UMR-IWW System Navigation Study
NECC/ECC Meeting Agenda

Sheraton Westport Lakeside Chalet Hotel, St. Louis, Missouri (314-878-1500)
Feb 21, 2007; 8:00 AM to 3:15 PM

Combined ECC/NECC

Attendees:

Richard Astrack	CEMVS-PM-F	Al Fenedick	USEPA, Reg 5	Paul Rohde	WCI
Butch Atwood	ILDNR	Robert Goodwin	DOT Maritime	Bernard Schonhoff	IA DNR
Ken Barr	CEMVR-PM-A	Dave Hokanson	UMRBA	Douglas Smith	CTS UMSL
Gretchen Benjamin	WI DNR	Don Hultman	USFWS	Terry Smith	CEMVD-PD-SP
Mark Beorkrem	UMRBA	Barry Johnson	USGS-UMESC	Rebecca Soileau	CEMVP-EC-H
Kevin Bluhm	CEMVP-PM-E	Brian Johnson	CEMVS-PM-EA	Chuck Sptizack	CEMVR-PM
Tom Boland	MACTEC	David Kelly	CEMVS-PM	Jeff Stamper	CEMVS-EC-DAS
Dru Buntin	MO DNR	Chris Klenklen	MO Dept AG	Max Starbuck	Nat Corn Grower
Jack Carr	CEMVR-PM-A	Martin Konrad	IA DNR	Dick Steinbach	USFWS
Mark Carr	MEMCO	Dick Lambert	MN DOT	Janet Sternburg	MODOC
Bob Clevenstine	USFWS	Sherrie Martin	MO DOT	Holly Stoerker	UMRBA
Joyce Collins	USFWS	Jeff McGrath	CEMVP-PM-E	Todd Strole	Natur Conserv
Hank DeHaan	CEMVR-PM-M	Barb Naramore	UMRBA	Mike Sullivan	USDA NRCS
Jeffrey DeZellar	CEMVP-PM-A	Katie Nelson	CEMVR-PM-A	Brad Walker	Prarie Rivers
Jon Duyvejonck	USFWS	Rick Nelson	USFWS	Susan Wilson	CEMVS-PM-N
		Don Powell	CEMVP	Rich Worthington	CECW-PD

Actions:

- **NECC/ECC:** Please send comments on traffic management measures (ex: Smart Locks) to Astrack.
- **NECC/ECC:** Comments on Shipper Response Studies due by end of March 2007 to Astrack.
- **NECC/ECC:** Send input on Grain Model (important variables and ranges along with data) to Astrack by end of March 2007.
- **Nicole McVay:** Send email to NECC/ECC with link to shipper response studies report on NETS website by Monday, Feb 26!!! **Done.**
- **Marsha Dolan:** Post NETS shipper response studies on NESP website**. Done.**
- **Astrack:** Set up conference call in March/April over Shipper Response studies with ECC.
- **Jack Carr:** Get back to Mark Carr about if TVA used zero competition rate in study.
- **Spitzack:** topic for next meeting: Forecast for trust fund expenditures doesn't include lock rehab -need clarification.
- **DeHaan:** Show an ER project and how it was evaluated for Lambert.
- **McVay/Barr**: Send email about Adult Fish Entrainment Workshop QC 27 March 07 ,12-4 pm.
- **Barr:** Send new Plus Up numbers out to NECC/ECC

Upcoming Meetings: (not finalized)
Adult Fish Entrainment Workshop QC 27 March 07 ,12-4 pm
April: ECC teleconference
May: ECC workshop

NECC/ECC: Location: **Rock Island, IL. Holiday Inn**, 226 17th St. 309-794-1212

22 May 07	23 May 07	24 May 07
UMBRA	7:30-Noon: EMP-CC	8-10am: Adpt Mngt Workshop
	1-5pm: Adpt Mngt Workshop	10-5pm: NECC/ECC

Minutes:

8:00 Introductions and Opening Remarks **Ken Barr/Jack Carr**

Carr welcomed everyone. Minutes from last meeting accepted with no changes.

8:15 UMSL Lock Scheduling Report (Presentation Attachment 1) **Dave Kelly**

Kelly The Center for Transportation Studies at the University of Missouri at St. Louis (UMSL) evaluated lock scheduling and its benefits to the Upper Mississippi River System. The 2005 University of Missouri at St. Louis (UMSL) report concluded lock scheduling was not economically feasible at current traffic levels. The 2006 UMSL report concluded lock scheduling could significantly benefit users under higher traffic levels (ex: construction or reduced performance of existing locks). All comments were sent to UMSL and they were given a chance to respond.

Stakeholder Comments- (slide 3)

1. Economic consequences of Delays: Single, Double, Recreational Lockages.
   - Priority to smaller vessels and single tows decreases their wait time, but increases wait time for double lock tows.
   - Slows movement of freight through the lock (double lock tows carry more freight and now have a longer wait).
   - Not clear how higher levels of traffic will result in faster barge movement through UMR and increase waiting time at locks.
2. Effect of Self-regulating Behavior on UMR System.
   - System's self regulating behavior is currently used to minimize lockage delays during high congestion periods.
   - Industry currently works together to increase efficiency.
   - Omission of such current behavior would over-state the effects of rules evaluated in the report.
3. Effect of 1200-ft Locks on UMR System.
   - Incorporating the new 1200 ft locks could be a productive modeling exercise.
   - This would allow 1200 ft locks to be effectively considered in further discussions of traffic management measures.
4. Comprehension of Report Language/Assumptions.
   - "Marcovian model structure" and "non-stationary transition probabilities" is not straightforward language.
   - Inhibits effective dialogue between operators, managers, and academicians.
   - Glossary of academic terms would be quite valuable.
5. Complexity of Traffic Management Policies/ Disruption to Existing Lock Operations.

- More complex locking procedure = more confusion and mistakes by lock and barge personnel.

UMSL Replies- (slide 4)

1. Economic consequences of Delays: Single, Double, Recreational Lockages
   - Average waiting times for different vessel classes could be converted to average costs of waiting.
   - Sequencing rules could be based on average costs of delay trying to minimize total of such delays.
   - Recreational vessels are quickly squeezed in as 'turnback' lockages when queues in both directions.
2. Effect of Self-regulating Behavior on UMR System.
   - UMSL recognized self regulating behavior occurs. Model included two rules to capture behavior:
     - Variation of First In First Out (FIFO) where priority is given to recreation vessels
     - Commercial vessels not needing re-configuration receive priority over those that do.
   - Possible to quantify impact of self-regulating behavior (by regulating tow speeds and adjusting arrival times under high traffic), but more detailed activity data (ex: GPS data of barge movements) required.
3. Effect of 1200-ft Locks on UMR System
   - Scope of work didn't encompass a new 1200 ft locks assessment.
   - Data from locks 19 and 26 could be used to produce approx 1200 ft lock times with resulting performance compared to 2006 report performance under sequencing rules.
4. Comprehension of Report Language/Assumptions.
   - Marcovian means the time required for event to occur within the simulation model is determined solely on current state of system.
   - Used to generate proper mix of upstream and downstream vessels for different times, days, and months w/o developing full itinerary for each.
   - Verified mix of traffic and lockage times with 2000 OMNI Data.
5. Complexity of Traffic Management Policies/ Disruption to Existing Lock Operations.
   - Traffic management rules were designed:
     - with ease of implementation in mind
     - to reduce lock wait times with minimal disruption
     - to facilitate the flow of all navigation traffic through congested locks in the system

Next step: UMSL indicated willingness to provide additional model analysis including economic cost of delay and effect of 1200 ft locks on UMR. UMSL could also summarize evaluations of more traffic management measures including: lock scheduling, smart locks, tradable permits, and congestion fees.

