.671. The Team leaders found one mistake with Missouri's budget that they adjusted for and came up with a total of 2.610 million. Linda Ott explained there were nuances in the budget, which actually now totals 2.7614-in that figure there is \$107K for contract work for Heidi Langrehr, Andy Bartels, and Jim Fischer at the Onalaska FS for additional support to the UMESC component specialists. Initially for that, they needed to take out approx 105K from the UMESC number. Thev also had to take a 10% operations cut across the board and leave a pool of money \$33.7K for temporary help for FS. FS could not be fully funded at level requested of Tom Kelly. FS budgets submitted in the fall were never able to be funded at that level. Linda Leake said when they got their bottom line number, following the not closing any FS assumption, they had to reduce operating expenses and cut temporary staff, and they were still \$68K in the red. We can't fund the budget at the level we submitted. JOHN SULLIVAN added, "Essentially the \$100K issue with Terry's FS, means the program is \$168K short with 02 level."

Linda Leake said yesterday they looked at the suggested SOW—what would it take to bring us back to 02 sampling level, and it would take \$175 K in order for FS to sample at 2002 level. "As Roger mentioned," she said, "the Corps has been looking but has not been successful in finding the additional funds. That's our priority too, but because of the budget constraints, we can't get there. How can we modify the suggested SOW to get to the budget we need to have?"

Linda Leake explained that within UMESC, we've been able to work with Terry to contract with them to provide some minimal services. This is not because of a budget issue Terry has, it's just because got included in FS column at UMESC but not in the FS total for baseline monitoring. It was in FS side at UMESC to save money. Chuck asked Terry what she had budgeted for. "Not full cost," Terry replied. She did not account for the contract money in the baseline budget. "When I know how much we're getting for the contract work, I will be adjusting appropriately for this year," she said.

Roger Perk asked, "How are we determining how many things are getting done in a given year? When we're putting dollars to certain tasks, is there some flexibility or is there slop in there? Who's not getting the temporary help to get the field work done?"

Someone (who?) said that from the Team Leaders' perspective—we have no idea how it will be broken down to our level—\$33K for temp help—pool determined based on our recommendations for suggested SOW. Temps were based on what Team Leaders felt they need to execute a full 02 sampling.

Roger Perk asked the Team Leaders, "If you had bottom line #, is it possible you could do more than what was in your initial budget that you put in? Next step is what can you accomplish for that many dollars for your stretch of the river? Am I hearing we might be closer than we think we are? Is that what I'm hearing?"

John Sullivan reminded the group that this is not clear for the lab work with water quality—we don't know if they can cover SRS. Barry said \$175 includes enough for full sampling load for all parameters in 02. \$30K is the amount in the \$175 that covers lab. If we want reduced parameters, we can reduce that total of \$30K somewhat. John Sullivan stated there was a concern that lab cost was driving the field work. "It's my feeling you still have valuable information to collect, even without the chemistry lab," he said. "We could still do the field work and not incur a lot of cost at the lab end."

Barry Johnson stated we might have to cut SRS in spring—it depends on what the total number ends up at.

John Sullivan said, "We have to have the discussion of what field work needs to get carried out."

Someone offered clarification-- The \$175K deficit includes temporary help at FS, operating costs across the board, and the shortfall from Bellevue. The bottom line is that the LTRMP is \$68K in red right now.

Chuck Theiling said "It appears to be boiling down to the loss of a temp to each FS. How do you make up for the loss of that one body to get the work done?"

Linda Leake explained that it's not that simple because if each FS comes up with a different strategy, how does that affect program as a whole? "We all agree we don't want each FS going independently," she concluded.

Janet Sternberg asked, "Are there other components of the budget you can defer to another year and put that towards more monitoring? We're looking at efficiencies on the monitoring side to do more work. Is there opportunity to look at that on the federal side?" Linda Leake said, "Yes—we've done that and cut half of students in GIS—there is some potential where products could be delayed. One of the nuances is that to reassign highly paid technical folks, there are additional costs—travel and per diem."

John Sullivan said, "Assign higher priorities to some tasks. Could there be temporary assignment of permanent staff to carry out some lab work?"

Linda Leake replied that in most areas a single person isn't owned by LTRMP—it's only a % of their time.

Marvin Hubbell said, "This has been informative-this group needs to stipulate so much money we're short and start planning. In the absence of having a good idea of what we're buying, we all want to maintain status quo as close as we can to 2002—we're getting close to chasing our tails here.

John Sullivan agreed and stated the group has better understanding on how money is distributed to FS. "Apparently temporary help at FS was critical for carrying out all field work in FY02, he said. "There may be savings on UMESC side as well. The job of A-Team is giving a recommendation of where our priorities are for the long term program. The States that commented recognize we all want to do 2002 level monitoring, but we can't always due to budget fluctuations. We think that baseline 02 is priority, but we have to consider permanent staff and assigning effort."

Discussions of specifics of how to accomplish this ensued. Different states had different ideas and priorities. For example, IL was concerned about losing 1st period of fish sampling and WI was more concerned about losing water quality or vegetation data in the program.

John Sullivan said, "The real question is what can we afford not to do this year?" There is consensus we have a problem, but we're not certain what the full design should be. The A-Team needs to come up with guidance on general feeling of what we can afford to loose."

The Analysis Team took a break, and after the break, John Sullivan asked, "Does anyone disagree that we don't have a shortfall?" There were no disagreements.

There have been suggestions about how to reduce shortfall—it's a 4% across the board reduction at each FS and at UMESC," Sullivan clarified. "The number is \$175K. The Army Corps could cut 1% and then UMESC and FS each could cut 1%. That's one alternative to reach the 02 effort."

Roger Perk explained that the HREP side is already \$0.5 million short. "We are going to work within our budgets. For the \$68 K, let's deal with it. No, the Corps won't move 1% on the HREP," Perk concluded. John Sullivan added that at the last EMPCC meeting EMPCC already made that decision. Sullivan also suggested the group pass along some comment in terms of how we might better address the issue of Savings and Slippage.

"Our recommendations are for FY 2004, not for the out years at this time," Janet Sternburg clarified. "If everyone cuts by 4%, that might still may mean we have to cut effort in the field. Do FS believe they could do full monitoring with an additional 4% cut?"

Valerie Barko commented that she was troubled about basing cuts on budget rather than science.

JOHN SULLIVAN stated. "That's an important point—the A-Team is asked to make suggestions, but we don't always have all the information available to do that. The work we went through the fisheries program is very valuable looking closely at it. For the future, Valerie hit it right on the head. We should plan for the fluctuating budget and what the program will be in those years when we don't have the money."

Janet Sternberg reminded the group that visions for the future will be discussed at EMPCC.

"Are there places all across the program where there can be cuts?" John Sullivan asked. "I don't think we should look at this as entirely attacking one side or the other. We have to have a philosophy to look at all of it."

John Chick asked, "Is it a worthwhile exercise to look at the federal side of the budget?"

Chuck Theiling asked about apparent inefficiencies in data management and what data management includes. Linda Leake answered that it includes managing and processing the data, taking care of computers in field, maintaining the database, taking care of the website, and query tools. "Those are permanent folks and there is no more money to gain," she said, adding she went through and made at least 4 cuts already. "We're almost at the point that if you cut it anymore, it's not worthwhile doing," she said. "At what point can we not do it? We need opportunity to go back and look at it."

Janet Sternburg commented, "It's a lot of loss in staff and that's reality."

John Chick commented that the way we've been reducing our budget is by gaining efficiencies. At a 4% level, that's not a long term solution—you rob Peter to pay Paul.

Barry Johnson added that we're halfway through the year and some sampling has already not been done—"to start a year and do full sampling will cost a lot more than it does now at this point."

University salaries are all in contract and cannot be cut, Linda Ott said. Students and temps that haven't yet been brought on board are the ones that are potential cuts.

Pat Heglund said, "You're asking for a lot of scientific information to back up what work we chose to do and that's not a whole lot of money to do the work."

UMESC staff identified some possible additional cuts such as 2 students doing LCU, Reducing a parameter set or taking only field WQ measurements, and cutting the \$11K identified for high priority emergency equipment refreshment.

John Sullivan asked, "Where can you save money to get the 4% cut in field station level?"

There was discussion that first period fish sampling is not even in the scope and would need to be added back to do the full 2002 fish sampling. Should we just leave it out instead? Rob Maher said Illinois had heartburn about that because fish has already been looked at. IL from science standpoint doesn't think dropping a whole period of fish is valid. Missouri also said they don't have a vegetation component to drop, which limits choices more for their field station.

Chuck Theiling asked, "What if we ramped up Water Quality monitoring to the 2002 level, but reduced the parameter's list? If we conduct 02 field effort for WQ, what effort will we do in the lab?"

Currently, TN, TP, SS, CHLA, volatile SS is a very weak effort in the lab, John Sullivan answered. "If we run into a situation we have not seen, we will miss opportunity of looking at that aspect—such was drought, which we suspect is what affected vegetation and nutrient levels in the crash in the early 1990's. We're missing important component, and I don't know the costs of getting soluble Nitrogen, etc back on line."

Rob Mayer suggested the A-Team come up with a prioritized list for out years.

Chuck Theiling asked about vegetation component salaries on the UMESC side listed at 1.4 FTE's. The .4 is Barry Johnson, Jim Rogala, and Brian Ickes.

Jenny Sauer asked for clarification –"10 % has already taken off FS budgets. What are we taking the 4% off of?" Barry Johnson and John Chick (?) clarified that the 4% has to come off accounts to the make up for the \$175K the program is short.

Someone asked how are the 5 field stations (all except Onalaska) saying it is possible to do the full monitoring with an additional 4% reduction? Missouri stated they can make up dollar amounts by piggy-backing time between the various projects. John Chick said he would not fill a permanent position and would hire a temp instead. Mark Pegg said he would be ok as long as equipment doesn't fail. Walt Popp said he can cut \$9K from a planned airboat repair. Mike Steuck said he would cut amount of temp staff time and cut one out because of doing EMAP. Mark Pegg said results would be slower because they might not have as much time for analyses later. John Chick said there are unspoken risks—"if a couple things go wrong for us—we'll all be in the red. There are no surpluses expenditures to make it up. John Sullivan asked if that happened, "Would fall or summer work be cut?"

Linda Leake commented that we are fiscally irresponsible if we have to go in red.

Marvin Hubbell asked if UMESC could then support that. Linda Leake answered that "until we take a look at it, we're not going to say, but trying to get to a 4% cut will impact others."

Much discussion ensued about the risks of dropping various types of monitoring and lab parameters. "We're asking for priorities," Barry Johnson stated and asked each state rep to for the state's priorities for field work:

Missouri ranked as follows from highest to lowest: 1. Fish (has been evaluated) 2. Water Quality (summer and fall are highest priority times), 3. Macroinvertebres, 4. Vegetation, and keep the status and trends report for justifying future full funding. Reduce travel, delay presentations, and eliminate science planning in 2004 unless it can be accountable to a non-LTRMP funding source. Further reduce LCU, bathymetry, and website products.

Illinois ranked from highest to lowest: 1. Fish, 2. Vegetation, 3. Water Quality (WQ could do without winter sampling, however they stated.)

Iowa ranked from highest to lowest as follows: 1. Fish, 2. Water Quality, 3. Invertebrates, 4. Vegetation. They said summer and fall were the most important sampling times for fish.

Wisconsin-John Sullivan polled all members and ranked from highest to lowest as follows: 1. Vegetation, 2. Water Quality and Fish ranked together as similar, 3. Invertebrates was least important. We could live with a reduced parameter list at lab from 2002, with priorities in water quality as follows: 1. MC fixed 2. Tributary fixed, and 3. off channel fixed sites lower priority. For WQ SRS, from most important to least important 1. Winter, 2. Summer, 3. Fall, 4. Spring. Inverts ranked lowest because of quite a bit of variation—we would like to hear thoughts of where it should go in future. We agree with what IA and MO already said for UMESC side. WI agrees that the Status and Trends

Report should be kept as suggested.

Minnesota ranked from components from highest to lowest priority as follows: 1. Water Quality, 2. Vegetation, 3. Fish, 4. Inverts. For water quality SRS, winter and summer SRS most important and retain the fixed sites. They would like John Sullivan's compromise for retaining dissolved nutrients like SRP, etc. MN has collects a lot of fish on Pool 4 –this is a state perspective, not a program perspective. Vegetation is important all the way around and for looking at effects of more drawdowns and more water level management. They did not have an opinion on the Status and Trends report yet.

EPA said Inverts ranked lowest, and that Fish and Water Quality should go across the board. Vegetation is important in the part of the river where grows. In the lower end

vegetation is not as important. From lowest to highest priority (1 is highest), Inverts 4, vegetation 3, water quality 2, fish 1(because it has been assessed already and trimmed).

Fish and Wildlife Service's representative commented that system wide there are different answers. There should be component evaluation that asks, "In this pool or stretch of the river what benefit do we get for the effort expended? Zero me out for this 04 exercise".

Barry Johnson and Pat Heglund reminded the group UMESC has already done some of the looking at different Components in different parts of river and Pat Heglund mentioned that in the cluster analysis for vegetation, some of the upper pools were much more similar than the lower pools.

The Army Corps Of Engineers – ranked fish 1 vegetation 2 Water Quality 3 inverts 4. Chuck Theiling said he did that on the basis on their ability to detect changes from HREPS. "From a fish perspective we hope someday down the road we'll be able to see poolwide responses, especially in Pool 8 when all the islands are constructed."

USGS-Pat Heglund and Barry Johnson stated that their FY04 proposal was what they felt was program wide was most appropriate. John Sullivan commented that effort now appeared consistent with what some of the differences are between field stations. "It was not a random effort on our part to decide who does what."

Tom Boland (IA) commented that, "I can be swayed differently if more information comes to light."

John Sullivan said the ranking gives us some feel for what to do this year and summarized. He asked the Team Leaders to send their 4% reductions and comments directly to UMESC and Linda Leake said they would need that and an impact list "yet this week", and UMESC would do the same. They would send it to John and John would copy it to the other A-team members, allowing them a couple days to return any comments.

Barry Johnson said that in WQ everyone indicated they can live with current parameters plus dissolved nutrients-dissolved nitrates, P, and silica, ammonia if possible, if it's not too expensive.

Fish—everyone agreed we should do all gears all periods if we can. WIS and MN said if push comes to shove they are willing to live with reduction in spring fish work.

VISIONS FOR FUTURE LTRMP

Based on what the program has been getting from Congress, what flexibility can we build into this program for the future? Pat Heglund and Marvin Hubbell will be discussing planning for a limited-funded LTRMP at EMPCC's next meeting. The purpose of this discussion is to inform the A-Team and provide some initial feedback for the EMPCC.

Marvin said at this point in time, they don't have a lot to report, but have been trying to figure out how they might get to what they might do in the future. They are hoping to have some kind of tentative recommendation at the May EMPCC meeting. They are anticipating by the August meeting 2004 at the latest a plan is agreed upon. They have not discussed how they will gain the input for what it should look like. Have been discussing identification of stakeholders, surveys, etc. For this discussion focus on outcomes from A-Team perspective—1) users, what information they use and want, etc, and 2) tools to get there. Preserving the current level of knowledge will be a critical component of it. There is also a need to identify expectations for the abilities to detect change. There are not many answers beyond these starting points. The 3 people—Pat, Richie (?lastname?) (USFWS) and Marvin have not met together yet.

John Sullivan asked, "Will this involve a potential restructuring of the program for fiscal management?"

Marvin Hubbell stated that during that discussion he didn't think there were limits put on the parameters to consider. That means we should asking administrative changes too.

John Sullivan asked, "Do you anticipate changes for the legislation?"

Marvin Hubbell replied that if there are legal constraints, there is not enough time to get it in the Report to Congress-"If there is a constraint, it would be in legal authorities."

John Sullivan-"Is there the potential that field stations could be funded differently and that would save program money?"

Marvin said, "In fairness we ought to ask that question of any part of the program. I don't know that the legislation specifically says all 31.4% of \$ needs to go through Interior."

John Sullivan said he had heard many questions and comments about it and felt it needed to be brought forward. "I think there's been enough concern that it should be addressed as part of the review."

Tom Boland asked, "Who's going to be doing the looking at Visions for the Future? The Corps? Leslie?"

Marvin replied, "We need to look at that—if there's a vision statement already adopted, that should be used as a starting point."

Tom Boland said, "There's not much money out there—this conversation needs to start and all the partners need to be part of, not just USGS and the Corps." (Marvin agreed.) Boland went on, "Just like we do a review of the science, we need to take a look at the administrative side. It needs to be done soon, hopefully within the next year, so we don't get caught in this situation. We've done everything you're talking about—we need to do it again." Marvin Hubbell replied, "Yes, to the extent that we all agree on what's still important."

Tom Boland said, "I hate to think of a scenario where the administration is just accepting budget cuts."

Marvin Hubbell said, "In addition to those discussions we have other things such as the IL River initiative and the navigation study. If the nav study goes through, there is a monitoring component that goes with that. How do we position LTRM to work in concert if one of those 2 programs becomes a reality?"

Tom Boland said, "It needs to be done and I'd be willing to be involved in that."

John Sullivan asked, "From the science side, will we have reports and associated recommendations to help you and others decide what's important? What will we have in a month?"

Marvin Hubbell replied, "Three of 10-yr reports are in draft, with a 4th coming. I'm anticipating relevant knowledge is there-I may be making a false assumption, but I'm hoping as we go through, we'll see progress on all those assumptions."

Chuck Theiling asked, "How is the EMP program review that is supposed to be happening working into this recommendation? We'll have that and outcomes of WRDA 04 and then can enter into more comprehensive reorganization. Meanwhile it's limited, but if we put it off for 9 months, we can be planning for realities."

More discussion ensued between Theiling and Hubbell about planning options.

Pat Heglund said, "If everyone just stays available as we go through this process to give feedback that will be important."

John Sullivan asked, "Are you willing to retain Tom [Boland] as an additional worker?