Comments/Questions:
Barr Need more resolution on winners and losers.
Kelly Contacted UMSL and no response to that.
Spitzack Could they do a model with 1200 ft locks. Is model capable of addressing that?
Kelly They could compare results of 2006 report with only the current 1200 ft locks and compare that with 5 new 1200ft locks.
Worthington Wouldn't results be self-evident? Results aren't valuable. We are trying to arrive at how much efficiency we can squeeze out of the current system and compare it to what results would be with improvements.
Carr Suggested by UMSL that scheduling would help during construction and it would be useful.
Worthington We already have those results. Needs a little more tweaking and come up with a system that minimizes economic disruption.
Rhode Is that a separate study? Helping to alleviate traffic concerns?

Carr No, it's an add on.
Rhode What is time frame for next steps and beyond?
Carr Study is complete. Unless we look at this alternative of some kind of construction scenario.
Astrack Bigger question of looking at other things this doesn't address. Corps will have to address sooner or later as part of NESP. Need ideas and would be glad to hear from NECC/ECC.
Carr Interium report is due in Sept.
Astrack That's not constraining on traffic management at all. We will report as much as we know. If additional analysis after then we could do as appropriate.
Lampert Additional studies: the industry has stated delay costs at one time, is that current? Don't know…could take another look at what it's costing industry to sit at locks? Not trying to get boats thought but tonnage.
Carr In the reevaluation we are looking at tonnage and delay and cost of delay. Looking for feedback of industry.
Rhode We've submitted plenty.
Carr Hopefully we'll be in study.
Mark Carr Not worth more work to answer a question I don't hear being asked.
Lambert Not compared to airlines and that scheduling, is that done?
Carr No.
Astrack If you have other ideas or thoughts please let us know. Smart locks: allows traffic to move under sever weather. (dense fog). Our next step may be just a summary of what ideas are out there ex: permits. Send traffic management ideas to Astrack. Dr Smith is here from CTS at St. Louis available for questions.
Questions to Dr. Smith:
Stamper Could you comment on how costs vary by vessel and site.
Smith We didn't take into consideration cost of delay in the UMSL scheduling study. We did break out in simulation results what specific delays were for classes of tows. We could apply costs on average according to delay cost of tows with assumptions you may have. We didn't find out what was in specific barges. Costs would be a function of urgency commodity needed. Cost of delay would depend on destination. Complicated issue. Is possible to give different weights with classes used in model. Cargo itself is an attribute.
Carr We talked about what's next. If you were to do further work, what direction you would go in?
Smith We have done similar work: if you go back 12-15 years adaptive behavior allowed them to increase efficiency. Helper boats were used. They found they did better than performance curves would have implied. Rough cut that extended lock capacity. Infrastructure improvements have greater impact on efficiency than scheduling. May have good rule to get efficiency to system. What to impose? If vessel had waited so many hours they would be bumped up in priority so as not to favor one group. Would be useful to look more seriously at other infrastructure changes that could be used during construction…helper boats and mechanical mechanisms. Merit in looking beyond individual lock to queue conditions at next lock. Working with some people in Germany to take into account adjacent lock queues. Idea: if large queue in direction – try to direct activity away from congestion. Next order of sophistication. Could use rules- industry could help us develop. Rules could be evoked before emergency situation. If you want information about performance under new locks you will see dramatic changes in efficiency. When you run to plus 30% or 40% on top of 2000 even slow new locks effect much more dramatic than with scheduling.
McGrath: when system is stressed= self regulating behavior. Should assume as part of without project condition. So overlay traffic management on top of that- benefits would be muted?
Smith Yes.
Mark Carr There would be a high surprise level as to how close we work in day to day operations. Industry starts twice a day phone calls between operators on Upper Miss to coordinate. We start intense dialogue at very low levels. One of two people from Corps and Coast Guard in on those calls.

Carr Measures like self help seem to be popular during construction…in your study was self help something different than helper boats?
Smith We could use some more specifics and incorporate them into the simulation but we didn't. We incorporated helper boats with 20% reduction in lockage time as rough change to simulate with self-help. Bit of a wild guess but does help.
McGrath Question on type of communication that takes place…pilots talking to each other?
Mark Carr Pilots give feedback at around 6 am. Midmorning the conference calls are started. Work out a mid day plan. Late afternoon a follow up call and hearing from pilots. Late in day afternoon call what to do overnight. 24 hour system. Low water + accidents= more dialogue.
Rhode This just happened recently with ice affecting tow boats.
Stamper Seems you could anticipate arrivals at lock and self-schedule.
Mark Carr If there's a supply chain issue (ex: power company running out of coal) most of commodities you could rank by commodity critical to destination for supply chain.
Stamper Supply issue: needed empty barges. Wouldn't show up in model but did in data: unique instances but flexibility happens with conf calls.
Rhode Operations guys do great job of communication because they understand they all need river or locks to operate.
Lampbert I'd be surprised if you could find a pilot who didn't know where every other boat in pool was and when get to lock.
Carr How do you rank commodities? Could you share that info?
Mark Carr It would change often depending on what is needed at facilities beyond locks. Flexible and fluid. Some info is proprietary with terminals too. We are owned by electric utility…policy not to talk about stocks.
Lampbert Better off figuring out value of commodity by figuring value of empty barge to full. Rather than going to companies could you figure cost of empty barge and apply it.
Carr That is currently done and published by Corps.
Lampbert Have value if 15 barges waiting you could give value.
Carr Yes
Worthington I think it would benefit everyone if general results were summarized in one document. Rich Astrack is doing this. The result of that is where we need to be. Are there questions we haven't answered? Dave Kelly will be leading the effort.

9:00 Schedule of Products (Presentation Attachment 2) Rich Astrack

Astrack went over the economic modeling flowchart (slide 2).
Shipper Response Studies- (slide 4) What response do shippers make to price changes- specific to UMR? Surveys
were done in person and by phone. **Nicole McVay will send message with link to you for access to report on website. (**Non-AG: http://www.nets.iwr.usace.army.mil/docs/ModelPrefUpperMissGrain/07-NETS-R-01.pdf
AG: http://www.nets.iwr.usace.army.mil/docs/ModelPrefUpperMissGrain/06-NETS-R-13.pdf)

- Agricultural: NETS product Kenneth Train and Wes Wilson. Draft done as of DEC 2006 and out in NETS system for peer review.
- Non-agricultural: draft report out in Jan 2007. Astrack has copies available. Not sure if available on NETS website. **Working to make available on NESP website. Comments due by end of March to Astrack.**
- Surveys were done in person and by phone.