Pat Heglund said she would take it under advisement with Leslie and Richard. Marvin Hubbell asked if the A-Team had others to volunteer from field stations, etc. John Sullivan replied that he would support Tom Boland doing it.

Marvin Hubbell said there is nothing formal at this time-he and Pat and Richard are a subgroup responding to direction given by EMPCC—it's just Leslie and Roger's effort to respond to that. If there is a working group identified, bring names back to Leslie and Roger.

John Sullivan added a general comment that "I think it would be advantageous for the A-Team to have some information on the budget, so we can raise any concerns and questions early enough to be addressed rather than waiting." Hubbell assured him they would think early about the actual number minus anticipated S&S. John Sullivan asked for other comments.

Pete Redmon (USEPA) said, "I'd like to see serious consideration for all potential users. It's important to build a strong, broad base with a bigger variety of activity. It's important those bases are all covered. Water Quality monitoring on the river hasn't been a big deal except in the two northern states." John Sullivan added that "it's not just members around this room—other agencies have a stake in what is going forward on this river."

STATUS OF 10-YEAR LTRMP REPORTS

Barry Johnson reported that drafts have been turned in for fish, invertebrate, and vegetation components. The Water Quality 10-yr report is lagging a bit, he said and added that Jim Fischer (WDNR) "did a very admirable job for us, but it was more work than he and the rest of the group could accomplish. Jeff Houser came on this fall and it is his top priority to finish this report. The Field Station authors are putting drafts together and Jeff is doing coordination. A draft is due by March 15th.

If people have questions or comments on the draft reports handed out today, Barry would like the comments back through John Sullivan within 3 weeks time. If that's not possible, they'll make other arrangements, he said. John said he'd take care of compiling comments on the Water Quality and Vegetation side. He asked for a volunteer to provide feedback to ATEAM for fish and invertebrate reports and to compile comments. Kevin Stauffer volunteered for fish. Invertebrates is open for someone to come forward. Jennie Sauer appreciates our ability to come through with this. Also, Jennie Sauer said an e-mail on the web-based reports just went out—there were 4 Vegetation reports and one 1 Invertebrate report. "It's an excellent product," she said, explaining that a person could go in on website and do a trend. Yao Yin and Heidi Langrehr summarized the vegetation data through 2003—it's web-based and in a format that is easy to extract. We need to have you look at it and make certain they get your comments," she told the group.

Chuck Theiling asked Barry Johnson what we can expect in terms of analysis reports. He replied that for Fish there are 3 other reports— two on community ecology from a systemic and a local perspective and the other one is the autoecology group's report which analyzes spatial and temporal variance composition. These are in the 2nd round or review before being sent out to peer-reviewed journals. Chuck Theiling commented that he had assumed the articles would have an LTRMP cover, "Am I wrong? He asked. Barry replied that any publications will indicate it was done through LTRMP funding. There are no specific LTRMP publications planned for the extra reports. Brian Ickes said that LTRM series tech reports will have a number of the points, and then manuscripts will be developed from them. The technical report typically comes before the peer-reviewed article. Pat Heglund mentioned that she still has concerns about journal scrutiny— whether a journal would consider such manuscripts as bonafide, unique contributions. She added the trend is for more and more restrictiveness about how different they need to be from the content of the technical report.

John Sullivan said it sounds like we'll get this information one way or the other—the timing is important—how valuable is it to have it now? Pat said none [journal editors] yet are giving them problems. Contracts are more specific now, however. Barry Johnson estimated a month to two months before the manuscripts go to journals, depending on how much needs to be revisited post-review.

Chuck Theiling felt the primary output of these efforts is an LTRMP report. Hard copies are more satisfying as products. Linda Leake said, "I appreciate Chuck's comment, but part of the efficiency gained 3 years ago was to cut editorial staff and production. That was a trade-off partnership agreed on we should take. Is this where we want to go with publications?" she asked.

Chuck Theiling said he felt the multi-year and the status and trends reports need a hard copy. The milestones perhaps should have a few hard copies. John Sullivan said, "It's called a printer."

STATUS AND TRENDS REPORT

The Status and Trends Report was identified in the past as a product to pull LTRMP findings together and help us sell program. UMESC removed it from the 2004 SOW because the money is not there. A number of others felt it's still an important item. Marvin Hubbell sent the comments Chuck put together-many haven't had a chance to look at it—it's an information item. With the budget issue we're at a loss. Marvin Hubbell said he had hoped 2004 would be possible. Chuck Theiling—John Sullivan passed out copies of outline. Chuck Theiling mentioned that the last one reviewed historical status and trends. "We don't need to do that now. The 10-yr reportscan quantify the baseline with parsing and tweaking of data if that's appropriate, or state 'here's the trend through time'." We need decide if we keep or change the ecosystem elements, look at the 6 categories, see if they are valid, and if so, find 6 or more individual parameters under each to show. Perhaps we could take each field station, plot a trend line, establish a desirable range, and look at the trend line to see if it is meeting it. In the last section we can recommend measures that might help us achieve our target. Monitoring and evaluation is where it kicks in on status and trends. We take those results, and ask what do we need to do to learn more? Design the focused studies to learn more. Take recommendations and apply the report card in a status and trends framework with things which people can understand that are strong ecological indicators. Parameters need to have policy and management relevance, technical merit (accurate field measurements), and practicality.

John Sullivan Sullivan and Chuck Theiling discussed the pros and cons of putting off the Status and Trends Report verses finishing it this year in time to send it to Washington. Linda Leake said Leslie fully supports it, but has no money to do it all this year. The timing issue may be the problem, John Sullivan said. Marvin Hubbell responded that as we go through budgeting process, we can take any available effort and shift it to Status and Trends Report. He said to look at the outline and send any comments to Chuck Theiling and Linda Leake. John Sullivan suggested those of us who have time should provide some initial comments to UMESC on our overall thoughts of where this is headed. Maybe can't be funded, but it is important to get it out this year—Janet Sternberg agreed. Chuck Theiling asked if the Corps could do it in house, what would the group feel about that. Linda Leake said a discussion between Roger and Leslie could address that. John Sullivan said he had no serious problem with advancing it to get a final product done. In the interim, members could take a look and share comments with UMESC and USACE. It would be an on-going item for the next few meetings.

Janet Sternburg will represent the chair of the A-Team at next EMPCC meeting—it is the most efficient way from a cost and time standpoint, since the meeting is in St. Louis. She asked, "Are there things we've discussed or have not discussed today that we want to bring attention to at EMPCC? Are there ways to change the Savings and Slippage process? Chuck Theiling suggested they plan on 25% Savings and Slippage in years to come. Marvin Hubbell said Roger Perk is making that presentation at EMPCC and is offering it up as discussion item. John Sullivan will put a summary of A-Team meeting actions and recommendations together for Janet by February 23rd.

No specific additional items were brought up.

Next meeting: EMPCC meets May 20th St. Paul. We need to meet before that. The Mississippi River Research Consortium is earlier this year--April 1&2. Tom Boland suggested a conference call unless there are burning issues we need to talk about. Monday, April 19^{th, at} 1:00 pm was penciled in as a conference call time.

Tom B. moved to adjourn at 2:20 pm, seconded by Mark Pegg. There were no Agency Reports.

Respectfully submitted,

Terry Dukerschein

ANALYSIS TEAM CONFERENCE CALL MINUTES, APRIL 19, 2004

Members Present: See attached list

John Sullivan chaired the meeting.

Roll Call

A-Team members welcomed Tim Yager, USFWS-Fort Snelling, MN, who replaced Dick Steinbach.

Approval of Minutes

Motions were made by members to accept minutes from our January 6th conference call and our February 10th meeting. All approved the minutes with no corrections or additions.

Budget Updates for FY04/05

Marvin Hubbell reported that MPR's (fund transfers to UMESC and states) have been executed from Corps to UMESC. Linda Ott said Tom Kelly had all 424's (WHAT ARE 424s?) except WI. Terry Dukerschein said she was working with the Fisheries Bureau in Madison to expedite this matter. Marvin encouraged everyone to execute budgets as efficiently as possible because of the late date.

Partnership Survey of LTRMP

John Sullivan asked members how they would like to proceed to discuss this issue. The point was not to answer the survey's questions but ask if members had questions on what was being asked. He also asked if there was a timeline and a need for future meetings to come to a resolution on how to proceed. Rick Frietsche indicated the survey results would provide an idea of how to proceed. Rick and Marvin indicated the goal was to complete the survey, consolidate the partnership responses and develop program alternatives, for EMPCC consideration and recommendations. This may not happen by the May EMPCC meeting, but would be expected to be completed by the August meeting.

Janet Sternburg asked if EMPCC members would get the summary before the May meeting so that it can be discussed within partner agencies prior to the meeting. Pat Heglund indicated the consolidated report would not be completed by the May EMPCC meeting so there will be nothing to respond to.

John Sullivan asked if there would be a meeting with EMPCC and others to review the survey recommendations. Pat explained their role is to pull responses together and consolidate similar alternatives. The process would be to develop alternatives for consideration. It will be up to the Corps (Roger) and USGS (Leslie) to discuss and

implement after receiving partnership input (through EMPCC). One question (Janet) letter sent out went to EMPCC members. Anyone else who's not EMPCC member receive survey? No. In Mo they are also contacting other agencies who use the info. Or invest.

There was some discussion concerning if other agencies (ILEPA, MPCA, MODNR) were providing input to those agencies that are the "official" EMP partnering agencies for completing the survey. It was not clear if this coordination was occurring but all recognized a need to pursue this.

Tom Boland commented there certainly is a need to ask the questions. The LTRM annual budget shows downward trend from late 90's. Savings and "seepage" (slippage) and inflation cuts deeper and deeper into the budget. Letting folks know the importance of this program has never been more important. Who will make the decision of how to restructure?

John Sullivan shared Tom's comment as well and wondered if a restructuring decision will receive input from the A-Team. The current coarse indicates it will be resolved at be at the policy level. Do we have the scientific basis for changing it rather than just budget-driven?

Pat Heglund indicated it is federal money coming to federal agencies and the federal agencies will ultimately need to make the decision, but they (Program Assessment Team) will come to EMPCC and get partnership input. She also indicated that federal regulations prohibit outside agencies from making policy recommendations.

John Sullivan asked if members had any specific questions on the survey itself. For example, he wondered what the conceptual models were for individual resource components (question I-1). Pat indicated that they listed in various documents but the point of the question was, is Goal 1 still important. Most members indicated they didn't have questions and would address them later with the Program Assessment Team as they arose.

Janet Sternburg had a general question regarding the LTRM involvement with HREP monitoring - was that responsibility of LTRM? Tom Boland indicated some states and some non-LTRMP people involved, but officially corps had responsibility to carryout this work outside of LTRM funding. Marvin Hubbell confirmed that is how they are operating now.

Janet also asked for clarification about question III-7 - How would you envision such work (HREP investigations) be accomplished outside of LTRMP funding? It is outside now? (What was the response?)

No other questions of the survey were discussed. Agencies reported their progress at completing the survey. UMSEC has asked Principal Investigators for different program scenarios and this will be reported to LTRM management for consideration. Marvin also

indicated he would provide a consolidation of responses that he receives from Corps biologist and program managers. Janet suggested the Corps consider getting input from the regulatory staff too. Marvin agreed that would be a good idea.

Status and Trends work in FY

The Scope of Work indicates at outline of the report will be completed by September. John Sullivan suggested the draft outline be circulated to A-Team members for their input. Barry Johnson said this effort has started yet but will consider this recommendation. John asked that if additional money came into the program "by some miracle", would it go towards funding the Status Trends work or some other analyses? Barry couldn't say but knew EMPCC endorsed USGS recommendation that "additional funding" be applied to more analyses.

Agency Reports

MN- Kevin Stauffer indicated they completed the Asian Carp Feasibility Study and it's on their website. They are going through yet another reorganization.

IL- Rob Maher said they are in reorganization too. Probably won't affect A-Team or EMP, but a lot still up in the air. Asian carp still a big issue. They are tagging Shovelnose sturgeon and paddlefish.

Corps- Marvin Hubbell indicated they are anticipating 4 million-dollar shortfall within the Rock Island District. He suspects other districts may have similar problems. Looking for volunteer time reductions, travel reductions and other cost saving measures. He mentioned they are looking at how HREP performance project reviews are being completed. They are trying to revamp how HREP reviews fit into adaptive management. Formalize it more. He also asked about the status of EMAP.

Barry Johnson indicated they have provided all budgets and proposals to EPA EMAP staff. EPA is reviewing it now.

USEPA - Pete Redmon indicated that from his perspective the EMAP proposal is on track and they want to get this funded. He indicated Region 5 had a large salary shortfall coming this year. They will not have summer help and are seeking voluntary time off.

IA - Tom Boland said they have serious financial constraints as well. They are seeking early retirements and Tom indicated he has received an early-out offer. John Sullivan said we hate to see you go and others echoed it.

MO - (Terry can you decipher this?) Janet Sternburg said that contrary to the trend of reducing agency staff in other states, Missouri still is building staff. Valerie Barko had updated her that no new people would be hired at their field station per say, but they had just put on 2 term biologists and one of them would be doing LTRMP data collection. The University of Missouri field station is hiring a wetlands and forest ecologist that will

also be under Bob Hrabik's supervision. Applications are due April 23rd, and the hires will not take place until May. Missouri's other field stations are also advertising for a number of positions. They were holding them vacant, but just within the last month they put out new announcements.

Speaking as an EMPCC representative, Janet Sternburg also reported that Gretchen Benjamin (WDNR) and Don Holtman (USFWS) were pulling together an outreach strategy for EMP to get word out to the general public to relay the importance of EMP and LTRM to the right congressmen at the right time of year, which hopefully will help to get full money and align Congressional support. This will be completed within the next couple months—EMPCC can share with the A-team and all partners to increase awareness of program.

WI - John Sullivan reported that reorganization strategies are being considered consistent with other states. Terry Dukerschein indicated the field station has moved into the West Campus at UMESC. She also reported that the position Terry Moe vacated as Team Leader of the Mississippi River Team has been approved to be filled and would be announced later this spring or in early summer.

USFWS - Tim Yager indicated they have budget concerns for FY05 & 06. They are busy with the Comprehensive Conservation Plan. Travel restrictions are in place.

Agencies Use of LTRM data

Barry Johnson reminded the A-Team that Leslie has requested this information. John Sullivan indicated they had provided a draft response. A-Team members were aware of this request and will prepare a response. This will be separate to the partnership survey response. John asked that all members share their response with other A-Team members.

Next Meeting

We have scheduled a tentative conference call for July 27th at 1 p.m. If a face-to face meeting is warranted, we plan on scheduling the following day, July 28, 2004 - probably Rock Island. John indicated final plans for the call/meeting would be made in early July.

Respectfully submitted,

Terry Dukerschein

A-Team Conference Call Attendance - April 19, 2004

A-Team

John Sullivan, WDNR Tom Boland, IDNR Janet Sternburg, MODOC Walter Redmon, USEPA Kevin Stauffer, MNDNR Tim Yager, USFWS Rob Maher, ILDNR Marvin Hubbell USCOE Pat Heglund, UMESC Linda Ott (for Linda. Leake) UMESC Barry Johnson, UMESC

Field Stations

Terry Dukerschein, WDNR Valerie Barko, MODOC Mark Pegg, ILNHS Mike Steuck, IDNR Walt Popp, MNDNR

Other

Rick Frietsche, USFWS

A-Team Meeting Minutes for 07/27/04 and 07/28/04 Location: Holiday Inn; Moline, IL

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John Sullivan; WDNR	Janet Sternberg; MODOC	Marvin Hubbell; USACE
Chuck Theiling; USACE	Valerie A. Barko; MODOC	Jeff Houser; USGS
Rob Maher; ILDNR	Dan Kirby; IADNR	Tim Yager; USFWS
Brian Gray; USGS	Dave Moeller; IADNR	Barry Johnson; USGS
Walt Popp; MNDNR	Clint Beckert; USACE	Dan Wilcox; USACE
Kevin Stouffer; MNDNR	Tom Boland; IADNR	T. Miller; USACE
Mark Pegg; INHS	John Pitlo; IADNR	Yao Yin; USGS
John Chick; INHS	Linda Leake; USGS	Shirley Yuan; USGS
Mike Steuck; IADNR	Roger Perk; USACE	Jennie Sauer; USGS
Larry Robinson; USGS	Mike Caucutt; USGS	

Meeting Attendees:

07/27/04

Meeting called to order by John Sullivan at 12:47 p.m.

J. Sullivan provided a welcome and introductions took place.

The agenda was reviewed and minutes from the April meeting were reviewed.

Tom Boland: Made a motion to approve the April minutes.

John Chick: Seconded the motion.

Minutes were approved unanimously.

R. Perk provided a handout outlining tasks to be performed by the technical meeting, per the instructions of EMPCC from a meeting in LaCrosse on June 24 and 25, and outlined the assumptions for the tasks.

BASE ASSUMPTIONS—Roger expressed the desire to use a 5-year planning horizon for the LTRMP that will fit at a \$19M funding level for EMP over the next 5 years with 23% savings and slippage, and an inflation rate of 4.1%. The goal is to define what the program will consist of at \$3.5M firm (after S&S and inflation). This was termed the minimal sustainable program. If the group cannot reach consensus on what represents the minimal sustainable program the Corp will determine what represents the minimal sustainable program. The base program will consist of the minimal sustainable program (\$3.5M) with additional funds on a year-to-year basis for use on additional program elements.

J. Chick questioned what would happen if funding fell below \$19M for EMP R. Perk stated that relatively speaking \$19M would sustain the program at \$3.5M, but major cuts in funding would have costs.