Transportation Rates (slide 5)

- NESP product to get costs of movement by water, rail, and truck. Tennessee Valley Authority (Dager), March 2007 completion.

Traffic Forecasts: Non-Agricultural (slide 6)

- NESP product, Louis Berger and Assoc, April 2007 completion.
- TVA, draft due Feb 2007

Rail Capacity Study (slide 7)

- TVA, Draft due April 2007
- Planning assumption is alternative modes have no limit in capacity. You have to prove otherwise- hence this study.

Water Compelled Rate Study (slide 7)

Comments/Questions:
Carr Just received Non-agricultural shipper response study. Commodities were combined due to survey issues. Results were a combined demand curve for all commodities.
Rick Nelson How does process work for peer review?
Astrack NETS hires experts outside of Corps to do peer review. Keith Hofset runs NETS program and said more comments = better.
Barr How dense are these products? Is it a good idea to have a conference call for ECC.
Carr Conference call would be good after giving opportunity to read through. Only 30-40 pages each.
Astrack If you take a look and give us feedback and if you want in **3-4 weeks we could set up a conference call with a presentation by Hofset or Manguno with a summary of shipper response studies.**
Carr We could go over how it fits into overall modeling. Details could be in presentation.
Transportation Studies:
Carr Sample of origin destinations was taken and sample includes all major movements and commodities. In sample cost of movement developed included from farm to rail or water. Equivalent movements if didn't have water developed also. Looked at some alternatives such as rail to PNW or St. Louis. Done by Chris Dager at TVA. Consistent between Ohio River and UMR. Since 1994 rate study Dager has noticed more trucking of grain directly from farms.
Mark Carr When conditions on Missouri deteriorated so main line freight alt more rail didn't pick up freight at that rate. They raised the rate to what market would bear. Did you use prevailing rate or zero competition rate?
Carr I believe zero competition. ***I'll get back to you in an email.***
McGrath Is there a review?
Astrack There will be a review. We'll get draft sent out for review and comments then adjust. NESP has independent tech review…within Corps. Also External peer review: non –Corps. Gives official comments.

9:30 NETS Grain Forecast Model (Presentation Attachment 2) Rich Astrack

Grain Model- (refer to slides 9-23) Workshop was Feb 14-15 in St. Louis.
Astrack There will be full report on model workshop available. Model looks at grain forecasting on UMR. We will start with a base model and predict grain out 50 years into future.

- Dr. Wilson gave us key factors: (Slides: 14-19) Ethanol Demand, Yield Growth Rates, Area Available for Production, Rail Capacity, China, Growth in non-grain barge shipments. **Looking for input on important variables and ranges along with data. Please send input to Astrack by end of March.**
- Panama Canal also came up but it was decided no major impact as expansion comes with higher rates.
- Break out groups were implemented to brainstorm, rank, discuss variables and ranges, and present findings to plenary. (slides 21-23)

- Next Steps: Use stakeholder input to run grain model and get results. Use results from grain model and also use non-grain forecasts in survey model.

Comments/Questions:
Rhode and Starbuck Corn growers suggested 15 mil gallons ethanol. Pro Exporter data will back that up.
Starbuck Yields have increased every year. Talk with seed corn companies they say we will increase yields rapidly. 2015- over 170 bushels per acre. (currently at 150 b/a). Winner of corn yield contest has had over 300 bushel/acre.
Starbuck 2.75 figure not recorded on slide of significant parameters.
Walker Acres in production not shown. Yields: no consideration for factors that affect yield over next 50 years. Ex: Fuel: petroleum, natural gas, water, and land degradation. None of these factors included in model.
Stoerker In summary: Bill Wilson gave you 6 factors he thought based on sensitivity analysis were important. And as a result of gathering stakeholders you found 4 of them were important.
Astrack Hopefully after meeting everyone has a better appreciation of interaction of variables and could appreciate how things worked together and results. Dr. Wilson did 10-12 sensitivities. Group didn't expect to get answer but wanted better understanding and to get input on variables.
Walker Workshop was well organized and run but there was definitely a skewed stakeholder group. Mostly industry and Corps. Lack of a broad stakeholder group needs to be kept in mind.
Astrack We are looking for anyone and everyone to offer input. Please send up ideas and your knowledge and information.
Barr This is a great opportunity if NECC/ECC has questions please start a dialogue here.

10:30 Peer Review Panel update and progress (Presentation Attachment 3) Rebecca Soileau
Soileau
- Introduced **Peer Review Panel** (slide 1)
- **Products** (slide 2) Draft interim report outline. Survey Model Documentation, Long term forecasting of Commodity flows on the Miss (grain model), Workshop and EPR meeting Feb 14-15.
- **Products for Review** (slides 3-4) Comments will be included in draft interim report non-attributed. At draft interim report stage Peer review panel will address how comments were addressed by Corps.
- **Meeting Schedule** (slide 5) Draft interim report in Sept/Oct.

Comments/Questions:
Spitzack Non-grain workshop may get tied in with NECC/ECC meeting in May.

11:00 Reevaluation Report Scope (Presentation Attachment 4) Chuck Spitzack
NESP Program Status Chuck Spitzack

Spitzack **Reevaluation**
- Updated analysis is due Sept to the Assistant Secretary of the Army.
- Scope and Purpose of Reevaluation (slide 3). Report serves as a decision document.
- Recommended Plan (slide 4).
- Re-evaluation criteria (slide 6) We will look into non-traditional considerations for this report. We will also consider international competitiveness and security.
- Re-evaluation Traffic Scenarios (slide 7). Base Case (BCS) for grain is not most likely- it's a projection of current conditions. High traffic (HTS) considers traffic in future. Low traffic (LTS) considers traffic in future. Non-Constrained follows: traditional considerations for corps reports.

- Report format (slide 9). Project will be introduced in context of a National Transportation System.
- Reevaluation Schedule (slide 10). We would like to input information into models in beginning of April.
- Work Plan (slide 13). Allocations based on 10 million budget for Fiscal Year 07. 10 million is a guess.
- Plus Up Exercise (slide 14) If we got 8 million more, would we be able to fully obligate funds and have high rate of expenditure?
- Breakdown of Plus up Exercise (slide 15)
- Plus Up Assessment (slide 16) Didn't ask for new start requests. Considering adding one in. Submitted plus up to district office.
- First increment plan ecosystem restoration: (slide 18) Process to be developed that Corps and partners can accept.
- Navigation Efficiency (slide 19) Need understanding between decision makers and team about funding levels and decisions. Need tool to communicate where we are at.
- Website (slide 20). If we get money will transform how Corps communicates and relates to UMR from integrated prospective. If in next week we have numbers- we'll share them.

Comments/Questions:
Barr Conference calls to discuss scenarios before running model?
Spitzack Teleconference is appropriate.
Barr What happens if second econ workshop is put off until 3rd week of May?
Spitzack It has to do with non-grain which is outside the model. We could do it in a teleconference. Jack could you comment on differences in nature of non-grain vs. grain products?
Carr Non-Grain is traditional Corps analysis. Looking at historical data for each non-grain commodity. Follow up interviews at terminals and companies for industries and shippers and carriers to look at changes in industry. Results will show a base forecast, high and low with explanations of each. Louis Berger's Anatoly Hochstein will present and get stakeholder input. So far we have bits of draft. Also, doing a forecast of container on barge regardless of what container is carrying under non-grain forecasts. Non-grain based on trends and individual industry input.
Rhode Are bi-products from ethanol included?
Carr yes.
Beorkrem elasticity discussions when?
Carr Elasticities- there's a report for grain and non-grain.
Spitzack Will be distributed next week and have teleconference.
Beorkrem Very visual for elasticity's. Phone call may not be best form. Workshop may be better format.
Carr telecom place to start and set dates.
Spitzack would be in April sometime.
Hultman What is the difference between Navigation and Ecosystem work?
Spitzack 4:1 ratio on what team leaders thought they could do in relation to budget. Navigation PDTs have back log of work they can do. Higher than environmental teams feel they could accomplish.
Benjamin Shouldn't say ecosystem restoration, EMP, and Sec 519 are same and can give less to any because more to other.
Barr Really was a capabilities drill. Maybe engineers are less risk adverse. In terms of capabilities drill we are dealing with three large lock projects and 20 smaller ecosystem projects. With no new starts this is the number team leaders came back with.
Clevenstine If you did a capability exercise you need to talk to partners on Product Development Teams (PDTs). We have huge data needs for adaptive management. We have capability to spend everything you've got. I don't know why you did cap exercise with out including us.

Barr Each team leader dealt with PDT. This is the number they came up with considering these.
Clevenstine If you could re-do and ask us we could help. I don't think you captured all that we could do.
Stoerker What is definition of new start? In terms of navigation
Spitzack New team for data collection or new construction. Starting a new lock design.
Stoerker Data collection would be a new start?
Spitzack yes.
Benjamin mussel…why new start?
Barr It's not. Proposal to go into pool 18 and learn about mussel challenges.
Benjamin Could spend 1 mil on mussels like that.
Barr yes, but wisely I don't know.
Stamper Still assuming switchboats locks 20-25 by FY 08? Moorings: La Grange, 14, and 24 into design this year. Construction next year. More moorings behind that. Still part of NESP. Need NESP authorization.
Goodwin Still working with RIAC on that?
Stamper yes-14 got blessed and La Grange got ok letter. 24 still working on.
Beorkrem trust fund situation?
Spitzack We need to address that in this report but we should not be limited by that.
Beorkrem Is it optimum to move one lock at a time under funding scenario?
Spitzack Stamper's team examining that now. Need to look at it in larger context.
Stamper Draft in August. Shopping for ideas. What can we put out there that delivers incremental benefits (ex take on lock and jump to next) are you giving systemic benefit. Ideal do all at same time. Not easy task. It won't change 5 locks new…just how we go about it. Last thing you want to do is build something not funded and have it in the way.
Carr Asked to do constrained budget scenarios in past having to do with trust fund dollars available.
Beorkrem That won't be built into interim report. Seeing 20 years on some locks. What about major rehab?
Spitzack Have schedules. There is work on that- I don't know details. Cyclical process. Considered in nav feasibility study.
Beorkrem It will be part of interim report?
Spitzack in background of econ analysis.
Beorkrem Nothing in forecast for trust fund expenditures includes rehab. Could we get a clarification?
Spitzack Good topic for next meeting
Storker On website will you be able to tell what parts of program are being accomplished?
Spitzack Need to see programs and how relate to each other. At some point programs have certain constituencies. Once lost, lose ability to get funded and done.
Spitzack requirements and developmental map will be shared with stakeholders.
Clevenstine please explain "planning paradigm".
Spitzack Create plan with buy in from division and stakeholders. Shift is it will require more than individual project, we need to give satisfying perspective on entire system.
DeHaan Reach planning has been coming up with new planning paradigm.
Spitzack Reach planning isn't perfect needs to bridge with system planning.
Barr We are looking at moving from construction project justification to operating and maintaining environment.
Beorkrem to States: under $150 million a year to ecosystem restoration. What funding needs will States and Feds need for that?
Nelson FWS would have a serious staffing need. Refuges and ecological services involved. We are scattered here and there. Need a solution that allows them to hire permanent people.

Beorkrem If planning report comes out in Aug will that provide states and feds enough to plan your own budget?
Nelson Our budget is driven from department heads down. Fit initiatives into what their giving. This would help us market up.
Benjamin 5-6 times amount of money for projects means at a minimum we need one person to follow project all the way though. We kept management up on this. Let them know we need the staff. Budget is legislative thing. FTEs (full time employees?) are hard to come by.
Storker What drives states to increase staff isn't to keep up with feds. Future work on institutional arrangements we need to think how we partner up when there is money disparity.
Benjamin Luckily we planned for this way back. We believe we will be supported with more staff.
Beorkrem IL and MO under NESP would get 60% or more of project money
IL DNR looked at it. Not sure.
Martin Governor has said no FTEs. Stealing employees from agencies now to do priority work.
Schonhoff Until it happens they wont put someone on now. Hard to get someone just to coordinate with Corps. New governor so we aren't sure where we're sitting. He seems to be on our side.
Beorkrem States will need to plan to ramp up employees, match money, and fund maintenance.

1:00 Reach Planning and System Objectives Hank DeHaan/Barry Johnson

DeHaan **Ecosystem Restoration and Management (Presentation Attachment 5)**

- Objective (slide 2). Sub-area defines small areas of projects in a reach.
- Status on Reach Planning (slide 3). 10 step planning framework: link objectives with monitoring actions, etc. additional steps on top of corps 6 step process.
- Science Panel Recommendations (slide 4). System wide PDT. Project Sequencing Procedure under Environmental Management Program (EMP).
- PDT Progress (slide 5). Draft reports for each reach produced- updated info on refining objectives. Evaluation procedures: quantity and quality of habitats. Are they achieving objectives? Made quality indexes for spacing. Preparing new draft report over evaluation process. Planning and policy charette to evaluate what worked, didn't, and why. Certain level of planning for reach and certain level for sub area.
- Conclusions (slide 6) Ranked sub areas based on cost, meet objectives. Info at reach scale vague compared to site scale. Difficult to evaluate benefits with projects in concept. Maintained variables through process. In addition to sub-area objectives they had over-arching reach objectives also. Through benefit assessment they could assess how well project reached both types of objectives. Low, med, and high ranking as Science Panel (SP) suggested.
- Science Panel (slide 7). Meet for workshop with Reach PDT.
- Ecological considerations for Restoration Project Sequencing (slide 9). Shift focus to landscape & processes. Benefits associated with sub area, reach, system, and over time in future.
- Issues (slide 10) involve both process and landscape. Additional work to target how much is enough target. What can system current support in current condition?
- The Big Picture (slide 11). Think of this as the vision statement. Down to site and work way out to extrapolate out to rest of system.
- Next steps (slide 13) By May have evaluation process done for 5, 18 and Harlow. Geomorphic encompasses 3-4 pools. Identify high, med, and low for site areas and then use. Decision Support System development. Incorporate into future hydrologic and landscape models.