Additional base assumptions were that the Corp and USGS will continue as partners and roles will remain similar—there will be changes, but the basic structure will be maintained. Also, there will be a field station maintained in each state

5 year LTRMP Strategic Plan

Results and Assignments from the June 24 and 25 Special EMP-CC Meeting

Program Management Assumptions:

- A. Five year planning horizon
- B. Level annual EMP appropriation of \$19 million for each of the next 5-years.
- C. Average fiscal year saving and slippage and Presidential rescission rate of 23%.
- D. Average annual rate of inflation of 4.1% during the entire 5 years.
- E. That the "minimal sustainable" program would be directly indexed to inflation in order to maintain a stable program for the entire 5 years.
- F. That the FY05 starting point for funding the "minimal sustainable" program should be \$3.5.
- G. That the Partnership would recommend a "minimal sustainable" program.
- H. That any funding available to LTRMP above that needed to fund the "minimal sustainable" program would be used to fund efforts contained in the LTRMP Operating Plan.
- I. That any changes to the program resulting from this effort should attempt to maintain as much of the existing scientific integrity of the LTRMP program as practical.

These Program Management Assumptions result in the following breakdown in funding for FY05.

Annual EMP Appropriation	\$19,000,000	
Saving and slippage (23%)	(\$	4,370,000)
UMRBA	(\$	28,000)
Independent Tech. Review Comm.	(\$	50,000)
Public Involvement		30,000)
Program Administration	(\$	180,000)
Sub-total		14,342,000)
HREP Allocation (68.6%)	\$	9,838,612
LTRMP Allocation (31.4%)	\$	4,503,338
COE LTRMP Management		140,000)
(MVR, MVS, MVP)		
LTRMP Sub-total	\$	4,363,338
"Minimal Sustainable" LTRMP	(\$	3,500,000)
FY05 Funding available above "Mir	n. Sus." \$ (\$	863,338)

"Additional Program Elements"

<u>"Minimal Sustainable" Program</u> - means that portion of the LTRMP program that will remain in place during the 5-year planning period and will be annually indexed to inflation to cover cost increases. The exact program elements that will be included in the "minimal sustainable" program will be defined by this strategic planning process.

<u>"Additional Program Elements"</u> - refers to the additional increment of LTRMP work that can be done annually above and beyond the "minimal sustainable" program. Work in this category will be paid for by funds in excess of \$3.5 million (FY05 dollars) up to the annual LTRMP funding appropriation. EMP-CC did not make a formal recommendation on how to handle the SOW for items in this category. Option include:

1. Work items in this category would require a separate annual Scope of Work (SOW), which would include milestones and products.

2 Items in this category would be outlined in a SOW for the entire 5 years of the planning period and would include milestones and products.

Key to font types for this report;

Regular	Refers to those items for which the group reached consensus at the June 24 & 25 special EMP-CC meeting.
Bold	Refers to those items, which were referred to the ad hoc technical committee for further evaluation and recommendations.
Italic	Refers to those items for which the EMP-CC will consider for final action but do not require additional input from the ad hoc technical committee.
Underline	Refers to items not addressed at the meeting but identified as possible "additional program elements".

Defining the "Minimal Sustainable" Program

The following is intended to help clearly define those portions of the LTRMP that are considered part of the "minimal sustainable" program.

In general the largest proportion of the "minimal sustainable" program is directly associated with component monitoring (fish, aquatic vegetation, water quality and macroinvertebrates). The following summarizes the actions taken at the June 24 and 25 meeting.

I. Component Monitoring portion of the "Minimal Sustainable" Program

A. Key Activities Associated with Component Monitoring.

The group agreed that the following are those activities associated with component monitoring that should be budgeted for as part of the "minimal sustainable" program. The intent is to include those activities that are associated with the collection, management, basic analysis and serving of component data. Any work item not specifically identified as being part of the key activities associated with component monitoring would be identified separately in the SOW and paid for from funds in excess of \$3.5 M (in FY05 \$). Key activities associated with component monitoring needs to be clearly defined, however the following is general guidance of what is included:

- 1. Data program
 - a. Field data collection.
 - b. WQ Lab

2. QA/QC of data.

3. Data management and serving (includes maintenance of existing capabilities)

4. Annual reports.

Β.

- a. Annual component reports
- b. Annual "running" analysis of data. (Needs to be defined)
- c. Internet posting of annual component data.
- 5. Maintaining existing Internet Tools. (Needs to be defined)

6. Equipment Refreshment (Needs to be defined - % of budget or set amount)

7. Data Analysis beyond that identified in I. A. 4. b. (Needs to be defined)

Field Station Network – The group considered the option of consolidating the two Illinois field station but continuing to monitor the La Grange trend pool. The estimated savings would be from \$205,000 to \$223,000 annually. The group expressed support for maintaining the existing network of six field stations however reserved the option of consolidating the two Illinois field stations (UMESC will coordinate with the state's to refine details).

- C. Macroinvertebrate Component The group did not want to direct this item to the ad hoc technical committee for additional input. However, they did identify several alternatives that would be considered based upon available funding. These options include:
 - 1. Keep as is with no changes.
 - 2. Drop as a component of the "minimal sustainable" program.
 - 3. Sample at only a portion of the field stations.
 - 4. Evaluate change detection capabilities of this component. Including:
 - a. Trend detection
 - b. Quality control

D.

E.

c. Application to entire river.

Fish Component – The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:

- 1. Monitoring period could be adjusted from being based on the calendar to being based upon water temperature ranges. This would not be a financial saving but may help to improve sampling effectiveness. The ad hoc technical team was asked to make a recommendation regarding this issue.
- 2. Component management. Options discussed included:
 - a. No change
 - **b.** To fully implement this component with a corresponding reduction in the level of effort for other components.
 - c. Field stations take on additional responsibility related to data collection and analysis.
 - d. Creation of multi-disciplinary teams at field stations. This would result in a person taking on primary responsibility for more than one component and for field crews to collect data on more than one component when out sampling.
- 3. Adjust sampling effort. Options included:
 - a. No change in existing procedures.
 - b. Continue sampling in all three periods but with fewer gears.
 - c. Sample in only two periods but with all gears. (See I. D. 1. for option)
 - d. Sample in only one period but with all gears. (See I. D. 1. for option)
 - e. Sample every other year but with all gears in all periods.

Aquatic Vegetation Component - The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:

- 1. To fully implement this component with a corresponding reduction in the level of effort for other components.
- 2. Sample every other year.

3. Develop an "event driven" monitoring plan for the lower pools, and implement as part of the "minimal sustainable" program. Monitoring would not occur in all pools.

- F. Water Quality Component The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% funding reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:
 - **1.** To fully implement this component with a corresponding reduction in the level of effort for other components.
 - 2. Sample every other year.
 - 3. Sample only Stratified Random Sample (SRS) sites.
 - 4. Sample only Fixed sites.
 - 5. Uniformly reduce the sampling effort for both SRS and Fixed sites.
 - 6. Not all field stations would monitor at the same level of effort or with the same sampling method (SRS or Fixed).
 - 7. Reconsider the number of parameters being analyzed.
- G. Data Management Data management refers to that portion of the UMESC staff directly involved in data handling and serving.
 - 1. Per this effort the "minimal sustainable" portion includes data management, Quality Assurance and Quality Control (QA/QC) of data, and data serving. This represents 2.5 FTE's worth of effort. UMESC is to look for efficiencies to reduce costs.
 - 2. The level of existing effort for summarizing data and tool development is .6 FTE. It was unclear from the discussion whether this portion of the program should be included as part of the "minimal sustainable" program or be considered as a candidate for "additional program elements" and the exact definition of what would be done.
- H. Full Cost Accounting Full cost accounting is defined as the pro rata share of all sources of income being used to pay for facility, supplies and equipment cost. Under this proposal, field stations that receive non-LTRMP funding would include the proportional share of overhead costs within each of those budgets. Each field station will estimate the additional revenue this will generate at the beginning of each fiscal year and that amount will be subtracted from the LTRMP allocation to that field station. This will be adjusted for actual income throughout the fiscal year. UMESC was asked to coordinate with the states to collect this information.

II. Other activities included in the"Minimal Sustainable" Program

- A. Land Use Land Cover (LU/LC) The FY04 level of effort is 4.2 FTE's. The group felt that this effort should be modified so that a small portion of the existing effort was maintained in the "minimal sustainable" program. Agreed to at the meeting was that LU/LC for the entire UMR floodplain would be done on a 10-year cycle. LU/LC initiatives could be done with "additional program element" funding on an annual basis. The primary discussion was the level of effort that should be included in the "minimal sustainable" program to support GIS activities. These options included:
 - 1. Drop completely.

B.

C.

- 2. Maintain a basic amount of "corporate knowledge" at .4 FTE. This includes providing field station with basic GIS data support. However, specific outputs were not resolved and would be required before inclusion.
- 3. Basic "corporate knowledge" plus. This would require 1.15 FTE's and would include II. A. 2. above, plus event driven photo purchase and interpretation and managing the "next steps" for future LU/LC updates.
- Science Management Science management refers to the level of administrative oversight provided for LTRMP by both the Corps of Engineers and UMESC.

	Fiscal Year	Funding Amount
1. Corps of Engineers	FY04	\$123,000
	FY05	\$140,000
2. USGS	FY04	\$350,000
	FY05	\$286,000

Bathymetry - The group valued the data provided by the bathymetry and agreed that collecting bathymetry data for the UMR was very important. However, actual collection of the data was not possible within the funding constraints of the "minimal sustainable" program. The following recommendations from the meeting:

- 1. The group recommended that .15 FTE be allocated to the "minimal sustainable" program. This would make some expertise available to the program and allow the program to work towards completing bathymetry coverage by seeking funding opportunities from outside the "minimal sustainable" program.
- 2. Funding for actual bathymetry work may be included in the "additional program elements" or come from other sources.

"Additional Program Elements"

A. Statistical Support – The group discussed statistical support for the "minimal sustainable" program. However, they referred this item to the ad hoc technical team to evaluate and make a recommendation. Four options are to be evaluated:

- 1. Should it be included as part of the "minimal sustainable" program and at what level of support.
- 2. Maintain at the FY04 level.
- 3. Reduce funding by 50%. Or
- 4. Drop completely.
- B. Development of new internet products/tools. (No guidance provided)
- C. Bathymetry (No guidance provided).
- D. Sampling in Pools 13 26. Each member of EMP-CC was asked to express an opinion as to whether the "minimal sustainable" program should include a 5-year sampling program in this portion of the river.
 - 1. F&WS and USEPA felt that this was highly valued and should be included in the "minimal sustainable" program for the next 5 years.
 - 2. The Corps, and states of IL, IA, MO, WI. and MN felt that it was valuable but should not be included in the "minimal sustainable" program.

Other Items Not Addressed but identified for possible inclusion as "additional program elements".

- G. Spend the first 6 months of FY05 to reduce staff levels. Use this time to complete task or "tie up" loose ends.
- H. Status and Trends Report
- I. Initiate Cross Component Analysis
- J. Develop an "event driven" monitoring plan to address significant natural occurrences (e.g. drought, floods, spills) as funding becomes available.
- K. Conduct an efficiency analysis similar to the fish analysis for WQ and aquatic vegetation.
- L. Develop procedures to increase the use of existing calibrated and validated submersed plant growth models.

J. Sullivan asked if additional program elements (APE) decisions will be made by EMP-CC

R. Perk responded that yes, EMP-CC will evaluate the APE requests, similar to current scope of work planning.

J. Pitlo asked what the anticipated amount of APE money was.

R. Perk responded that at a \$19M funding level APE \$\$\$ would be about \$700,000 this year and about \$100,000 in year five

J. Sullivan asked what APE \$\$\$ would be available under a \$16M funding level.

R. Perk responded that he was not sure.

J. Pitlo asked, what you anticipated the APE's to be and done by.

R. Perk responded it could be anyone, but most likely states and UMESC.

L. Leake responded APE could be anything like bathymetry or land cover and there is already a list of program priorities.

R. Perk added that "Status and Trends" was near the top of his list and the CORP, USGS, and States would be involved in that.

J. Sullivan asked if R. Perk expected the group to use the base assumptions in making decisions about program elements during the meeting.

R. Perk responded that yes they were already adopted by EMP-CC.

L. Leake noted that EMP-CC has provided a specific list for the group and provided a overhead and poster board of the list

The items on the list that were referred to the AD HOC advisory board were as follows:

- 1) Equipment refreshment (needs to be defined as a percentage of the budget or set amount)
- 2) Fish Component: The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. Further details were provided in the handout.
- Aquatic vegetation component: The group fully supported inclusion of the component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. Further details were provided in the handout.
- 4) Water quality component: The group fully supported inclusion of the component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. Further details were provided in the handout.
- 5) Statistical support: The group discussed statistical support for the "minimal sustainable" program. However, they referred this item to the ad hoc team to evaluate and make recommendations. Further details were provided in the handout.
- 6) Data analysis. Data analysis beyond that identified in I.A.4.b. (needs to be defined).
- 7) Graphical display tools (needs to be defined).

L. Leake stated that leads were assigned to each of the seven items to jump start discussion and to report on findings to help discussion

C. Beckert asked if it had already been decided that there will be sampling reduction. L. Leake responded that it is a thread linking items together, doesn't have to be this or that, could go anyway, and doesn't assume cuts are as is—just a consistent framework for discussion. Each subgroup will lead discussion using the framework.

J. Chick presented results for the fish AD HOC analysis team, which consisted of himself, R. Maher, J. Pitlo, T. Miller, T. Boland, and D. Kirby

The fish analysis team concentrated on assessing the impacts of adjusting sampling effort, and noted that adjusting to a sampling period based on water temperature would be difficult (presents several logistic challenges and would represent a significant change from the current design) and may provide minimal cost savings.

Adjusting sampling effort concentrated on the following scenarios:

- 1) No change
- 2) Fewer gears
- 3) Sample only two periods—all gears
- 4) Sample only one period—all gears
- 5) Sample every other year—all gears

Chick noted that two published LTRMP reports Ickes and Burkhardt (2002) and Lubinski et al. (2001) have addressed several of the questions asked. A summary of the fish Ad Hoc findings (provided by J. Chick) and recommendations follow on the next 3 pages.

J. Chick redid community analysis already done for all periods and included only periods 1 and 3, and period 3 only. Several MDSS plots were presented that showed resolution with respect to spatial patterns was still okay with two periods, but when only third period was analyzed it became difficult to distinguish among study areas. With regard to temporal patterns, two periods reduced resolution. When only third period was analyzed, obvious temporal patterns (e.g., 1994 being an outlier year) were no longer present. Differences in CPUE standard error (SE) were presented for the three scenarios and it was noted that with 2 periods SE increased from 20-25% and with only one period the SE increased from 50-100%.

Plots showing the presence and impacts of year*period interaction, with respect to CPUE, were presented.

Plots showing a reduced ability to detect CPUE trends over time with only 2 periods or 1 period were presented.

It was noted that dropping one period caused an approximately 29% reduction in the total catch of stock-length fish for 12 common recreational or commercial species, and dropping to two periods caused a reduction of approximately 62%.

R. Perk asked if day electrofishing data correlates with other gears

V. Barko responded that each gear catches a component of the entire community

B. Johnson asked if it has been assessed what component of community structure EF picks up

J. Chick-day electrofishing is important and the other gears supplement

Fish Component Ad-Hoc Technical Team

As a result of the special EMPCC meeting, we were asked to address the following:

Fish Component – The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:

- 1. Monitoring period could be adjusted from being based on the calendar to being based upon water temperature ranges. This would not be a financial saving but may help to improve sampling effectiveness. The ad hoc technical team was asked to make a recommendation regarding this issue.
- 2. Component management. Options discussed included:
 - a. No change
 - b. To fully implement this component with a corresponding reduction in the level of effort for other components.
 - c. Field stations take on additional responsibility related to data collection and analysis.
 - d. Creation of multi-disciplinary teams at field stations. This would result in a person taking on primary responsibility for more than one component and for field crews to collect data on more than one component when out sampling.
- 3. Adjust sampling effort. Options included:
 - a. No change in existing procedures.
 - b. Continue sampling in all three periods but with fewer gears.
 - c. Sample in only two periods but with all gears. (See I. D. 1. for option)
 - d. Sample in only one period but with all gears. (See I. D. 1. for option)
 - e. Sample every other year but with all gears in all periods.

First, we note that two published LTRMP technical reports (Ickes and Burkhardt 2002 – Evaluation and proposed refinement of the sampling design for the Long Term Monitoring Program's Fish Component; and Lubinski et al. 2001 – Initial analyses of change detection capabilities and data redundancies in the Long Term Resource Monitoring Program) have addressed several of the questions asked. To this end:

Continue sampling in all three periods but with fewer gears.

This wound up being the main issue addressed by the Ickes and Burkhardt 2002 technical report and a series of A-team discussion. As a result, several gear were eliminated from the program in 2002 to reduce cost and data redundancy. The ad-hoc committee did not feel adequate time was available to seriously consider further reductions beyond those adopted as a result of the effort outlined in Ickes and Burkhardt 2002.

Sample every other year but with all gears in all periods.

This option was also addressed by the Ickes and Burkhardt 2002 technical report and during Ateam discussions. That report concluded: ". . . The negative consequences, as identified by the group, outweighed the positive consequences by a factor of three. This option would have resulted in a partial interruption of temporal continuity and delayed the time it would take to detect trends. The group seemed to view the rapid detection of trends as highly important and felt that this option could hamper those efforts. Thus, we did not consider [this option] as a viable option." Page

The ad hoc committee chose not to address this option further.

Component management.

The ad hoc technical team felt that there was little technical information that could be brought to bear on these options and chose not to address them during ad hoc team meeting. Discussion on these topics needs to take place at the A-team meeting with the group at large.

Monitoring period could be adjusted from being based on the calendar to being based upon water temperature ranges. This would not be a financial saving but may help to improve sampling effectiveness. The ad hoc technical team was asked to make a recommendation regarding this issue.

The ad hoc technical team felt that there was a less urgent need to immediately address this option compared to others. Given that there are no financial savings and that there could be substantial consequences to linking with past data, the team elected to forego further considerations of this topic until a better concept of an overall future LTRMP fish component can be decided on.

The group asked that the implications of a 25% and 50% sampling reduction be evaluated.

The ad hoc technical team felt that the best way to evaluate the implications of these reductions was to concentrate on the following options:

- a. No change in existing procedures.
- b. Sample in only two periods but with all gears.
- c. Sample in only the third time period but with all gears.