Questions/Comments:
Beorkrem For next meeting or email could you send out an example of this process?

DeHaan yes we could. I have another presentation also.
Lambert Are you looking at specific projects during this evaluation or pool plans?
DeHaan Looking at reach then all potential projects. Objectives for reach…restore system, then if project meets objectives. Dollars put to it in feasibility report. Trying to refine that effort.
Lambert Could you show a project and how it was evaluated?
DeHaan can do off line. I can send to you.
Beorkrem Used 5, 18 at initial pass. Next step use a project?
DeHaan: Next few slides will address this.
Steinbach What thought process went into dividing pool into sub areas vs. process in over all pool?
DeHaan Instead of reach plan for entire reach it was easier to develop sub area plan. Didn't want to sequence each project. Sequence areas to start in pool.
Barr Product of our history. Taking next step- landscape process instead of habitat.
Beorkrem How much does HEP interfere?
DeHaan We used simplified version of HEP.
Beorkrem There has to be some loss of process in what's driving evaluation that's a concern long term?
DeHaan How well it reacts to existing plan. Need to approach as system rather than specific projects. Need to take leap out to reach.
Barr I like way cumulative effects guys did it. Reach then down to pool.
Beorkrem Science team understanding that difficulty?

Johnson (Co-chair of NESP science panel) **Goals and Objectives for NESP Science Panel Progress (Presentation Attachment 6)**

- SP doesn't see it as their job to set goals and objectives. Rather River council but SP recommending a framework. Goals and objectives are part of SP processes (report cards ect).
- SP working on system level stuff. IL river 519 on watershed. Pool plans on navigation reach, list of 4 local projects.
- SP producing a white paper on goals and objectives this year draft in Aug. Draft objectives…need discussion. Are draw downs sufficient? probably not. Competing concepts…water higher for fish overwintering, lower for trees. Look at all pools and buy real estate where necessary. All open for discussion including time frame (years listed flexible). Other programs like river council would be needed to reach some goals. Could store nutrients in plants, trees. Taking tributaries that have been channelized and restore so deposit sentiment before UMR.
- Not many measures of patch size, diversity, connectivity currently. Need to be developed. Presenting reduced versions to get comments.
- At system scale migration is systemic. Like to improve on capability of aquatic organisms to navigate throughout system. Indicator species. Poster child skipjack herring.
- SP hasn't gotten into human uses but river council will.
- Next steps: expect panel to be engaged at system and reach level this year.

Questions/comments:
Beorkrem Objective 1 (on slide 7)…is that another area?
Johnson Need someone with background in landscape ecology to go in and say what we have now.
Barr What we are starting to do with these sandboxes. With some of this $18 mil we will start to develop landscape metrics.
Beorkrem Is there a way NGOs can sit in on meetings with managers?
Johnson Yes, but not sure how. Want perspectives from variety.

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Schonhoff Will example about skip jack herring be in report?
Johnson Will be in report. If we can get skip jack we can get a lot of other things moving.
Beorkrem Fish passage. What goals?
Barr 35 species.
Johnson List species but thinking communities and associations.
Barr Hopefully you'll start seeing connections between the bottom up and top down approach.

1:45 Preparing for May Adaptive Mngt. Workshop Bob Clevenstine

Clevenstine **Adaptive Management Workshop (Presentation Attachment 7)**

- Administrative level…staff top down guidance. Agency level practitioners will be engaged in every step of Adaptive Management (AM) cycle. Stakeholders articulated societal goals engage at 4 steps in AM process.
- Generic AM cycle learn: problem assessment, design, implement, monitor, evaluate, and adjust.
- Reason for workshop: what is so difficult about implementation of AM cycle.
- Time frame for workshop: one after noon 4 hours May 23rd. would we need 8-10 on May 24th for follow up discussion?
- Draft agenda (slide 6)
- Questions (slide 8) Timeframe: 4 hours good. Audience complete: invite managers and upper level staff. How much is too much info? What do administrators need vs. want to hear? Ex: theoretical vs. practical. Do we need 4 hours on May 24?

Questions/Comments:
Sternburg Going to meeting in April NCER adaptive management. Will same info be covered here? Do we need to go to both in case of MO?
Clevenstine Same things.
Barr Hopefully you will see science of adaptive management there. Here we need your help on address institutional challenges to AM.
Rick Nelson Our EMPCC rep is deputy regional director. High as you can get. What are we asking of those administrators? Do anything or just become better informed. Will we ask them to come back later and sign up to a more formalized approach?
Clevenstine Could be a result of workshop. Do we need to formalize AM across partners? Need greater commitment to modeling and science. Sometimes a shift in program resources. Need people there who can consider that.
Barr Coming at you from SP but challenges could be institutional.
Duyvejonck May need next morning to get participants input while fresh. Use second day.
Johnson We will be stealing from EMPCC on May 23; NECC/ECC on 24.
Barr Believe it's important and come back and get ideas. 8-10 follow on from workshop needed on second day.
Johnson General aspects of AM or specific issues?
Clevenstine Hoped to get into specifics. That's what the invited practitioners are hoping to do as well.
Beorkrem How dependent on read aheads?
Barr Don't expect much. Case studies mostly. States what do you think in terms of types of participation appropriate?
Sternburg How much will this change status quo for us? Increase in MO contributing $ then they need to be there for new budget item. If it's more how to plan project then may not be that big of change for us.
Beorkrem 30% of $ coming from auth NESP.

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Sternberg Part of EMP of what they see on ground. Not doing additional sampling. We don't have dollars so if that's an expectation than invite higher level. If it's more participation, as in past one, that's staff time. We're already strapped. $100 mil dollars means we will get overworked. No one dedicated to river.
Clevenstine SP asked to put workshop for PDT's . Hope to get to field level in future. AM has to be supported at highest agency levels. What that means in terms of state agency participation I can't say. Suggest all in together at this point.
Sternberg Internal meetings trying to make sure awareness of need. Whether applied hard to say.
State HQ staff in Des Moines: is now time to involve or wait for NESP auth?
Clevenstine: Now is time. EMP and 519 going on now. If we can get a better handle we'll be in better place to implement when NESP gets authorized.
Barr Won't stand-up the river council until NESP is authorized. Good question.
Spitzack Learning session. Relate it to UMR system in learning manner.
Stoerker Struggling with how you attract upper level management to learning program. Not asking for decision or commitment. Luxury of time. Mismatch between stated goal and who you want there.
Clevenstine: We are asking for a commitment to AM.
Storker Asking for commitment to a concept not an action. This isn't defined, hard to ask for decision or commitment. Workshop as learning experience is valuable.
Barr We are asking for a commitment to a future river council. The discussion quickly moves from science to an intuitional arrangements discussion.
Naramore If that's the objective then do we need a workshop or direct dialogue at their offices.
Barr Plus up includes visits to begin on institutional arrangements.
Sternburg Upper level folks have forgotten institutional arrangements.
Clevenstine How should I re-phrase our workshop purpose?
Barr States and fish and wildlife-
Sternburg What does this mean on a change for us an interaction on UMR? That's what they will evaluate for staffing. They recognize it-but far in future.
Barr Hoping lessons learned from workshop will answer.
Sternburg Maybe lower level people at this workshop.
Benjamin Todd Ames won't sit through what you are going to talk about. He will want to know what do I need to do to make it happen in 5 mins. Personally, I'd come with my staff but not higher ups.
Holtman Need to know what to go to administrators with and what will be asked of them. We convince people above us. We would be the audience. Purpose would be a commitment to process.
Powell Could we build this as prelude to river council? Council key position If you build it that way. AM hard to grab a hold of. First step in future of rivers council would be easier to sell to admin types.
Spitzack Audience level talked about seems appropriate as stepping stone.
Clevenstine Is purpose correct?
Barr It's a multi-step process and this is step 3 of 7.

2:45 Project Challenges and Status Ken Barr

Barr **Projects, Workshop, and Budget (Attachment Presentation 8)**

- Adult Fish Entrainment Workshop QC 27 March 07 ,12-4 pm. **Will send out email about it.**
- List of projects and how ecosystem component split up (slides 3-4)
    - Will start benchmarks and metrics and have modeling workshop.
    - Focus on learning things now that will affect rest of program. Go out on 4 sites to prepare to protect those sites.

- Emiquon west: priority there now is restoration of mass trees on a chunk of that land. Not a good opportunity to re-plumb river through there. Emiquon east still out there.
- Fleeting plan workshop in 3rd qtr with Dorie.
- Pool 18- reach planning and draw down in 18. Draw down needs advanced dredging and can use dredged material to build islands. Lower pool 18 area was number one area and islands were a component of that. Half of $200,000 used on mussels. There is an impact to mussels but significant? Need population estimate of mussels.
- Fish passage early monitoring- Dieteen hoped for. Early construction on fish passage is important.
- Can't sign cost sharing agreement on floodplain restoration with out authorization. If we get authorization well re-program money and start.
- Continue water pool level management.
- Schenimann Chute gets doc ready for authorization. Built this capability from PDTs.
- Alternatives formulation briefing March 8 for Dam Embankment Lowering at LD 8. Part of $9 mil navigation component is part of mitigation piece also plant work and restoration work, plus-ed up mitigation work as well.
- Important as we construct lock and dam that we meet mitigation issues.

Questions/Comments:
Beorkrem Will these new plus up numbers go out after answer next week?
Barr yes.
Benjamin Fish passage at pool 3? Work there:
Lock and dam 3 fish passage didn't come up high priority in feasibility. In terms of decision data you remember NECC meeting we said 5 and 8 pushed off for exotic species concerns until year 10.
Beorkrem From SP and intuitional arrangements work and getting to modeling process so project selection process fitting over all goals. When will we be doing it as desired instead of rushed?
Barr I think with systems objectives we are getting tools to start doing that. Senate side directive before construction must show how it meets objectives. Tools coming along. Timeframe if we had to do it now we could roughly come up with next cut of projects. Tools Barry's talking about-system metrics still a year or so out.
Johnson Pool 6 drawdown.
Benjamin WI DNR will put money in too.
DeZellar Pool 9 drawdown problems because of excellent condition of pool 9- don't want to mess up vegetation with draw dawn. Pool 5 wait for benefits to deteriorate to get NESP money. Pool 18 islands St. Paul will need to start replenishing pipeline to build project when time comes.
Benjamin Monitoring of how drawdown helps meet clean water act standards?
Barr Meeting to start looking at those water quality programswith EPA and how they compliment each other.
Two ways to offer suggestions: all of you have people on PDTs work through them. First shot on this target plus up came from PDT over target capability. If Systemic in nature Hank and Ken have hands on 1.5 mil pot.

3:05 Next Meeting **Ken Barr/Jack Carr/Group**

May 22 -25 in Rock Island, IL
Workshop second day in afternoon. EMP morning. Economic workshop on third day. Half a day on Friday for econ as well?
Next NECC is adaptive management workshop. ECC is 10 am on next day and possibly into Friday. EMP may need more than half a day.

NECC/ECC: Location: **Rock Island, IL. Holiday Inn**, 226 17th St. 309-794-1212

22 May 07	23 May 07	24 May 07
UMBRA	7:30-Noon: EMP-CC	8-10am: Adpt Mngt Workshop
	1-5pm: Adpt Mngt Workshop	10-5pm: NECC/ECC

No Additional Stakeholder comments. Adjourn at 3:15 pm.


UMSL
Lock Scheduling Report
NECC - ECC
February 21, 2007

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UMSL Lock Scheduling Report

Analysis of Traffic Management Measures

- Initial UMSL Report (June 2005) and Conclusions
- Expanded UMSL Report (September 2006) and Conclusions

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UMSL Lock Scheduling Report

Summary of Industry / Corps UMSL Comments

- Economic Consequences of Delays : Single, Double, Recreational Lockages
- Effect of Self-Regulating Behavior on UMR System
- Effect of 1200-foot Locks on UMR System
- Comprehension of Report Language / Assumptions
- Complexity of Traffic Management Policies / Disruption to Existing Lock Operations

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UMSL Lock Scheduling Report

Summary of UMSL Responses to Comments

- Economic Consequences of Delays : Single, Double, Recreational Lockages
- Effect of Self-Regulating Behavior on UMR System
- Effect of 1200-foot Locks on UMR System
- Comprehension of Report Language / Assumptions
- Complexity of Traffic Management Policies / Disruption to Existing Lock Operations

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UMSL Lock Scheduling Report

Next Step for Traffic Management Measures

- Additional Modeling and Analysis by UMSL?
- Summary Report of All Traffic Management Measures

Economic Modeling Activities

NECC-ECC

February 21, 2007

Economic Modeling Flowchart

WCSC Data

LPMS Data

O/D Commodity Flows

Transportation Rate Data

Waterway Movements

Shipper Response Studies

Global Grain Model

Non-Grain Forecasts

Traffic Forecasts

Cost of Delay

Survey Model

Equilibrium Traffic & Benefits

Waterway Analysis Model

Transit Curves

Economic Modeling Flowchart

WCSC Data

LPMS Data

O/D Commodity Flows

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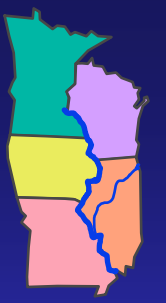
Economic Modeling Activities