Benefits of the Exiting Procedures

The current procedures provide a tremendous amount of information on UMRS fish communities. Some effects we have found in analyses include:
I.

II.

- Community Structure Variation
 - A. Systemic level temporal trends, possibly associated with the 1993 flood.
 - B. Large scale differences among individual regional trend areas (RTA).
 - C. Differences among individual RTA
 - D. Correlations of fish community variation with environmental variation
 - E. The potential to combine information from multiple gears in novel ways
- Population Information
 - A. Temporal trends from analysis of catch per unit effort
 - B. Temporal and spatial trends from analysis of total catch for rare species
 - C. Information on year-class strength
 - D. Size structure information
 - E. Length and weight information
 - F. Growth of young-of-the-year fish

Effect of sampling in only the third time period with all gears:

In general, the ad hoc technical team was surprised at how severe the consequences of this restriction were to the quality of the information collected. Important community findings, including differences between Pools 4 and 13 as well as systemic temporal patterns possibly associated with the 1993 flood, would not be possible with this restriction. At the population level, several temporal trends of common species within individual RTA would not be detected. We would loose a substantial amount of information on rare species due to reductions in occurrence and total catch, and the species would not have been detected by this program. Length frequency patterns would change, even for common species. Finally, this restriction would reduce the types of analyses that could be done, such as analyzing growth of young-of-the-year fishes and analyses that use time periods as replicates.

Potential savings compared to the full fish component have been estimated to be \$130,000. The overall conclusion of the ad hoc team was that this option has little potential to provide meaningful data on UMRS fish communities and may in fact provide misleading information in some cases. The ad hoc team would favor the termination of the fish component over this option.

Sample in only two periods but with all gears

Most of the major community patterns would still be detected, some finer differences might be obscured and there might be less opportunity for further hypothesis generation and analyes. Some trends in abundance of species may be undetectable or inaccurate – the number of species that this would be true for would be fewer than for dropping two time periods, but the ultimate number is unknowable. We would loose info on rare species and length frequency. As with dropping two time periods, this option would reduce the types of analyses that can be conducted. Potential Savings estimated at 60,000 when compared to the full component.

Pag

J. Sternberg questioned if dollar savings were for sampling only or included other components of sampling.

L. Leake responded it is looking at the whole component.

J. Sternberg questioned if it is a 33% reduction to a \$1.4M fish component.

B. Johnson responded it would equate to roughly a 15% reduction.

Y. Yin presented findings for the vegetation ad hoc committee (Y. Yin, M. Pegg, D. Wilcox). Handout inserted below.

The vegetation committee had a 90-minute conference call concerning the issue of vegetation reductions. They went through three options provided from the June EMP-CC meeting notes.

C. Theiling asked if fish and water quality component vegetation information has been compared to the vegetation component vegetation information.

Y. Yin replied that it is much more qualitative and less precise because GPS coordinates are not taken at each site.

J. Sullivan- So is vegetation information from WQ a complete waste of time, has it been looked at?

Y. Yin- Distribution accuracy is low, individual species are not identified—I did not take analyses far after determining these discrepancies.

D. Wilcox-The water quality vegetation observations are there to help interpret WQ data J. Sullivan- So that suggests that WQ and vegetation are tied together and important to each other.

J. Chick- All you get from fish or WQ components is presence or absence for vegetation. C. Theiling- Will we be able to correlate WQ and Vegetation components—are these so different that correlations cannot be made.

Y. Yin- we have already done this to a certain extent—the upper end of pool turbidity is a good predictor, along with velocity, and stage.

D. Wilcox-Need to look at a large hydrological scale-to get more resolution would require a more intense sampling.

Y. Yin-We did not necessarily have consensus on the best option. We have presented information and leave it up to the A-team to decide.

D. Wilcox- seems to be some consensus. Sampling every other year is not that popularlose detail-models could be used to predict vegetation in off years at less resolution. Models could be used for growth, biomass, and reproduction.

J. Sullivan-Expressed concerns about the importance of models for monitoring.

D. Wilcox-Models are an inexpensive way to look at factors.

T. Yager-What are the cost savings?

L. Leake-Will work up

Vegetation committee handout follows for next 1.5 pages.

LTRMP Aquatic Vegetation ad hoc technical committee briefing

Terry Dukerschein – Wisconsin DNR Mark Pegg – Illinois DNR-INHS Dan Wilcox – US Army Corps of Engineers Yao Yin – USGS

The ad hoc technical committee had a telephone conference from 10:00AM to 11:30AM, Tuesday, July 20, 2004. We evaluated the pros and cons of five restructuring options for the LTRMP aquatic vegetation component as described below. The first three options were stated in the EMP-CC June 24-25 meeting notes distributed by Linda Leake of USGS. The fourth and fifth options were put forward during the conference.

1. To fully implement this component with a corresponding reduction in the level of effort for other components.

The group believes across-the-board reductions of sampling effort by 25% or 50% would result in insignificant financial savings at the risk of a loss of statistical power and breach of data integrity. Bosourd is to to the approach

2. Sample every other year.

The group thinks this option requires another component to alternate with. The assumption is that the field station will not hire seasonal assistants for the two components (retaining both WQ and Vegetation specialists) to achieve an appreciable amount of savings. Vegetation growth models developed by Ellie Best and empirical model developed by Yao Yin could be used to give qualitative assessment of whether a non-sampling year was a 'good' or 'bad' year for submersed aquatic macrophytes. Cautions for this options includes: 1. availability of models is limited to 3 species; 2. the models have not been tested system-wide, 3. the qualitative nature of assessments is not compatible with LTRMP monitoring data.

3. Develop an "event driven" monitoring plan for the lower pools, and implement as part of the "minimal sustainable" program. Monitoring would not occur in all pools.

We believe this option is extremely difficult to plan on, plus criteria for "events" are lacking. An appreciable amount of savings could be achieved if only vegetation specialists in the lower pools could be assigned to other paid projects.

4. To sample Pools 4, 8, and 13 at 450 sites (per pool per year), lower Alton Pool at 200 sites, floodplain lakes in La Grange at 150 sites. Discontinue sampling in La Grange and Pool 26 in the usual strata that were sampled from 1998 and 2003.

This option discontinues the sampling in Pool 26 and La Grange as conducted from 1998 to 2003, initiates new sampling in floodplain lakes in La Grange, and reduces sampling effort in Pool 4, 8, and 13 by 25%. Statistical analyses conducted by Yao Yin reveal that the power to detect a 50% change in aquatic vegetation abundance would decrease from 95% to 80% in the northern three pools. The group thinks discontinuation of sampling in La Grange and Pool 26 would hinder the system perspective of design of the vegetation component. An appreciable amount of savings could be achieved by consolidating the sampling in La Grange and lower Alton into one crew. The estimated sample size-powers (for detecting 50% and 30% of vegetation abundance changes, respectively) are:

N	600	500	450
Powers(50% and 30% change, respectively), alpha=.05	.95/.90	.85/.80	.80/.70

5. Combine Water Quality sampling and Aquatic Vegetation sampling to be conducted by one crew. Vegetation sampling effort will be at ~450 sites per pool.

This option will require one crew to juggle the sampling of two components during June-August. The group thinks this is a possibility and an appreciable amount of savings could be achieved by not hiring seasonal assistants (retaining both WQ and Vegetation specialists). However, the group acknowledges that some modifications of WQ and Vegetation sampling designs will be required which, if we're not careful, could affect continuity/consistency with past data.

Jeff Houser presented findings for the Water Quality Ad Hoc Committee (Jeff Houser, John Sullivan, Clint Beckert, Walt Popp)

The handout provided is pasted on the next page.

410 .50

B. Johnson- What constituents are sampled in the scenarios?

J. Houser-In field, limited WQ "as is" current constituents. Cutting parameters does not seem a cost saving at this time. Some constituents have already been cut (e.g., metals). D. Wilcox-Do we need and are we utilizing all the parameters

J. Houser-Hopes to look at additional parameters in the near future.

J. Chick-Where I am at the spring SRS event is important.

J. Houser-It is important to maintain seasons.

J. Chick-It may make more sense to drop spring in the upper 3 pools and winter in the 3 lower pools.

J. Houser- We can look at that

V. Barko- Can extra monies be used in other components to base decisions on more "real" numbers like Ickes and Burkhardt (2002) for fish.

J. Houser-Hope do that and already have started to some extent, constituents do not all behave the same.

J. Sauer- There is only one gear for vegetation and invertebrates so it is not the same as WQ and fish.

C. Theiling-Your perspective on field-based turbidity and nutrients.

J. Houser-Would affect accuracy.

C. Theiling-Are we using WQ nutrient information for vegetation models, if we are not using nutrient information in models why are we taking it.

D. Wilcox, J. Houser, and M. Steuck discussed multiple uses for WQ information.

D. Wilcox-discussed options for automated nutrient measurements.

J. Houser-There is not always a correlation between BWC & MCB.

D. Wilcox- Back to Chuck's question, perhaps measuring nutrients through the system can get to yield.

J. Chick- Is it not important to determine major changes in WQ.

C. Theiling-Is that not the EPA's job—to determine gross changes in WQ.

J. Sullivan-WQ is important to many river components BREAK from 2:47-3:00.

Summary of WQ sub-team discussion

4

Continue sampling at SRS sites, some fixed sites, and some tributaries. SRS data provides information on spatial variability and unbiased strata means (important for describing general habitat conditions). Fixed site data provides greater temporal coverage, which is particularly informative during the growing season (e.g. 3 to 6 points in time during the summer instead of one). Tributary data are important for understanding the causes of water quality patterns in the UMRS.

Avoid reduction in summer and winter SRS coverage if possible. Reduce/eliminate other seasons first. Avoid reductions in backwater sampling; reductions in main channel and side channel areas are preferable.

Final decisions concerning distribution of sampling effort should be made after the amount of personnel time available for sampling and lab work is determined.

Maintaining some aspects of long term data string is critical.

Scenarios for Discussion

Scenario I:

Fixed sites and tributaries:

A. Discontinue sampling of small/ungaged tributaries, sites outside of study pools, and isolated backwaters. Number of tributaries sampled should be reduced to ~3 per study area. Only gaged tributaries that have significant impact on the UMRS should be monitored. Number of fixed sites reduced so that all sampling and field station lab work can be done in 2 days/episode (2 people). Th following fixed sites are suggested as priorities for continued sampling:

- 1. Main channel fixed sites at the upper and lower end of the pools.
- 2. Fixed sites that are "representative" of large impounded or backwater areas.

B. Reduce sampling to every two months from November through March.

C. A modification of "I.A." that was discussed was to reduce the number of fixed sites such that they can be sampled in 1 day and to sample every two weeks from April through September. This would increase the temporal coverage during the growing season by two-fold, but reduce the number of sites sampled. The logistic feasibility of this is not clear.

<u>SRS</u>: As in 2002. The number of sites at which samples for nutrient analysis are collected has already been reduced by $\frac{1}{2}$ (currently collected at 1/3 of SRS sites). Additional reductions in nutrien sampling are not advised. If reduction in SRS is also required, see scenarios II and III.

Scenario II:

Fixed sites: as in #1.

<u>SRS</u>: Discontinue spring SRS. Spring SRS data is the most variable as it occurs at different points on spring hydrograph in different years, and represents a transient state of the system that is less critical for habitat assessment than summer and winter. However, it is the season of maximum transport of nutrients and sediments.

Scenario III:

Fixed sites: as in #1.

<u>SRS</u>: Drop Spring and Fall SRS. The group felt that summer and winter SRS are the most critical fo habitat assessment and that if additional reductions are needed that discontinuing Fall SRS was preferable to reducing summer or winter.

Statistical Support (B. Gray, M. Pegg, V. Barko, J. Houser) What he does in a situation like this

- 1. To look at goals, white papers, validity
- 2. Consulting
- 3. Methods for analysis

Example-How to analyze count data-a bit like fish CPUE.

Ability to detect trends

Topic the group addressed

Priorities for analyses

- 1. Completion of the kinds of analysis (3 categories)
 - a. Means, SE, trend, multivariate, analogs (agreed important)
 - b. Within component more detailed analyses have been initiated, e.g. reliability of means, random error or sampling, temporal and spatial correlation
 - c. Cross-component models-habitat models-time consuming and complex
- 2. Components with least previous analyses
 - a. Fish a lot and invert to a lesser degree
 - b. Is there ability to shift resources to veg and wq?
- 3. Analyses at field station encouraged.

Data Analysis and Reporting (B. Johnson)

How much analysis should be included in minimum program?

How much have been done and what is out of the norm?

To the point where much of data collection is routine, for example, WQ has been

streamlined allowing component to at least provide annual information-web-based updates.

Talked about identifying red flags. Was red flags defined?

Cross component analyses-how much is part of minimal sustainable?

M. Hubbell-struggling to define key elements from items defined.

J. Sullivan-as if there was a distinction between analyses or reporting?

B. Johnson-yes, need reporting for analyses, web-based formats are more summary and less analyses.

J. Sullivan-are web-based reports to replace annual reports?

B. Johnson-yes.

J. Sauer asked if he's seen the invert page? Others will be similar.

J. Sullivan- on the topic of more sophisticated analyses. Is this topic or part of previous? B. Johnson-need to define that.

D. Wilcox said short-term web-based annual. More analyses would be like 10 year, more interpretation and analysis.

C. Theiling asked someone to define the LTRMP annual reports.

J. Sauer-like one from B. Gray's individual component reports as opposed to the overall summary of across all components.

M. Steuck asked what about annual updating of data via web of data already analyzed (for stuff ready to roll), a tool for "red-flagging"; update noteworthy reports?

J. Sullivan viewed status and trends as "what we have learned". Does everyone view this as this category?

D. Wilcox said 10-year reports more in depth.

M. Steuck said we need to define what reporting is minimal sustainable at 3.5M-not the above and beyond, as money comes then we can look at other questions.

B. Johnson said we are trying to look at a five-year chunk, perhaps not look at just annual, but may include a more in-depth report in year 4 or 5.

B. Gray said perhaps talking year 6.

J. Sullivan asked for clarification of point-A-team felt status and trends in '04, but that is not a charge from EMP-CC.

M. Hubbell depicted categories for reporting as follows:

Seven Categories (first 4 are potential BASE; last 3 are above and beyond)

- 1. Web based
- 2. Annual component (web and annual are same)
- 3. Running analysis
- 4. Annual synthesis report (cross-component and synthesis; overall summary again, as previous, unusual occurrence)
- 5. Status and Trend
- 6. Special reports
- 7. 5-10 year reports

D. Wilcox said Status and Trend is for a wider audience. Would think EMP-CC would want this as part of minimal sustainable program.

C. Theiling said we need to look at the audience the reports are for, as we consider these items.

Graphical Display Tools (Caucutt and M. Steuck)

Handouts were provided (2 critical pages are pasted below).

June 2004 stats for websites 3,000-6,000 visits per day.

Addresses of web-site viewers can be queried.

Talked about usage and hackers-process for security to prevent shutdown. Dept. of Interior also looks for holes, daily backup of data-a lot of effort for security reasons. L. Leake said it takes time to query users, we don't go out and query this info often.

Explanation of Data Flow (see handout)

Last handout (primarily what he was tasked to look at for this meeting-FTE breakdown). J. Sullivan asked what about WQ and Veg data browsers?

M. Caucutt said they are in review.

L. Leake said those tools that are being developed and are under review are "graphical display tools". These tools outlined by Mike would be additional. The question is do we want to maintain these tools?

M. Steuck-so, if we decide "minimum sustainable", things like fish would stay but would not be updated?

L. Leake said yes, but development not included. If already developed, we are talking just maintenance-may not be able to afford development.

M. Caucutt said trying to lay out what are available. Critical tools are included as data management points 1 and 2.



New data is immediately available to Field Stations from UMESC LTRMP Intranet Level 2 Web Browsers

UMESC LTRMP Data Management Component Data Flow FY 2003/2004

Mille C

One of the key goals of the LTRMP is to provide timely and useful information to natural resource decision makers in the Upper Mississippi River System (UMRS) basin. The following data delivery and access tools are in order of perceived importance to the user. Note that as you increase online data manipulation options for the users, you also increase the amount of effort required to develop and maintain.

Critical tools: "minimal sustainable"

These Data Management tools should be considered part of the collection and data delivery process.

- Updates to Data Collections and Corrections applications. These are the applications loaded on rugged notebook PCs used to collect the data and the applications downloaded from the UMESC Intranet used to male corrections to the Level 2 tables.
- The minimum data delivery and access tools needed for electronic delivery of LTRMP data would be the component database browsers. These allow users to query each component and select the download format the user needs. These are some of the most important web pages for LTRMP and they deliver over 1000 custom queries a year. (2.5 FTEs)

Graphical Display tools

- The Spatial Query tool is a stand alone application that packages the LTRMP component data in a spatial view. The tool is available by cd or downloadable from the web. Updates could be the addition of new data, small enhancements or a total re-vamped version. (1 additional FTE)
- The Graphical Database Browsers (currently only the Fish component is online) are online tools that query the LTRMP database and return the results to the user's browser in an online graphical application. Useful for quick snapshots of the component data. Efforts are underway to provide each component an online, specialized graphical display tool. (1 additional FTE)

Internet Mapping Application

• An effort is underway to provide an online application of the entire inventory of land Cover/Land Use layers. This will allow the user to select any portion of the Upper Mississippi River System and generate an online map with multiple year Land Cover/Land Use options. (1 additional FTE)

J. Sullivan asked with no additional data collection, what would be required to maintain data?

M. Caucutt and L. Leake said looking at about 2.5 FTE's basically same as "minimum sustainable".

J. Sullivan asked 3,000-6,000 hits a day, is that a lot and how does it compare? Nobody had a definitive answer.

L. Leake said team includes M. Caucutt, R. Maloney, Bower, D. Hansen. Will sit down tonight and talk dollars.

Equipment Refreshment (L. Leake)

\$2M dollars of program equipment has been lax over past 2 years because of lack of dollars.

Have been trying to identify needs.

J. Sullivan asked are we talking about field stations only?

L. Leake said we are talking UMESC and field station equipment and are suggesting refreshment as a percentage of budget. We are presently looking at about \$250,000. Perhaps 1% on an annual basis—approximately \$57,000.

FWS asked so the \$250,000 represents defined needs?

L. Leake said yes, after that trying to maintain through % basis hoping to pursue equipment refreshment this year to jumpstart.

J. Sullivan asked have we defined items mandatory for sampling.

L. Leake said yes, couple of boats for safety, laptops, network servers, field data collection equipment, and field operations equipment. This is all based on what will the program be next year, safety first and field monitoring second.

J. Sullivan asked what costs are associated with implanting changes that change data entry applications?

L. Leake said costs are included on an annual basis as part of critical tools of data management. It is part of minimum data management.

J. Sullivan asked would a merging of WQ and Veg require rewriting apps?

L. Leake said not necessarily, depended on change.

M. Steuck said the worst effort often comes when a single parameter is added.

B. Johnson said obviously, we are in emergency mode. Have we ever had a schedule for equipment?

L. Leake said no, have been replaced as needed.

A discussion commenced about the utility of scheduling equipment refreshment.

L. Leake said change is at hand. Is equipment refreshment a part of minimum sustainable program (MSP).

FWS asked if EMP-CC thought it should be part of a MSP?

L. Leake said that is what they were asking—if it should be.

D. Wilcox said didn't think we can maintain a program without equipment refreshment.

L. Leake said USGS put on an estimate of 1% as a way to get started.

J. Sullivan asked if it will be hard for the A-team to assess. He asked team leaders if \$40,000 gross would be enough?

L. Leake said let's look at it as a percentage of useable dollars. That represents a start for discussion. We can work that backwards. How many dollars do you want to be able to spend?

J. Sullivan asked if had enough for day and do we want to reconvene at 8:00am?

M. Steuck made motion to adjourn.

T. Boland seconded motion.

Motion passed unanimously at 4:15pm.

Meeting commenced at 8:07am on Thursday, July 29, 2004.

J. Sullivan presented Leake's full cost accounting as starting point. Today we will try to accomplish goals of 7 EMPCC questions to fit in a reduced budget. Items not agreed upon will be decided by EMPCC.

R. Maher questioned closing of 1 Illinois field station. Is it still on the table?

R. Perk said each state will remain a presence in the program. The combined two Illinois stations is on the table. That was not a question asked by EMPCC.

Sternberg stated that's correct. It would have to come up through the EMPCC Rep.

L. Leake said she had been working on the issue of accounting costs and savings by combining 2 field stations, haven't received answers to all the questions from the states. Sternberg said she would like to see in this meeting a cost accounting of field stations before and after.

J. Chick questioned if input from field stations would be needed.

L. Leake said we will do that once we have all the info.

L. Leake provided and explained graphics, graphics include full accounting-data management.

J. Chick, so we are not being asked to figure out a program of under 3.5M.

R. Perk said EMPCC asked us to answer specific questions, if they put together a program under a 3.5M budget.

L. Leake stated what she did was put together a guide to what costs are, so we can help put things into a 3.5M box.

J. Sullivan said so this is a breakdown of what it costs to get data to UMESC.

L. Leake said no it goes beyond data collection. Staff at UMESC and field, overhead, common services.

J. Sullivan asked what costs are not included?

L. Leake said Service Management is not included-let me show you...basically, 1.0 FTE of administration is not included.

C. Theiling asked why are these things not included?

R. Perk stated we wanted to provide EMPCC with the ability to work out components separate from each other.

Example (more numbers as provided to EMPCC):

- 1. Staffing comprised of multi discipline teams working across components.
- 2. Field staffing:
 - a. MN, WI, IA=3 permanent, 2 seasonal
 - b. IL combined=5 permanent, 2 seasonal
 - c. MO=2.5 permanent, 2 seasonal
 - d. UMESC=4.8 permanent, 2 lab (temp)
- 3. Fish: All pools and years; 3rd period \$840K
- 4. WQ: Fixed-in, out tributaries; biweekly/month SRS=All pools, all seasons 02 level \$1,300K
- 5. Veg: 25% reduction, P4, 8, 13; 50% reduction, P26; No sampling LaGrange or Open River \$520K
- 6. STAT Eval: 0.6 FTE \$110K
- Data Management: 2.4 FTE \$280K; Go toward Licensing and Maintenance \$145K

 Science Mngt. Support: 1.3 FTE \$200K
LC/LU: 1.0 FTE \$130K
Bathy: 0.15 FTE \$20K
Equipment refresh: 1% \$55K Total 3,600K

There was much discussion about the numbers and what they mean

J. Chick said so I don't know what I am supposed to do today.

R. Perk asked John what he needed to make decisions. There was much discussion about logistics of combining Illinois field stations among Perk, Chick, Maher, and Pegg.

J. Chick questioned how we can make decisions today with the information provided? Why are we provided budget \$\$\$?

R. Perk said we are charged with questions and to provide recommendations to EMPCCthe numbers are provided as guidelines.

J. Chick made a motion to include all 3 fish periods or no fish at all.

Discussion of if that is the way we want to go

J. Sauer, C. Theiling, R. Perk, Barko discussion of appropriate ways to assess the importance of components.

R. Perk said so if I come and said I have \$3.5M for a new program today, you couldn't tell me what you want?

J. Chick and Perk discussion of what tasks are required.

J. Sullivan said went through \$ provided by Leake to clarify what things are included in the costs presented in Table. Sullivan questions adding floodplain lakes newly to program when we are now cutting.

J. Pitlo questioned how many persons will be cut from each field station.

Team leaders-approx. 60% in IL, 40% in IA, 30% in MN, WI, MO

Additional discussion from Leake, Steuck on staff and \$\$\$'s showed why staffing is broken down the way it is.

J. Sullivan—shift direction from costs to a discussion of what dropping data from the program will cost in biological terms (provided overhead as below).

Station	Fish	WQ	Veg
4	Y	Y	Y
8	Y	?	Y
13	Y	?	Y
26	Y	?	Ν
OR	Y	?	Ν
LG	Y	Y	N

Basically Sullivan suggests that fish is the common thread. The importance of WQ and Veg depend on Study Area/Reach.

T. Boland agrees with changing direction. Reiterates our charge is technical input perhaps independent of \$\$\$. Proposed moving on recommendations independent of money.

Wilcox amazed that we're saying ALL FISH or NO FISH despite J. Chick's showing a lot would be learned from 2 periods. He complemented AD HOC committee leaders for providing technical input independent of emotion.

J. Sullivan asked if members are willing to go through questions? Lets start w/first on list; equipment refreshment. There are obviously needs in the way of equipment. Propose a shot in the arm from APE and the % each year after.

Yager said first need to define if equipment refreshment is part of "minimal sustainable program."

T. Boland made a motion to refresh essential equipment at 200K out of APE in 2005 with an additional refreshment at 1% of the budget in years 2005-2009. Motion seconded by M. Steuck.

*Motion passed.

J. Chick made a motion that we recommend that we do not drop the fish component to less than 2 periods with all gears and study areas as presently sampled. Motion seconded by ?.

*Motion passed.

Discussion of veg and potential for combining WQ/Veg or combining other crew members (Pitlo, Houser, Theiling).

J. Sullivan asked if it was necessary to continue sampling vegetation in the LaGrange Pool and Pool 26.

J. Chick questioned what else is to be learned from continuing to sample LaGrange.

Y. Yin said the relationships between veg and wq and fish (cross component). Discussion continued among Sullivan, Yin and Chick about the importance of veg sampling in the LaGrange Pool.

Discussion of power and cost associated with vegetation scenarios and potential logistic issues (B. Johnson, Houser, Chick).

J. Sullivan makes a motion to drop vegetation sampling in the La Grange Pool, Pool 26 and Open River Study Area, and keep vegetation sampling in Pool 4, Pool 8 and Pool 13 at a minimum allocation of 450 sites.

T. Boland seconds.

*Motion passed.

J. Chick suggested a friendly amendment that UMESC should continue to discuss the possibility of combining WQ and Veg components logistically.

No second, amendment not passed.

J. Sullivan said we can revisit amendment.

Break 10:10-10:22

J. Sullivan reconvenes beginning discussions with WQ issues.

Discussion of the importance of un-gauged tributaries because they provide no context for tributary influence (J. Sullivan and C. Theiling). J. Chick recommends that J. Houser look into adding gauge data to water quality.

J. Houser said it is important to keep water quality in all pools if we wish to detect changes caused by management changes. Would be hesitant to drop water quality study areas.

J. Chick—doesn't seem that there are obvious reasons for dropping water quality from any of the study areas.

J. Sullivan questioned need for as many sites in OR study area. Wasn't there a Hrabik report discussing WQ procedure in the OR?

B. Johnson said it is not completed and will probably not be for a couple of months.

J. Chick said he would move that we follow Jeff's scenario's in order for recommending cuts.

V. Barko asked why don't we use APE money for continuing WQ monitoring to buy another year to finish analysis to provide more information for making cuts.

B. Gray agreed—is hesitant to drop an SRS event. Estimate can be made even with lower samples. Would argue for a small sample over no sample.

M. Steuck said so IA equates to what amount of reduction?

Houser said approx. 30-40% reduction in fixed sites. Steuck doesn't believe that scientist in here would have heartburn with scenarios for IA.

Houser suggested cuts in SRS made in spring first.

C. Beckert—appears that we have an outstanding WQ component in the way of procedures and validity, but there seems to be a lack of an objective for the WQ component. Scares me that over 1M is spent with no objective.

J. Houser answers that the WQ data is used to determine how parameters change from year to year, change due to large management action, detects change due to climate, provide info. for 303(d), 305(b) and TMDL.

C. Beckert asked is the WQ component is designed to answer these questions?

Y. Yin said if we find a change in biological indicators, we need to be able to access abiotic factors (e.g., water quality parameters).

C. Beckert said he would like that the objectives to be spelled out as that then.

J. Chick said he was sure a broad objective has been spelled out.

C. Beckert said for example, an attempt to determine the influence of a tributary on a BWC failed and probably due to insufficient data.

R. Perk said that is why we have this small box-to have APE money for focused questions.

Wilcox reiterated C. Beckert's points for a need for objectives-need to address the question what is the data needed for.

J. Houser said we chose generality over specificity for a reason to provide a "jack of all trades" type of wq component.

C. Theiling questioned the past.

B. Johnson said past is the past. Look to the future with people in place. WQ is typically \$1.2M-\$1.7M.

Sternberg suggests that we evaluate the cost of continuing water quality by doing an efficiency study using APE monies during '05.

R. Perk said there is potential, money dependant, that APE money could be used as a "glide-slope".

J. Sullivan would like to provide funds for sustaining wq in '05 and allow for additional efficiency analysis during the year.

J. Chick asked can't we, at this time, make some cuts at field stations in the way of fixed sites?

B. Johnson said water quality has been reduced (see Lubinski report) in 2000.

M. Steuck said so lets reduce fixed sited by 40-50% and maintain all 4 SRS events until further evaluation.

Sullivan and Johnson reiterate the importance of design efficiency.

Steuck motions to reduce fixed sites 40-50% and continue all 4 SRS events, as in option I.A, with an evaluation of water quality component using APE funds. J. Chick seconded.

*Motion passed unanimously.

Statistical Support

Steuck reiteration from B. Gray's talk currently 0.6 FTE @ \$110K. Can't field stations do 1 and 2?

- 1. Means, SE, trend, multivariate analysis
- 2. Within component more detailed analysis
- 3. Cross-component models/habitat models

Discussion about what is the base statistical support (Chick, Johnson, Brian).

B. Johnson said 0.25 FTE would get most of 1 and 2.

L. Leake had already dropped from 1.0 to 0.6 FTE.

J. Sullivan asked so what is the base?

M. Pegg made a motion to recommend dropping the statistical support to 0.25 FTE.

M. Steuck seconded motion.

Discussion commenced concerning statistical support needs.

B. Gray-I may be biased, but I think we need to maintain support.

Boland-I think we need to maintain

Sullivan-I agree

Motion did not pass: Five votes for the motion; ten votes against the motion.

Sullivan—support that statistical analysis be 0.5

Johnson—maintain at 0.5, but have no less than 0.25.

Perk and B. Gray discussion.

B. Johnson motioned that we recommend funding statistical support at 0.5 FTE, and at no less than 0.25 FTE.

T. Boland seconded.

*Motion passed

Data Analysis Web based annual reports Summary reports (an observational web-based report)-done annually.

D. Wilcox valued a summary report.

Steuck asked what do we want for annual minimal sustainable reports?

Wilcox said there is value in providing narrative.

C. Theiling said seems we have defined these as part of component requirements.

L. Leake said let this program define the minimal sustainable.

M. Steuck offered up annual reports (pertaining to subjects approved or demanded by A-team or EMP-CC by field stations).

M. Pegg asked should these be a part of the program as freebies.

L. Leake suggested to consider independent of money.

M. Pegg motioned to recommend web-based annual updates and LTRMP summary reports as the minimal sustainable program and field station contribute reports pertaining to EMP on an annual basis as approved by A-team and EMP-CC. J. Sternberg seconded the motion

Discussion of whether additional items/report should be part of minimal sustainable commitment of field station personnel to providing additional program products. Discussion of the utilization of field expertise.

C. Theiling suggested Everglades and Chesapeake Bay as a model for web-based annual status and trends.

*Motion passed unanimously.

Graphical Display Tools

M. Caucutt reviewed what graphical display tools were.

L. Leake asked should these things be continued?

Data delivery and correction and collection tools CRITICAL TOOLS follows: 2.4 FTE @ 280K=get the below Database/browser Field Application of QA/QC Data Management security Software/license/IT maintenance=180K *extra* spatial query tool updates; add data 1 FTE, improve data 2 FTE

Graphical display tools=1FTE=100K fish and veg Internet mapping=1 FTE=100K

Wilcox suggests maintenance of graphical display tools and add as funding allows C. Theiling suggested additional tools are not that useful.

L. Leake said actually 1 FTE could do Spatial Query Tool and Graphical Database Browser (100K)

J. Sullivan suggested that fish data browser move above line (i.e., become part of maintenance).

M. Caucutt said vegetation browser is 90% done

M. Pegg motioned that Database/browser, field application/QA/QC, security archival and backup, software license/IT maintenance and graphical database browsers are the base and Spatial Query Tools and internet mapping tools will be added as APE money allows. (Should =2.4 FTE and an additional 0.5 FTE.) R. Maher seconded motion.

Motion passed.

New Business

L. Leake needs an FY04 and FY05 list of equipment needs from team leaders.

November 18th next EMP-CC meeting. J. Sullivan suggests next A-team meeting 1st week of November.

R. Maher made a motion that given the LTRMP was authorized as mitigation for expansion of L&D 26, and given the potential for negative impacts on the Illinois River, and given uncertainties surrounding efficiencies gained through collocating the Illinois field stations, we move that we not collocate the Illinois field stations. (This motion was put to the A-team membership only, not the Ad-hoc technical committee).

J. Sternberg seconded. Discussion followed. *Motion passed. FWS abstained and the USEPA was not present.

J.Chick—If the program approves discontinuing vegetation monitoring at Pool 26 and LaGrange then I would like to see the public informed about the loss of this due to congressional appropriation changes.

J. Pitlo will replace T. Boland as Iowa's A-team representative (Boland retires July 31). M. Steuck will transfer to J. Pitlo's position (effective August 13). Dan Kirby will be the interim team-leader at the Bellevue LTRMP station.

T. Boland motion to adjourn. J. Sternberg seconded. Meeting adjourned at 12:43pm.

A-Team/Ad Hoc Technical Team Recommendations - June 28, 2004

Definitions -

Minimal Sustainable Program (MSP) - The "base" LTRM program for the next five years. Assumes 19M EMP, 23% savings and slippage, 4.1% inflation over 5 years. For LTRM, this amounts to about 3.5 million for FY05. This amount will inflate each year up to about 4.2 million in FY09 assuming EMP stays flat at 19M.

Annual Program Elements (APE) - This is the money available now that will be necessary to account for future inflationary losses. This amounts to about 700K in FY05 and would decrease to 0K in FY09.

Recommendations for EMPCC

Equipment Refreshment - Fund "critical needs" up to \$200k out of APE in FY05. In addition, provide 1% of MSP during years FY05 to FY09.

Fish Component - We recommend that we do not drop the fish component to less than 2 periods with all gears and study areas as presently sampled.

Vegetation Component - Drop the vegetation sampling component in the La Grange Pool, Pool 26, and Open River Study Area, and keep vegetation sampling in Pools 4, 8, and 13 at a minimum allocation of 450 samples per study area, per year.

Water Quality Component - Reduce fixed sites by 40%-50% and continue all SRS events, as outlined in option I.A (WQ sub-team), with an evaluation of the water quality component using APE funds.

Statistical Support - We recommend funding statistical support at 0.5 FTE's, and at no less than 0.25 FTE's.

Data Analysis & Reporting - We recommend web-based annual updates and LTRM summary reports as the minimal sustainable program, and field stations shall contribute reports pertaining to EMP on an annual basis as approved by the A-team and EMP-CC.

Data Collection, Delivery & Tools - Database/browser, field Apps/QA/QC, security archival and backups, software licensing/IT and graphical database browsers are the base, and spatial query tools and internet mapping tools will be added as APE funds allow.