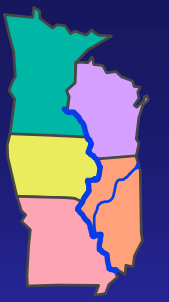


- **Shipper Response: Agricultural**
  - NETS Product
  - Kenneth Train & Wesley Wilson
  - December 2006 Draft Under Review

- **Shipper Response: Non-Agricultural**
  - NETS product
  - Kenneth Train & Wesley Wilson
  - January 2007 Draft Under Review

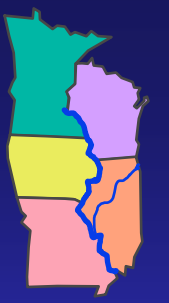
Draft available to NECC-ECC

Economic Modeling Activities



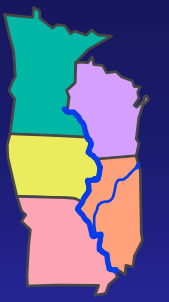
- Transportation Rates
  - NESP Product
  - Tennessee Valley Authority
  - Scheduled Completion March 2007

Economic Modeling Activities



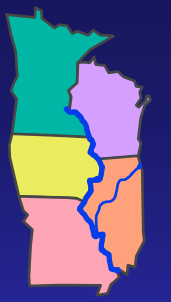
- **Traffic Forecasts: Non-Agricultural**
  - **NESP Product**
  - **Louis Berger & Associates**
  - **Scheduled Completion April 2007**

Economic Modeling Activities



- **Water Compelled Rate Study**
  - By TVA
  - Draft report this month
- **Rail Capacity Study**
  - By TVA
  - Draft report Apr 07

Why are all these folks so happy??



Grain Forecasting Model Workshop Summary

February 14-15

St. Louis, MO

Economic Modeling Flowchart

WCSC Data

LPMS Data

O/D Commodity Flows

Transportation Rate Data

Waterway Movements

Shipper Response Studies

Global Grain Model

Survey Model

Equilibrium Traffic & Benefits

Traffic Forecasts

Non-Grain Forecasts

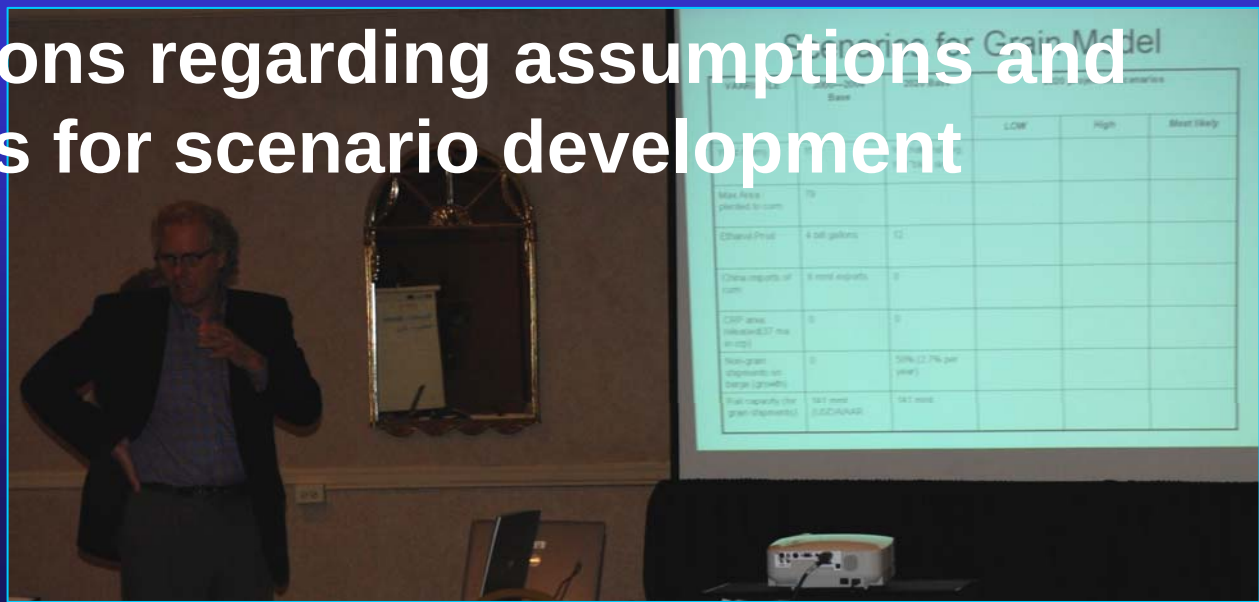
Cost of Delay

Waterway Analysis Model

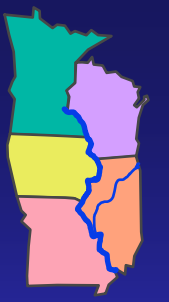
Transit Curves

Grain Forecasting Model Workshop Objectives

- Give participants as clear as possible understanding of the Grain Forecasting Model – Dr. Bill Wilson presenting model and responding to questions
- Document stakeholder concerns and recommendations regarding assumptions and variable ranges for scenario development



Grain Forecasting Model Workshop Participants

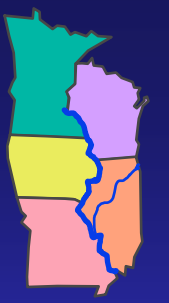


- Dr. Rebecca Soileau–facilitated
- Dr. Bill Wilson–presented Grain Forecasting Model
- External Peer Review Panel (non-Corps)
- Independent Technical Review Team (Corps)
- Upper Mississippi River Basin Association
- Corn Growers
- Waterways Council, Inc. (MARC 2000)
- Environment and Agriculture Program Institute for Agriculture and Trade Policy Navigation Industry
- MARAD
- Corps' Planning Center of Expertise for Inland Navigation
- Project Delivery Team

Workshop Structure

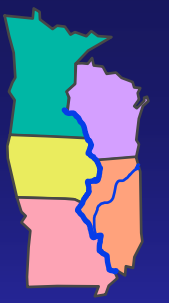
- Plenary: Presentation by Model Developer
- Workgroup Breakout Sessions
- Plenary: Workgroup Presentations of Issues

Parameters Significantly Impacting Model Results



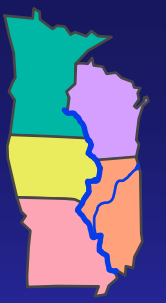
- U.S. Ethanol Demand
  - Ethanol demand affects U.S. surpluses available for export
  - Energy Information Agency 2005 Forecast: 4 billion gal
  - Energy Information Agency 2006 Forecast: 11 billion gal
  - Other ethanol forecasts: 17 billion gal and upwards
  - Non-corn sources of ethanol

Parameters Significantly Impacting Model Results



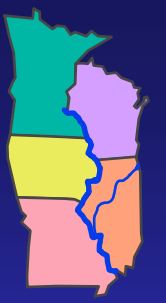
- Yield Growth Rates
  - Yields are important because they directly influence total U.S. production
  - Impact the relative competitiveness of the U.S. vs. rest of the world