Other A-Team Action

LaGrange & Alton Stations -Given the LTRMP was authorized as mitigation for expansion of L&D 26, and given the potential for negative impacts upon the Illinois River, and given uncertainties surrounding efficiencies gained through collocating the Illinois field stations, we move that we not collocate the Illinois field stations. (Motion passed - USFWS abstained and USEPA not present)

A-Team Meeting Minutes for 07/27/04 and 07/28/04 Location: Holiday Inn; Moline, IL

Meeting Attendees:		
John Sullivan; WDNR	Janet Sternberg; MODOC	Marvin Hubbell; USACE
Chuck Theiling; USACE	Valerie A. Barko; MODOC	Jeff Houser; USGS
Rob Maher; ILDNR	Dan Kirby; IADNR	Tim Yager; USFWS
Brian Gray; USGS	Dave Moeller; IADNR	Barry Johnson; USGS
Walt Popp; MNDNR	Clint Beckert; USACE	Dan Wilcox; USACE
Kevin Stouffer; MNDNR	Tom Boland; IADNR	T. Miller; USACE
Mark Pegg; INHS	John Pitlo; IADNR	Yao Yin; USGS
John Chick; INHS	Linda Leake; USGS	Shirley Yuan; USGS
Mike Steuck; IADNR	Roger Perk; USACE	Jennie Sauer; USGS
Larry Robinson; USGS	Mike Caucutt; USGS	

07/27/04

Meeting called to order by John Sullivan at 12:47 p.m.

J. Sullivan provided a welcome and introductions took place.

The agenda was reviewed and minutes from the April meeting were reviewed.

Tom Boland: Made a motion to approve the April minutes.

John Chick: Seconded the motion.

Minutes were approved unanimously.

R. Perk provided a handout outlining tasks to be performed by the technical meeting, per the instructions of EMPCC from a meeting in LaCrosse on June 24 and 25, and outlined the assumptions for the tasks.

BASE ASSUMPTIONS—Roger expressed the desire to use a 5-year planning horizon for the LTRMP that will fit at a \$19M funding level for EMP over the next 5 years with 23% savings and slippage, and an inflation rate of 4.1%. The goal is to define what the program will consist of at \$3.5M firm (after S&S and inflation). This was termed the minimal sustainable program. If the group cannot reach consensus on what represents the minimal sustainable program the Corp will determine what represents the minimal sustainable program. The base program will consist of the minimal sustainable program (\$3.5M) with additional funds on a year-to-year basis for use on additional program elements.

J. Chick questioned what would happen if funding fell below \$19M for EMP R. Perk stated that relatively speaking \$19M would sustain the program at \$3.5M, but major cuts in funding would have costs.

Additional base assumptions were that the Corp and USGS will continue as partners and roles will remain similar—there will be changes, but the basic structure will be maintained. Also, there will be a field station maintained in each state

5 year LTRMP Strategic Plan

Results and Assignments from the June 24 and 25 Special EMP-CC Meeting

Program Management Assumptions:

- A. Five year planning horizon
- B. Level annual EMP appropriation of \$19 million for each of the next 5-years.
- C. Average fiscal year saving and slippage and Presidential reseission rate of 23%.
- D. Average annual rate of inflation of 4.1% during the entire 5 years.
- E. That the "minimal sustainable" program would be directly indexed to inflation in order to maintain a stable program for the entire 5 years.
- F. That the FY05 starting point for funding the "minimal sustainable" program should be \$3.5.
- G. That the Partnership would recommend a "minimal sustainable" program.
- H. That any funding available to LTRMP above that needed to fund the "minimal sustainable" program would be used to fund efforts contained in the LTRMP Operating Plan.
- That any changes to the program resulting from this effort should attempt to maintain as much of the existing scientific integrity of the LTRMP program as practical.

These Program Management Assumptions result in the following breakdown in funding for FY05.

Annual EMP Appropriation 5	\$19,000,000	
Saving and slippage (23%)	(\$ 4	,370,000)
UMRBA	(\$	28,000)
Independent Tech. Review Comm.	(\$	50,000)
Public Involvement	(\$	30,000)
Program Administration	(\$	180,000)
Sub-total	(\$14	,342,000)
HREP Allocation (68.6%)	\$ 9	,838,612
LTRMP Allocation (31.4%)	\$ 4	,503,338
COE LTRMP Management	(\$	140,000)
(MVR, MVS, MVP)		
LTRMP Sub-total	\$ 4,	363,338
"Minimal Sustainable" LTRMP	(\$ 3,	500,000)
FY05 Funding available above "Min. S	Sus."\$ (\$	863,338)

"Additional Program Elements"

<u>"Minimal Sustainable" Program</u> - means that portion of the LTRMP program that will remain in place during the 5-year planning period and will be annually indexed to inflation to cover cost increases. The exact program elements that will be included in the "minimal sustainable" program will be defined by this strategic planning process.

<u>"Additional Program Elements"</u> - refers to the additional increment of LTRMP work that can be done annually above and beyond the "minimal sustainable" program. Work in this category will be paid for by funds in excess of \$3.5 million (FY05 dollars) up to the annual LTRMP funding appropriation. EMP-CC did not make a formal recommendation on how to handle the SOW for items in this category. Option include:

1. Work items in this category would require a separate annual Scope of Work (SOW), which would include milestones and products.

2 Items in this category would be outlined in a SOW for the entire 5 years of the planning period and would include milestones and products.

Key to font types for this report;

- Regular Refers to those items for which the group reached consensus at the June 24 & 25 special EMP-CC meeting.
- Bold Refers to those items, which were referred to the ad hoc technical committee for further evaluation and recommendations.
- Italic Refers to those items for which the EMP-CC will consider for final action but do not require additional input from the ad hoc technical committee.

Underline Refers to items not addressed at the meeting but identified as possible "additional program elements".

Defining the "Minimal Sustainable" Program

The following is intended to help clearly define those portions of the LTRMP that are considered part of the "minimal sustainable" program.

In general the largest proportion of the "minimal sustainable" program is directly associated with component monitoring (fish, aquatic vegetation, water quality and macroinvertebrates). The following summarizes the actions taken at the June 24 and 25 meeting.

I. Component Monitoring portion of the "Minimal Sustainable" Program

A. Key Activities Associated with Component Monitoring.

The group agreed that the following are those activities associated with component monitoring that should be budgeted for as part of the "minimal sustainable" program. The intent is to include those activities that are associated with the collection, management, basic analysis and serving of component data. Any work item not specifically identified as being part of the key activities associated with component monitoring would be identified separately in the SOW and paid for from funds in excess of \$3.5 M (in FY05 \$). Key activities associated with component monitoring needs to be clearly defined, however the following is general guidance of what is included:

- 1. Data program
 - a. Field data collection.
 - b. WQ Lab
- 2. QA/QC of data.

3. Data management and serving (includes maintenance of existing capabilities)

4. Annual reports.

Β.

- a. Annual component reports
- b. Annual "running" analysis of data. (Needs to be defined)
- c. Internet posting of annual component data.
- 5. Maintaining existing Internet Tools. (Needs to be defined)

6. Equipment Refreshment (Needs to be defined - % of budget or set amount)

7. Data Analysis beyond that identified in I. A. 4. b. (Needs to be defined)

Field Station Network – The group considered the option of consolidating the two Illinois field station but continuing to monitor the La Grange trend pool. The estimated savings would be from \$205,000 to \$223,000 annually. The group expressed support for maintaining the existing network of six field stations however reserved the option of consolidating the two Illinois field stations (UMESC will coordinate with the state's to refine details).

- C. Macroinvertebrate Component The group did not want to direct this item to the ad hoc technical committee for additional input. However, they did identify several alternatives that would be considered based upon available funding. These options include:
 - 1. Keep as is with no changes.
 - 2. Drop as a component of the "minimal sustainable" program.
 - 3. Sample at only a portion of the field stations.
 - 4. Evaluate change detection capabilities of this component. Including:
 - a. Trend detection
 - b. Quality control
 - c. Application to entire river.
- D. Fish Component The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:
 - 1. Monitoring period could be adjusted from being based on the calendar to being based upon water temperature ranges. This would not be a financial saving but may help to improve sampling effectiveness. The ad hoc technical team was asked to make a recommendation regarding this issue.
 - 2. Component management. Options discussed included:
 - a. No change
 - b. To fully implement this component with a corresponding reduction in the level of effort for other components.
 - c. Field stations take on additional responsibility related to data collection and analysis.
 - d. Creation of multi-disciplinary teams at field stations. This would result in a person taking on primary responsibility for more than one component and for field crews to collect data on more than one component when out sampling.
 - 3. Adjust sampling effort. Options included:
 - a. No change in existing procedures.
 - b. Continue sampling in all three periods but with fewer gears.
 - c. Sample in only two periods but with all gears. (See I. D. 1. for option)
 - d. Sample in only one period but with all gears. (See I. D. 1. for option)
 - e. Sample every other year but with all gears in all periods.
- E. Aquatic Vegetation Component The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:

- 1. To fully implement this component with a corresponding reduction in the level of effort for other components.
- 2. Sample every other year.

3. Develop an "event driven" monitoring plan for the lower pools, and implement as part of the "minimal sustainable" program. Monitoring would not occur in all pools.

F. Water Quality Component - The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% funding reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:

- 1. To fully implement this component with a corresponding reduction in the level of effort for other components.
- 2. Sample every other year.
- 3. Sample only Stratified Random Sample (SRS) sites.
- 4. Sample only Fixed sites.
- 5. Uniformly reduce the sampling effort for both SRS and Fixed sites.
- 6. Not all field stations would monitor at the same level of effort or with the same sampling method (SRS or Fixed).
- 7. Reconsider the number of parameters being analyzed.
- G. Data Management Data management refers to that portion of the UMESC staff directly involved in data handling and serving.
 - Per this effort the "minimal sustainable" portion includes data management, Quality Assurance and Quality Control (QA/QC) of data, and data serving. This represents 2.5 FTE's worth of effort. UMESC is to look for efficiencies to reduce costs.
 - 2. The level of existing effort for summarizing data and tool development is .6 FTE. It was unclear from the discussion whether this portion of the program should be included as part of the "minimal sustainable" program or be considered as a candidate for "additional program elements" and the exact definition of what would be done.
- H. Full Cost Accounting Full cost accounting is defined as the pro rata share of all sources of income being used to pay for facility, supplies and equipment cost. Under this proposal, field stations that receive non-LTRMP funding would include the proportional share of overhead costs within each of those budgets. Each field station will estimate the additional revenue this will generate at the beginning of each fiscal year and that amount will be subtracted from the LTRMP allocation to that field station. This will be adjusted for actual income throughout the fiscal year. UMESC was asked to coordinate with the states to collect this information.

II. Other activities included in the"Minimal Sustainable" Program

A. Land Use Land Cover (LU/LC) The FY04 level of effort is 4.2 FTE's. The group felt that this effort should be modified so that a small portion of the existing effort was maintained in the "minimal sustainable" program. Agreed to at the meeting was that LU/LC for the entire UMR floodplain would be done on a 10-year cycle. LU/LC initiatives could be done with "additional program element" funding on an annual basis. The primary discussion was the level of effort that should be included in the "minimal sustainable" program to support GIS activities. These options included:

1. Drop completely.

С.

 Maintain a basic amount of "corporate knowledge" at .4 FTE. This includes providing field station with basic GIS data support. However, specific outputs were not resolved and would be required before inclusion.

B. Science Management – Science management refers to the level of administrative oversight provided for LTRMP by both the Corps of Engineers and UMESC.

	Fiscal Year	Funding Amount
1. Corps of Engineers	FY04	\$123,000
	FY05	\$140,000
2. USGS	FY04	\$350,000
	FY05	\$286,000

Bathymetry - The group valued the data provided by the bathymetry and agreed that collecting bathymetry data for the UMR was very important. However, actual collection of the data was not possible within the funding constraints of the "minimal sustainable" program. The following recommendations from the meeting:

- The group recommended that .15 FTE be allocated to the "minimal sustainable" program. This would make some expertise available to the program and allow the program to work towards completing bathymetry coverage by seeking funding opportunities from outside the "minimal sustainable" program.
- Funding for actual bathymetry work may be included in the "additional program elements" or come from other sources.

Basic "corporate knowledge" plus. This would require 1.15 FTE's and would include II. A. 2. above, plus event driven photo purchase and interpretation and managing the "next steps" for future LU/LC updates.

"Additional Program Elements"

A. Statistical Support – The group discussed statistical support for the "minimal sustainable" program. However, they referred this item to the ad hoc technical team to evaluate and make a recommendation. Four options are to be evaluated:

- 1. Should it be included as part of the "minimal sustainable" program and at what level of support.
- 2. Maintain at the FY04 level.
- 3. Reduce funding by 50%. Or
- 4. Drop completely.

B. Development of new internet products/tools. (No guidance provided)

C. Bathymetry (No guidance provided).

D. Sampling in Pools 13 - 26. Each member of EMP-CC was asked to express an opinion as to whether the "minimal sustainable" program should include a 5-year sampling program in this portion of the river.

- 1. F&WS and USEPA felt that this was highly valued and should be included in the "minimal sustainable" program for the next 5 years.
- 2. The Corps, and states of IL, IA, MO, WI. and MN felt that it was valuable but should not be included in the "minimal sustainable" program.

Other Items Not Addressed but identified for possible inclusion as "additional program elements".

G. Spend the first 6 months of FY05 to reduce staff levels. Use this time to complete task or "tie up" loose ends.

H. Status and Trends Report

I. Initiate Cross Component Analysis

J. Develop an "event driven" monitoring plan to address significant natural

occurrences (e.g. drought, floods, spills) as funding becomes available.

- K. Conduct an efficiency analysis similar to the fish analysis for WQ and aquatic vegetation.
- L. Develop procedures to increase the use of existing calibrated and validated submersed plant growth models.

J. Sullivan asked if additional program elements (APE) decisions will be made by EMP-CC

R. Perk responded that yes, EMP-CC will evaluate the APE requests, similar to current scope of work planning.

J. Pitlo asked what the anticipated amount of APE money was.

R. Perk responded that at a \$19M funding level APE \$\$\$ would be about \$700,000 this year and about \$100,000 in year five

J. Sullivan asked what APE \$\$\$ would be available under a \$16M funding level.

R. Perk responded that he was not sure.

J. Pitlo asked, what you anticipated the APE's to be and done by.

R. Perk responded it could be anyone, but most likely states and UMESC.

L. Leake responded APE could be anything like bathymetry or land cover and there is already a list of program priorities.

R. Perk added that "Status and Trends" was near the top of his list and the CORP, USGS, and States would be involved in that.

J. Sullivan asked if R. Perk expected the group to use the base assumptions in making decisions about program elements during the meeting.

R. Perk responded that yes they were already adopted by EMP-CC.

L. Leake noted that EMP-CC has provided a specific list for the group and provided a overhead and poster board of the list

The items on the list that were referred to the AD HOC advisory board were as follows:

- 1) Equipment refreshment (needs to be defined as a percentage of the budget or set amount)
- 2) Fish Component: The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. Further details were provided in the handout.
- Aquatic vegetation component: The group fully supported inclusion of the component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. Further details were provided in the handout.
- 4) Water quality component: The group fully supported inclusion of the component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. Further details were provided in the handout.
- 5) Statistical support: The group discussed statistical support for the "minimal sustainable" program. However, they referred this item to the ad hoc team to evaluate and make recommendations. Further details were provided in the handout.
- 6) Data analysis. Data analysis beyond that identified in I.A.4.b. (needs to be defined).
- 7) Graphical display tools (needs to be defined).

L. Leake stated that leads were assigned to each of the seven items to jump start discussion and to report on findings to help discussion

C. Beckert asked if it had already been decided that there will be sampling reduction. L. Leake responded that it is a thread linking items together, doesn't have to be this or that, could go anyway, and doesn't assume cuts are as is—just a consistent framework for discussion. Each subgroup will lead discussion using the framework.

J. Chick presented results for the fish AD HOC analysis team, which consisted of himself, R. Maher, J. Pitlo, T. Miller, T. Boland, and D. Kirby

The fish analysis team concentrated on assessing the impacts of adjusting sampling effort, and noted that adjusting to a sampling period based on water temperature would be difficult (presents several logistic challenges and would represent a significant change from the current design) and may provide minimal cost savings.

Adjusting sampling effort concentrated on the following scenarios:

- 1) No change
- 2) Fewer gears
- 3) Sample only two periods—all gears
- 4) Sample only one period—all gears
- 5) Sample every other year—all gears

Chick noted that two published LTRMP reports Ickes and Burkhardt (2002) and Lubinski et al. (2001) have addressed several of the questions asked. A summary of the fish Ad Hoc findings (provided by J. Chick) and recommendations follow on the next 3 pages.

J. Chick redid community analysis already done for all periods and included only periods 1 and 3, and period 3 only. Several MDSS plots were presented that showed resolution with respect to spatial patterns was still okay with two periods, but when only third period was analyzed it became difficult to distinguish among study areas. With regard to temporal patterns, two periods reduced resolution. When only third period was analyzed, obvious temporal patterns (e.g., 1994 being an outlier year) were no longer present. Differences in CPUE standard error (SE) were presented for the three scenarios and it was noted that with 2 periods SE increased from 20-25% and with only one period the SE increased from 50-100%.

Plots showing the presence and impacts of year*period interaction, with respect to CPUE, were presented.

Plots showing a reduced ability to detect CPUE trends over time with only 2 periods or 1 period were presented.

It was noted that dropping one period caused an approximately 29% reduction in the total catch of stock-length fish for 12 common recreational or commercial species, and dropping to two periods caused a reduction of approximately 62%.

R. Perk asked if day electrofishing data correlates with other gears

V. Barko responded that each gear catches a component of the entire community

B. Johnson asked if it has been assessed what component of community structure EF picks up

J. Chick-day electrofishing is important and the other gears supplement

Fish Component Ad-Hoc Technical Team

As a result of the special EMPCC meeting, we were asked to address the following:

- Fish Component The group fully supported inclusion of this component in the "minimal sustainable" program. The group asked that the implications of a 25% and 50% sampling reduction be evaluated. To accomplish this several proposals to reduce costs and to possibly modify component monitoring procedures were considered. These included:
 - 1. Monitoring period could be adjusted from being based on the calendar to being based upon water temperature ranges. This would not be a financial saving but may help to improve sampling effectiveness. The ad hoc technical team was asked to make a recommendation regarding this issue.
 - 2. Component management. Options discussed included:
 - a. No change
 - b. To fully implement this component with a corresponding reduction in the level of effort for other components.
 - Field stations take on additional responsibility related to data collection and analysis.
 - d. Creation of multi-disciplinary teams at field stations. This would result in a person taking on primary responsibility for more than one component and for field crews to collect data on more than one component when out sampling.
 - 3. Adjust sampling effort. Options included:
 - a. No change in existing procedures.
 - b. Continue sampling in all three periods but with fewer gears.
 - c. Sample in only two periods but with all gears. (See I. D. 1. for option)
 - d. Sample in only one period but with all gears. (See I. D. 1. for option)
 - e. Sample every other year but with all gears in all periods.

First, we note that two published LTRMP technical reports (Ickes and Burkhardt 2002 – Evaluation and proposed refinement of the sampling design for the Long Term Monitoring Program's Fish Component; and Lubinski et al. 2001 – Initial analyses of change detection capabilities and data redundancies in the Long Term Resource Monitoring Program) have addressed several of the questions asked. To this end:

Continue sampling in all three periods but with fewer gears.

This wound up being the main issue addressed by the Ickes and Burkhardt 2002 technical report and a series of A-team discussion. As a result, several gear were eliminated from the program in 2002 to reduce cost and data redundancy. The ad-hoc committee did not feel adequate time was available to seriously consider further reductions beyond those adopted as a result of the effort outlined in Ickes and Burkhardt 2002.

Sample every other year but with all gears in all periods.

This option was also addressed by the Ickes and Burkhardt 2002 technical report and during Ateam discussions. That report concluded: ". . . The negative consequences, as identified by the group, outweighed the positive consequences by a factor of three. This option would have resulted in a partial interruption of temporal continuity and delayed the time it would take to detect trends. The group seemed to view the rapid detection of trends as highly important and felt that this option could hamper those efforts. Thus, we did not consider [this option] as a viable option." Page

The ad hoc committee chose not to address this option further.

Component management.

The ad hoc technical team felt that there was little technical information that could be brought to bear on these options and chose not to address them during ad hoc team meeting. Discussion on these topics needs to take place at the A-team meeting with the group at large.

Monitoring period could be adjusted from being based on the calendar to being based upon water temperature ranges. This would not be a financial saving but may help to improve sampling effectiveness. The ad hoc technical team was asked to make a recommendation regarding this issue.

The ad hoc technical team felt that there was a less urgent need to immediately address this option compared to others. Given that there are no financial savings and that there could be substantial consequences to linking with past data, the team elected to forego further considerations of this topic until a better concept of an overall future LTRMP fish component can be decided on.

The group asked that the implications of a 25% and 50% sampling reduction be evaluated.

The ad hoc technical team felt that the best way to evaluate the implications of these reductions was to concentrate on the following options:

- a. No change in existing procedures.
- b. Sample in only two periods but with all gears.
- c. Sample in only the third time period but with all gears.

Benefits of the Exiting Procedures

The current procedures provide a tremendous amount of information on UMRS fish communities. Some effects we have found in analyses include:

I.

- Community Structure Variation
 - A. Systemic level temporal trends, possibly associated with the 1993 flood.
 - B. Large scale differences among individual regional trend areas (RTA).
 - C. Differences among individual RTA.
 - D. Correlations of fish community variation with environmental variation
 - E. The potential to combine information from multiple gears in novel ways
- II. Population Information
 - A. Temporal trends from analysis of catch per unit effort
 - B. Temporal and spatial trends from analysis of total eatch for rare species
 - C. Information on year-class strength
 - D. Size structure information
 - E. Length and weight information
 - F. Growth of young-of-the-year fish

Effect of sampling in only the third time period with all gears:

In general, the ad hoc technical team was surprised at how severe the consequences of this restriction were to the quality of the information collected. Important community findings, including differences between Pools 4 and 13 as well as systemic temporal patterns possibly associated with the 1993 flood, would not be possible with this restriction. At the population level, several temporal trends of common species within individual RTA would not be detected. We would loose a substantial amount of information on rare species due to reductions in occurrence and total catch, and the species would not have been detected by this program. Length frequency patterns would change, even for common species. Finally, this restriction would reduce the types of analyses that could be done, such as analyzing growth of young-of-the-year fishes and analyses that use time periods as replicates.

Potential savings compared to the full fish component have been estimated to be \$130,000. The overall conclusion of the ad hoc team was that this option has little potential to provide meaningful data on UMRS fish communities and may in fact provide misleading information in some cases. The ad hoc team would favor the termination of the fish component over this option.

Sample in only two periods but with all gears

Most of the major community patterns would still be detected, some finer differences might be obscured and there might be less opportunity for further hypothesis generation and analyes. Some trends in abundance of species may be undetectable or inaccurate – the number of species that this would be true for would be fewer than for dropping two time periods, but the ultimate number is unknowable. We would loose info on rare species and length frequency. As with dropping two time periods, this option would reduce the types of analyses that can be conducted. Potential Savings estimated at 50,000 when compared to the full component.

J. Sternberg questioned if dollar savings were for sampling only or included other components of sampling.

L. Leake responded it is looking at the whole component.

J. Sternberg questioned if it is a 33% reduction to a \$1.4M fish component.

B. Johnson responded it would equate to roughly a 15% reduction.

Y. Yin presented findings for the vegetation ad hoc committee (Y. Yin, M. Pegg, D. Wilcox). Handout inserted below.

The vegetation committee had a 90-minute conference call concerning the issue of vegetation reductions. They went through three options provided from the June EMP-CC meeting notes.

C. Theiling asked if fish and water quality component vegetation information has been compared to the vegetation component vegetation information.

Y. Yin replied that it is much more qualitative and less precise because GPS coordinates are not taken at each site.

J. Sullivan- So is vegetation information from WQ a complete waste of time, has it been looked at?

Y. Yin-Distribution accuracy is low, individual species are not identified—I did not take analyses far after determining these discrepancies.

D. Wilcox-The water quality vegetation observations are there to help interpret WQ data J. Sullivan- So that suggests that WQ and vegetation are tied together and important to each other.

J. Chick- All you get from fish or WQ components is presence or absence for vegetation. C. Theiling- Will we be able to correlate WQ and Vegetation components—are these so different that correlations cannot be made.

Y. Yin- we have already done this to a certain extent—the upper end of pool turbidity is a good predictor, along with velocity, and stage.

D. Wilcox-Need to look at a large hydrological scale-to get more resolution would require a more intense sampling.

Y. Yin-We did not necessarily have consensus on the best option. We have presented information and leave it up to the A-team to decide.

D. Wilcox- seems to be some consensus. Sampling every other year is not that popularlose detail-models could be used to predict vegetation in off years at less resolution. Models could be used for growth, biomass, and reproduction.

J. Sullivan-Expressed concerns about the importance of models for monitoring.

D. Wilcox-Models are an inexpensive way to look at factors.

T. Yager-What are the cost savings?

L. Leake-Will work up

Vegetation committee handout follows for next 1.5 pages.

LTRMP Aquatic Vegetation ad hoc technical committee briefing

H2

Terry Dukerschein – Wisconsin DNR Mark Pegg – Illinois DNR-INHS Dan Wilcox – US Army Corps of Engineers Yao Yin – USGS

The ad hoc technical committee had a telephone conference from 10:00AM to 11:30AM, Tuesday, July 20, 2004. We evaluated the pros and cons of five restructuring options for the LTRMP aquatic vegetation component as described below. The first three options were stated in the EMP-CC June 24-25 meeting notes distributed by Linda Leake of USGS. The fourth and fifth options were put forward during the conference.

1. To fully implement this component with a corresponding reduction in the level of effort for other components.

The group believes across-the-board reductions of sampling effort by 25% or 50% would result in insignificant financial savings at the risk of a loss of statistical power and breach of data integrity. Bosievely the to the approach

2. Sample every other year.

The group thinks this option requires another component to alternate with. The assumption is that the field station will not hire seasonal assistants for the two components (retaining both WQ and Vegetation specialists) to achieve an appreciable amount of savings. Vegetation growth models developed by Ellie Best and empirical model developed by Yao Yin could be used to give qualitative assessment of whether a non-sampling year was a 'good' or 'bad' year for submersed aquatic macrophytes. Cautions for this options includes: 1. availability of models is limited to 3 species; 2. the models have not been tested system-wide, 3. the qualitative nature of assessments is not compatible with LTRMP monitoring data.

3. Develop an "event driven" monitoring plan for the lower pools, and implement as part of the "minimal sustainable" program. Monitoring would not occur in all pools.

We believe this option is extremely difficult to plan on, plus criteria for "events" are lacking. An appreciable amount of savings could be achieved if only vegetation specialists in the lower pools could be assigned to other paid projects.

4. To sample Pools 4, 8, and 13 at 450 sites (per pool per year), lower Alton Pool at 200 sites, floodplain lakes in La Grange at 150 sites. Discontinue sampling in La Grange and Pool 26 in the usual strata that were sampled from 1998 and 2003.

This option discontinues the sampling in Pool 26 and La Grange as conducted from 1998 to 2003, initiates new sampling in floodplain lakes in La Grange, and reduces sampling effort in Pool 4, 8, and 13 by 25%. Statistical analyses conducted by Yao Yin reveal that the power to detect a 50% change in aquatic vegetation abundance would decrease from 95% to 80% in the northern three pools. The group thinks discontinuation of sampling in La Grange and Pool 26 would hinder the system perspective of design of the vegetation component. An appreciable amount of savings could be achieved by consolidating the sampling in La Grange and lower Alton into one crew. The estimated sample size-powers (for detecting 50% and 30% of vegetation abundance changes, respectively) are:

N	600	500	450
Powers(50% and 30% change, respectively),	.95/.90	.85/.80	.80/.70
alpha=.05	1		

5. Combine Water Quality sampling and Aquatic Vegetation sampling to be conducted by one crew. Vegetation sampling effort will be at ~450 sites per pool.

This option will require one crew to juggle the sampling of two components during June-August. The group thinks this is a possibility and an appreciable amount of savings could be achieved by not hiring seasonal assistants (retaining both WQ and Vegetation specialists). However, the group acknowledges that some modifications of WQ and Vegetation sampling designs will be required which, if we're not careful, could affect continuity/consistency with past data.

410 .50

Jeff Houser presented findings for the Water Quality Ad Hoc Committee (Jeff Houser, John Sullivan, Clint Beckert, Walt Popp)

The handout provided is pasted on the next page.

B. Johnson- What constituents are sampled in the scenarios?

J. Houser-In field, limited WQ "as is" current constituents. Cutting parameters does not seem a cost saving at this time. Some constituents have already been cut (e.g., metals).

D. Wilcox-Do we need and are we utilizing all the parameters

J. Houser-Hopes to look at additional parameters in the near future.

J. Chick-Where I am at the spring SRS event is important.

J. Houser-It is important to maintain seasons.

J. Chick-It may make more sense to drop spring in the upper 3 pools and winter in the 3 lower pools.

J. Houser- We can look at that

V. Barko- Can extra monies be used in other components to base decisions on more "real" numbers like Ickes and Burkhardt (2002) for fish.

J. Houser-Hope do that and already have started to some extent, constituents do not all behave the same.

J. Sauer- There is only one gear for vegetation and invertebrates so it is not the same as WQ and fish.

C. Theiling-Your perspective on field-based turbidity and nutrients.

J. Houser-Would affect accuracy.

C. Theiling-Are we using WQ nutrient information for vegetation models, if we are not using nutrient information in models why are we taking it.

D. Wilcox, J. Houser, and M. Steuck discussed multiple uses for WQ information.

D. Wilcox-discussed options for automated nutrient measurements.

J. Houser-There is not always a correlation between BWC & MCB.

D. Wilcox- Back to Chuck's question, perhaps measuring nutrients through the system can get to yield.

J. Chick- Is it not important to determine major changes in WQ.

C. Theiling-Is that not the EPA's job—to determine gross changes in WQ.

J. Sullivan-WQ is important to many river components BREAK from 2:47-3:00.

Summary of WQ sub-team discussion

H # 4

Continue sampling at SRS sites, some fixed sites, and some tributaries. SRS data provides information on spatial variability and unbiased strata means (important for describing general habita' conditions). Fixed site data provides greater temporal coverage, which is particularly informative during the growing season (e.g. 3 to 6 points in time during the summer instead of one). Tributary data are important for understanding the causes of water quality patterns in the UMRS.

Avoid reduction in summer and winter SRS coverage if possible. Reduce/eliminate other seasons first. Avoid reductions in backwater sampling; reductions in main channel and side channel areas are preferable.

Final decisions concerning distribution of sampling effort should be made after the amount of personnel time available for sampling and lab work is determined.

Maintaining some aspects of long term data string is critical.

Scenarios for Discussion

Scenario I:

Fixed sites and tributaries:

A. Discontinue sampling of small/ungaged tributaries, sites outside of study pools, and isolated backwaters. Number of tributaries sampled should be reduced to ~3 per study area. Only gaged tributaries that have significant impact on the UMRS should be monitored. Number of fixed sites reduced so that all sampling and field station lab work can be done in 2 days/episode (2 people). Th following fixed sites are suggested as priorities for continued sampling:

- 1. Main channel fixed sites at the upper and lower end of the pools.
- 2. Fixed sites that are "representative" of large impounded or backwater areas.

B. Reduce sampling to every two months from November through March.

C. A modification of "I.A." that was discussed was to reduce the number of fixed sites such that they can be sampled in 1 day and to sample every two weeks from April through September. This would increase the temporal coverage during the growing season by two-fold, but reduce the number of sites sampled. The logistic feasibility of this is not clear.

<u>SRS</u>: As in 2002. The number of sites at which samples for nutrient analysis are collected has already been reduced by ½ (currently collected at 1/3 of SRS sites). Additional reductions in nutrien sampling are not advised. If reduction in SRS is also required, see scenarios II and III.

Scenario II:

Fixed sites: as in #1.

<u>SRS</u>: Discontinue spring SRS. Spring SRS data is the most variable as it occurs at different points on spring hydrograph in different years, and represents a transient state of the system that is less critical for habitat assessment than summer and winter. However, it is the season of maximum transport of nutrients and sediments.

Scenario III:

Fixed sites: as in #1.

<u>SRS</u>: Drop Spring and Fall SRS. The group felt that summer and winter SRS are the most critical fo habitat assessment and that if additional reductions are needed that discontinuing Fall SRS was preferable to reducing summer or winter.

Statistical Support (B. Gray, M. Pegg, V. Barko, J. Houser) What he does in a situation like this

- 1. To look at goals, white papers, validity
- 2. Consulting
- 3. Methods for analysis

Example-How to analyze count data-a bit like fish CPUE.

Ability to detect trends

Topic the group addressed

Priorities for analyses

- 1. Completion of the kinds of analysis (3 categories)
 - a. Means, SE, trend, multivariate, analogs (agreed important)
 - b. Within component more detailed analyses have been initiated, e.g. reliability of means, random error or sampling, temporal and spatial correlation
 - c. Cross-component models-habitat models-time consuming and complex
- 2. Components with least previous analyses
 - a. Fish a lot and invert to a lesser degree
 - b. Is there ability to shift resources to veg and wq?
- 3. Analyses at field station encouraged.

Data Analysis and Reporting (B. Johnson)

How much analysis should be included in minimum program?

How much have been done and what is out of the norm?

To the point where much of data collection is routine, for example, WQ has been streamlined allowing component to at least provide annual information-web-based

updates.

Talked about identifying red flags. Was red flags defined?

Cross component analyses-how much is part of minimal sustainable?

M. Hubbell-struggling to define key elements from items defined.

J. Sullivan-as if there was a distinction between analyses or reporting?

B. Johnson-yes, need reporting for analyses, web-based formats are more summary and less analyses.

J. Sullivan-are web-based reports to replace annual reports?

B. Johnson-yes.

J. Sauer asked if he's seen the invert page? Others will be similar.

J. Sullivan- on the topic of more sophisticated analyses. Is this topic or part of previous? B. Johnson-need to define that.

D. Wilcox said short-term web-based annual. More analyses would be like 10 year, more interpretation and analysis.

C. Theiling asked someone to define the LTRMP annual reports.

J. Sauer-like one from B. Gray's individual component reports as opposed to the overall summary of across all components.

M. Steuck asked what about annual updating of data via web of data already analyzed (for stuff ready to roll), a tool for "red-flagging"; update noteworthy reports?

J. Sullivan viewed status and trends as "what we have learned". Does everyone view this as this category?
D. Wilcox said 10-year reports more in depth.

M. Steuck said we need to define what reporting is minimal sustainable at 3.5M-not the above and beyond, as money comes then we can look at other questions.

B. Johnson said we are trying to look at a five-year chunk, perhaps not look at just annual, but may include a more in-depth report in year 4 or 5.

B. Gray said perhaps talking year 6.

J. Sullivan asked for clarification of point-A-team felt status and trends in '04, but that is not a charge from EMP-CC.

M. Hubbell depicted categories for reporting as follows:

Seven Categories (first 4 are potential BASE; last 3 are above and beyond)

- 1. Web based
- 2. Annual component (web and annual are same)
- 3. Running analysis
- 4. Annual synthesis report (cross-component and synthesis; overall summary again, as previous, unusual occurrence)
- 5. Status and Trend
- 6. Special reports
- 7. 5-10 year reports

D. Wilcox said Status and Trend is for a wider audience. Would think EMP-CC would want this as part of minimal sustainable program.

C. Theiling said we need to look at the audience the reports are for, as we consider these items.

Graphical Display Tools (Caucutt and M. Steuck)

Handouts were provided (2 critical pages are pasted below).

June 2004 stats for websites 3,000-6,000 visits per day.

Addresses of web-site viewers can be queried.

Talked about usage and hackers-process for security to prevent shutdown. Dept. of Interior also looks for holes, daily backup of data-a lot of effort for security reasons. L. Leake said it takes time to query users, we don't go out and query this info often.

Explanation of Data Flow (see handout)

Last handout (primarily what he was tasked to look at for this meeting-FTE breakdown). J. Sullivan asked what about WQ and Veg data browsers?

M. Caucutt said they are in review.

L. Leake said those tools that are being developed and are under review are "graphical display tools". These tools outlined by Mike would be additional. The question is do we want to maintain these tools?

M. Steuck-so, if we decide "minimum sustainable", things like fish would stay but would not be updated?

L. Leake said yes, but development not included. If already developed, we are talking just maintenance-may not be able to afford development.

M. Caucutt said trying to lay out what are available. Critical tools are included as data management points 1 and 2.

Mille C



LTRMP Data Collection, Delivery and Access Tools

One of the key goals of the LTRMP is to provide timely and useful information to natural resource decision makers in the Upper Mississippi River System (UMRS) basin. The following data delivery and access tools are in order of perceived importance to the user. Note that as you increase online data manipulation options for the users, you also increase the amount of effort required to develop and maintain.

Critical tools: "minimal sustainable"

These Data Management tools should be considered part of the collection and data delivery process.

- Updates to Data Collections and Corrections applications. These are the applications loaded on rugged notebook PCs used to collect the data and the applications downloaded from the UMESC Intranet used to male corrections to the Level 2 tables.
- The minimum data delivery and access tools needed for electronic delivery of LTRMP data would be the component database browsers. These allow users to query each component and select the download format the user needs. These are some of the most important web pages for LTRMP and they deliver over 1000 custom queries a year. (2.5 FTEs)

Graphical Display tools

- The Spatial Query tool is a stand alone application that packages the LTRMP component data in a spatial view. The tool is available by cd or downloadable from the web. Updates could be the addition of new data, small enhancements or a total re-vamped version. (1 additional FTE)
- The Graphical Database Browsers (currently only the Fish component is online) are online tools that query the LTRMP database and return the results to the user's browser in an online graphical application. Useful for quick snapshots of the component data. Efforts are underway to provide each component an online, specialized graphical display tool. (1 additional FTE)

Internet Mapping Application

 An effort is underway to provide an online application of the entire inventory of land Cover/Land Use layers. This will allow the user to select any portion of the Upper Mississippi River System and generate an online map with multiple year Land Cover/Land Use options. (1 additional FTE)

J. Sullivan asked with no additional data collection, what would be required to maintain data?

M. Caucutt and L. Leake said looking at about 2.5 FTE's basically same as "minimum sustainable".

J. Sullivan asked 3,000-6,000 hits a day, is that a lot and how does it compare? Nobody had a definitive answer.

L. Leake said team includes M. Caucutt, R. Maloney, Bower, D. Hansen. Will sit down tonight and talk dollars.

Equipment Refreshment (L. Leake)

\$2M dollars of program equipment has been lax over past 2 years because of lack of dollars.

Have been trying to identify needs.

J. Sullivan asked are we talking about field stations only?

L. Leake said we are talking UMESC and field station equipment and are suggesting refreshment as a percentage of budget. We are presently looking at about \$250,000. Perhaps 1% on an annual basis—approximately \$57,000.

FWS asked so the \$250,000 represents defined needs?

L. Leake said yes, after that trying to maintain through % basis hoping to pursue equipment refreshment this year to jumpstart.

J. Sullivan asked have we defined items mandatory for sampling.

L. Leake said yes, couple of boats for safety, laptops, network servers, field data collection equipment, and field operations equipment. This is all based on what will the program be next year, safety first and field monitoring second.

J. Sullivan asked what costs are associated with implanting changes that change data entry applications?

L. Leake said costs are included on an annual basis as part of critical tools of data management. It is part of minimum data management.

J. Sullivan asked would a merging of WQ and Veg require rewriting apps?

L. Leake said not necessarily, depended on change.

M. Steuck said the worst effort often comes when a single parameter is added.

B. Johnson said obviously, we are in emergency mode. Have we ever had a schedule for equipment?

L. Leake said no, have been replaced as needed.

A discussion commenced about the utility of scheduling equipment refreshment.

L. Leake said change is at hand. Is equipment refreshment a part of minimum sustainable program (MSP).

FWS asked if EMP-CC thought it should be part of a MSP?

L. Leake said that is what they were asking—if it should be.

D. Wilcox said didn't think we can maintain a program without equipment refreshment.

L. Leake said USGS put on an estimate of 1% as a way to get started.

J. Sullivan asked if it will be hard for the A-team to assess. He asked team leaders if \$40,000 gross would be enough?

L. Leake said let's look at it as a percentage of useable dollars. That represents a start for discussion. We can work that backwards. How many dollars do you want to be able to spend?

J. Sullivan asked if had enough for day and do we want to reconvene at 8:00am?

M. Steuck made motion to adjourn.

T. Boland seconded motion.

Motion passed unanimously at 4:15pm.

Meeting commenced at 8:07am on Thursday, July 29, 2004.

J. Sullivan presented Leake's full cost accounting as starting point. Today we will try to accomplish goals of 7 EMPCC questions to fit in a reduced budget. Items not agreed upon will be decided by EMPCC.

R. Maher questioned closing of 1 Illinois field station. Is it still on the table?

R. Perk said each state will remain a presence in the program. The combined two Illinois stations is on the table. That was not a question asked by EMPCC.

Sternberg stated that's correct. It would have to come up through the EMPCC Rep. L. Leake said she had been working on the issue of accounting costs and savings by combining 2 field stations, haven't received answers to all the questions from the states. Sternberg said she would like to see in this meeting a cost accounting of field stations before and after.

J. Chick questioned if input from field stations would be needed.

L. Leake said we will do that once we have all the info.

L. Leake provided and explained graphics, graphics include full accounting-data management.

J. Chick, so we are not being asked to figure out a program of under 3.5M.

R. Perk said EMPCC asked us to answer specific questions, if they put together a program under a 3.5M budget.

L. Leake stated what she did was put together a guide to what costs are, so we can help put things into a 3.5M box.

J. Sullivan said so this is a breakdown of what it costs to get data to UMESC.

L. Leake said no it goes beyond data collection. Staff at UMESC and field, overhead, common services.

J. Sullivan asked what costs are not included?

L. Leake said Service Management is not included-let me show you...basically, 1.0 FTE of administration is not included.

C. Theiling asked why are these things not included?

R. Perk stated we wanted to provide EMPCC with the ability to work out components separate from each other.

Example (more numbers as provided to EMPCC):

- 1. Staffing comprised of multi discipline teams working across components.
- 2. Field staffing:
 - a. MN, WI, IA=3 permanent, 2 seasonal
 - b. IL combined=5 permanent, 2 seasonal
 - c. MO=2.5 permanent, 2 seasonal
 - d. UMESC=4.8 permanent, 2 lab (temp)
- 3. Fish: All pools and years; 3rd period \$840K
- 4. WQ: Fixed-in, out tributaries; biweekly/month SRS=All pools, all seasons 02 level \$1,300K
- 5. Veg: 25% reduction, P4, 8, 13; 50% reduction, P26; No sampling LaGrange or Open River \$520K
- 6. STAT Eval: 0.6 FTE \$110K
- Data Management: 2.4 FTE \$280K; Go toward Licensing and Maintenance \$145K

 Science Mngt. Support: 1.3 FTE \$200K
LC/LU: 1.0 FTE \$130K
Bathy: 0.15 FTE \$20K
Equipment refresh: 1% \$55K Total 3,600K

There was much discussion about the numbers and what they mean

J. Chick said so I don't know what I am supposed to do today.

R. Perk asked John what he needed to make decisions. There was much discussion about logistics of combining Illinois field stations among Perk, Chick, Maher, and Pegg.

J. Chick questioned how we can make decisions today with the information provided? Why are we provided budget \$\$\$?

R. Perk said we are charged with questions and to provide recommendations to EMPCCthe numbers are provided as guidelines.

J. Chick made a motion to include all 3 fish periods or no fish at all.

Discussion of if that is the way we want to go

J. Sauer, C. Theiling, R. Perk, Barko discussion of appropriate ways to assess the importance of components.

R. Perk said so if I come and said I have \$3.5M for a new program today, you couldn't tell me what you want?

J. Chick and Perk discussion of what tasks are required.

J. Sullivan said went through \$ provided by Leake to clarify what things are included in the costs presented in Table. Sullivan questions adding floodplain lakes newly to program when we are now cutting.

J. Pitlo questioned how many persons will be cut from each field station.

Team leaders-approx. 60% in IL, 40% in IA, 30% in MN, WI, MO

Additional discussion from Leake, Steuck on staff and \$\$\$'s showed why staffing is broken down the way it is.

J. Sullivan—shift direction from costs to a discussion of what dropping data from the program will cost in biological terms (provided overhead as below).

Station	Fish	WQ	Veg
4	Y	Y	Y
8	Y	?	Y
13	Y	?	Y
26	Y	?	N
OR	Y	?	N
LG	Y	Y	N

Basically Sullivan suggests that fish is the common thread. The importance of WQ and Veg depend on Study Area/Reach.

T. Boland agrees with changing direction. Reiterates our charge is technical input perhaps independent of \$\$\$. Proposed moving on recommendations independent of money.

Wilcox amazed that we're saying ALL FISH or NO FISH despite J. Chick's showing a lot would be learned from 2 periods. He complemented AD HOC committee leaders for providing technical input independent of emotion.

J. Sullivan asked if members are willing to go through questions? Lets start w/first on list; equipment refreshment. There are obviously needs in the way of equipment. Propose a shot in the arm from APE and the % each year after.

Yager said first need to define if equipment refreshment is part of "minimal sustainable program."

T. Boland made a motion to refresh essential equipment at 200K out of APE in 2005 with an additional refreshment at 1% of the budget in years 2005-2009. Motion seconded by M. Steuck.

*Motion passed.

J. Chick made a motion that we recommend that we do not drop the fish component to less than 2 periods with all gears and study areas as presently sampled. Motion seconded by ?.

*Motion passed.

Discussion of veg and potential for combining WQ/Veg or combining other crew members (Pitlo, Houser, Theiling).

J. Sullivan asked if it was necessary to continue sampling vegetation in the LaGrange Pool and Pool 26.

J. Chick questioned what else is to be learned from continuing to sample LaGrange.

Y. Yin said the relationships between veg and wq and fish (cross component).

Discussion continued among Sullivan, Yin and Chick about the importance of veg sampling in the LaGrange Pool.

Discussion of power and cost associated with vegetation scenarios and potential logistic issues (B. Johnson, Houser, Chick).

J. Sullivan makes a motion to drop vegetation sampling in the La Grange Pool, Pool 26 and Open River Study Area, and keep vegetation sampling in Pool 4, Pool 8 and Pool 13 at a minimum allocation of 450 sites.

T. Boland seconds.

*Motion passed.

J. Chick suggested a friendly amendment that UMESC should continue to discuss the possibility of combining WQ and Veg components logistically.

No second, amendment not passed.

J. Sullivan said we can revisit amendment.

Break 10:10-10:22

J. Sullivan reconvenes beginning discussions with WQ issues.

Discussion of the importance of un-gauged tributaries because they provide no context for tributary influence (J. Sullivan and C. Theiling). J. Chick recommends that J. Houser look into adding gauge data to water quality.

J. Houser said it is important to keep water quality in all pools if we wish to detect changes caused by management changes. Would be hesitant to drop water quality study areas.

J. Chick—doesn't seem that there are obvious reasons for dropping water quality from any of the study areas.

J. Sullivan questioned need for as many sites in OR study area. Wasn't there a Hrabik report discussing WQ procedure in the OR?

B. Johnson said it is not completed and will probably not be for a couple of months. J. Chick said he would move that we follow Jeff's scenario's in order for recommending cuts.

V. Barko asked why don't we use APE money for continuing WQ monitoring to buy another year to finish analysis to provide more information for making cuts.

B. Gray agreed—is hesitant to drop an SRS event. Estimate can be made even with lower samples. Would argue for a small sample over no sample.

M. Steuck said so IA equates to what amount of reduction?

Houser said approx. 30-40% reduction in fixed sites. Steuck doesn't believe that scientist in here would have heartburn with scenarios for IA.

Houser suggested cuts in SRS made in spring first.

C. Beckert—appears that we have an outstanding WQ component in the way of procedures and validity, but there seems to be a lack of an objective for the WQ component. Scares me that over 1M is spent with no objective.

J. Houser answers that the WQ data is used to determine how parameters change from year to year, change due to large management action, detects change due to climate, provide info. for 303(d), 305(b) and TMDL.

C. Beckert asked is the WQ component is designed to answer these questions?

Y. Yin said if we find a change in biological indicators, we need to be able to access abiotic factors (e.g., water quality parameters).

C. Beckert said he would like that the objectives to be spelled out as that then.

J. Chick said he was sure a broad objective has been spelled out.

C. Beckert said for example, an attempt to determine the influence of a tributary on a BWC failed and probably due to insufficient data.

R. Perk said that is why we have this small box-to have APE money for focused questions.

Wilcox reiterated C. Beckert's points for a need for objectives-need to address the question what is the data needed for.

J. Houser said we chose generality over specificity for a reason to provide a "jack of all trades" type of wq component.

C. Theiling questioned the past.

B. Johnson said past is the past. Look to the future with people in place. WQ is typically \$1.2M-\$1.7M.

Sternberg suggests that we evaluate the cost of continuing water quality by doing an efficiency study using APE monies during '05.

R. Perk said there is potential, money dependant, that APE money could be used as a "glide-slope".

J. Sullivan would like to provide funds for sustaining wq in '05 and allow for additional efficiency analysis during the year.

J. Chick asked can't we, at this time, make some cuts at field stations in the way of fixed sites?

B. Johnson said water quality has been reduced (see Lubinski report) in 2000.

M. Steuck said so lets reduce fixed sited by 40-50% and maintain all 4 SRS events until further evaluation.

Sullivan and Johnson reiterate the importance of design efficiency.

Steuck motions to reduce fixed sites 40-50% and continue all 4 SRS events, as in option I.A, with an evaluation of water quality component using APE funds. J. Chick seconded.

*Motion passed unanimously.

Statistical Support

Steuck reiteration from B. Gray's talk currently 0.6 FTE @ \$110K. Can't field stations do 1 and 2?

- 1. Means, SE, trend, multivariate analysis
- 2. Within component more detailed analysis
- 3. Cross-component models/habitat models

Discussion about what is the base statistical support (Chick, Johnson, Brian).

B. Johnson said 0.25 FTE would get most of 1 and 2.

L. Leake had already dropped from 1.0 to 0.6 FTE.

J. Sullivan asked so what is the base?

M. Pegg made a motion to recommend dropping the statistical support to 0.25 FTE. M. Steuck seconded motion.

Discussion commenced concerning statistical support needs.

B. Gray-I may be biased, but I think we need to maintain support.

Boland-I think we need to maintain

Sullivan-I agree

Motion did not pass: Five votes for the motion; ten votes against the motion.

Sullivan—support that statistical analysis be 0.5

Johnson—maintain at 0.5, but have no less than 0.25.

Perk and B. Gray discussion.

B. Johnson motioned that we recommend funding statistical support at 0.5 FTE, and at no less than 0.25 FTE.

T. Boland seconded.

*Motion passed

Data Analysis

Web based annual reports

Summary reports (an observational web-based report)-done annually.

D. Wilcox valued a summary report.

Steuck asked what do we want for annual minimal sustainable reports?

Wilcox said there is value in providing narrative.

C. Theiling said seems we have defined these as part of component requirements.

L. Leake said let this program define the minimal sustainable.

M. Steuck offered up annual reports (pertaining to subjects approved or demanded by A-team or EMP-CC by field stations).

M. Pegg asked should these be a part of the program as freebies.

L. Leake suggested to consider independent of money.

M. Pegg motioned to recommend web-based annual updates and LTRMP summary reports as the minimal sustainable program and field station contribute reports pertaining to EMP on an annual basis as approved by A-team and EMP-CC. J. Sternberg seconded the motion

Discussion of whether additional items/report should be part of minimal sustainable commitment of field station personnel to providing additional program products. Discussion of the utilization of field expertise.

C. Theiling suggested Everglades and Chesapeake Bay as a model for web-based annual status and trends.

*Motion passed unanimously.

Graphical Display Tools

M. Caucutt reviewed what graphical display tools were.

L. Leake asked should these things be continued?

Data delivery and correction and collection tools CRITICAL TOOLS follows: 2.4 FTE @ 280K=get the below Database/browser Field Application of QA/QC Data Management security Software/license/IT maintenance=180K *extra* spatial query tool updates; add data 1 FTE, improve data 2 FTE

Graphical display tools=1FTE=100K fish and veg Internet mapping=1 FTE=100K

Wilcox suggests maintenance of graphical display tools and add as funding allows C. Theiling suggested additional tools are not that useful.

L. Leake said actually 1 FTE could do Spatial Query Tool and Graphical Database Browser (100K)

J. Sullivan suggested that fish data browser move above line (i.e., become part of maintenance).

M. Caucutt said vegetation browser is 90% done

M. Pegg motioned that Database/browser, field application/QA/QC, security archival and backup, software license/IT maintenance and graphical database browsers are the base and Spatial Query Tools and internet mapping tools will be added as APE money allows. (Should =2.4 FTE and an additional 0.5 FTE.) R. Maher seconded motion.

Motion passed.

New Business

L. Leake needs an FY04 and FY05 list of equipment needs from team leaders.

November 18th next EMP-CC meeting. J. Sullivan suggests next A-team meeting 1st week of November.

R. Maher made a motion that given the LTRMP was authorized as mitigation for expansion of L&D 26, and given the potential for negative impacts on the Illinois River, and given uncertainties surrounding efficiencies gained through collocating the Illinois field stations, we move that we not collocate the Illinois field stations. (This motion was put to the A-team membership only, not the Ad-hoc technical committee).

J. Sternberg seconded. Discussion followed. *Motion passed. FWS abstained and the USEPA was not present.

J.Chick—If the program approves discontinuing vegetation monitoring at Pool 26 and LaGrange then I would like to see the public informed about the loss of this due to congressional appropriation changes.

J. Pitlo will replace T. Boland as Iowa's A-team representative (Boland retires July 31). M. Steuck will transfer to J. Pitlo's position (effective August 13). Dan Kirby will be the interim team-leader at the Bellevue LTRMP station.

T. Boland motion to adjourn. J. Sternberg seconded. Meeting adjourned at 12:43pm.