Parameters Significantly Impacting Model Results



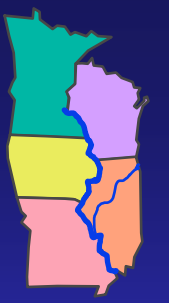
- **Area Available for Production**
  - **Available area is important because it directly influences total production**
  - **Includes the issue of Conservation Reserve Program (CRP) acreage**

Parameters Significantly Impacting Model Results



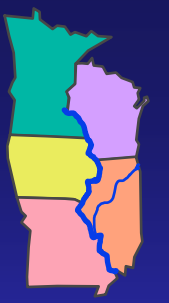
- **Rail Capacity**
  - Rail capacity influences modal choice within the model and ultimately the magnitude of waterway traffic
  - Prospects for rail expansion?
  - Current model assumption limits rail capacity to the maximum loadings observed during the base period (2000-2004)

Parameters Significantly Impacting Model Results



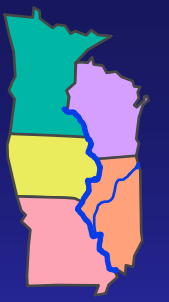
- **China**
  - **China is a large and growing market for corn, and future import demand is likely policy and not market driven**
  - **Chinese designate corn as "strategic" crop; central government intervenes in market to produce desired policy outcome**
  - **Recent history: China has exported corn (8 mmt)**
  - **Current model assumption: corn imports = 0**
  - **Soybeans no longer designated as "strategic" crop**

Parameters Significantly Impacting Model Results



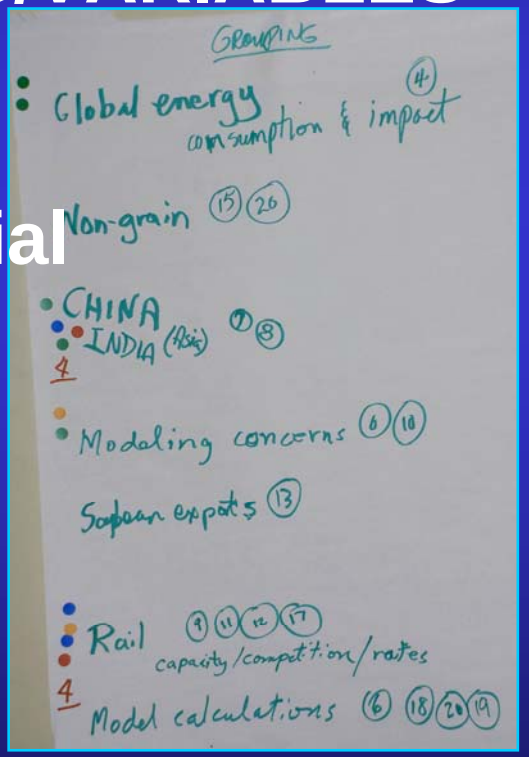
- **Growth in Non-grain Barge Shipments**
  - **Increases in non-grain traffic increase congestion and reduce capacity available for grain traffic.**
  - **In the context of developing traffic scenarios for the interim report, this is not a critical consideration because these scenarios will represent "unconstrained" or potential traffic.**
  - **Congestion and identification of equilibrium traffic will be computed in the Survey Model.**

Breakout Session – 2 groups



WHICH ARE IMPORTANT FACTORS/VARIABLES

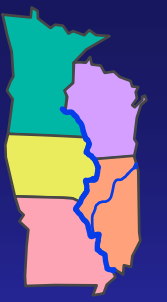
- Brainstorming – record all ideas
- Then discuss, understand and initial prioritization (vote)
- Report out on top variables



Significant Parameters
Workgroup 1

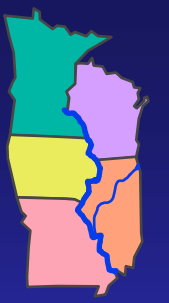
- Acres in Production
- Yields (corn)
  - 1.6 bu increase/yr – low
  - 1.8 bu/increase/yr – mid
  - 2.0 bu/increase yr - high
- Rail Capacity
  - No increase – low
  - 10 % increase – mid
  - 20 % increase - high
- China
  - No corn imports - low
  - Market solution - high

Significant Parameters
Workgroup 2



- Yields
- Ethanol
- China
- Rail capacity

Next Steps



- Stakeholder Input
- Project Delivery Team Constructs Traffic Scenarios
  - Base condition
  - Low traffic scenario
  - High traffic scenario
- Execute Grain Model for Identified Scenarios

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External Peer Review Panel

NESP Navigation Economic Re-evaluation

Center for Expertise for Inland Navigation
Wesley Walker & Rebecca Soileau

Presented to:
NECC-ECC
St. Louis, Missouri
21 February 2007

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External Peer Review Panel

- **John Beghin** — Iowa State University
  - •Marlin Cole Chair in international agricultural economics
  - •Co-director of the Food and Agricultural Policy Research Institute (FAPRI)

- **Stephen Fuller** — Texas A&M University
  - •Regents Professor in the Department of Agricultural Economics.
  - •Former NRC panel member reviewing Navigation Study

- **Alexander Metcalf** — President of (TEMS)
  - •Transportation Economics & Management Systems, Inc.

- **Darryl Ray** — University of Tennessee
  - •Director of the Agricultural Policy Analysis Center

- **Denver Tolliver** — North Dakota State University
  - •Associate Director and Senior Research Fellow at the Upper Great Plains Transportation Institute

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Products for Review

- **Third CRA ----Through Feb 17**
  - **Draft Interim Report Outline**
  - **Survey Model Documentation**
  - **Concept for Non-traditional benefits**
  - **Long-Term Forecasting of Commodity Flows on the Mississippi River; Applications to Grains and World Trade**
  - **Workshop and EPR Meeting February 14-15**

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Products for Review

Feb 18 – Sept 07:

1. Concept for Non-traditional benefits;
2. Water Compelled Rate Study SOW;
3. Rail Capacity Study SOW;
4. Non-Grain Traffic Forecast;
5. Corps developed Scenarios for Grain and Non-Grain Forecasts;

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Products for Review

Feb 18 – Sept 07:

6. Development of Demand Curves for Grain and non-grain commodities;
7. TVA Transportation Rate Study (limited);
8. University of Missouri at St. Louis Traffic Management Model and report;
9. Draft of Background on the Transportation System;
10. Draft of Background on the MARAD/ DOT transportation strategy;
11. Draft Interim Report

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Meeting Schedule

• Introductory Meeting of EPR Panel	Nov 12-13
• Grain Forecasting Workshop	Feb 14-15
• Non-grain and Elasticity	April/May
• Draft Interim Report	Sept/Oct

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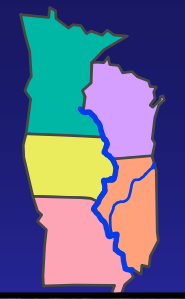
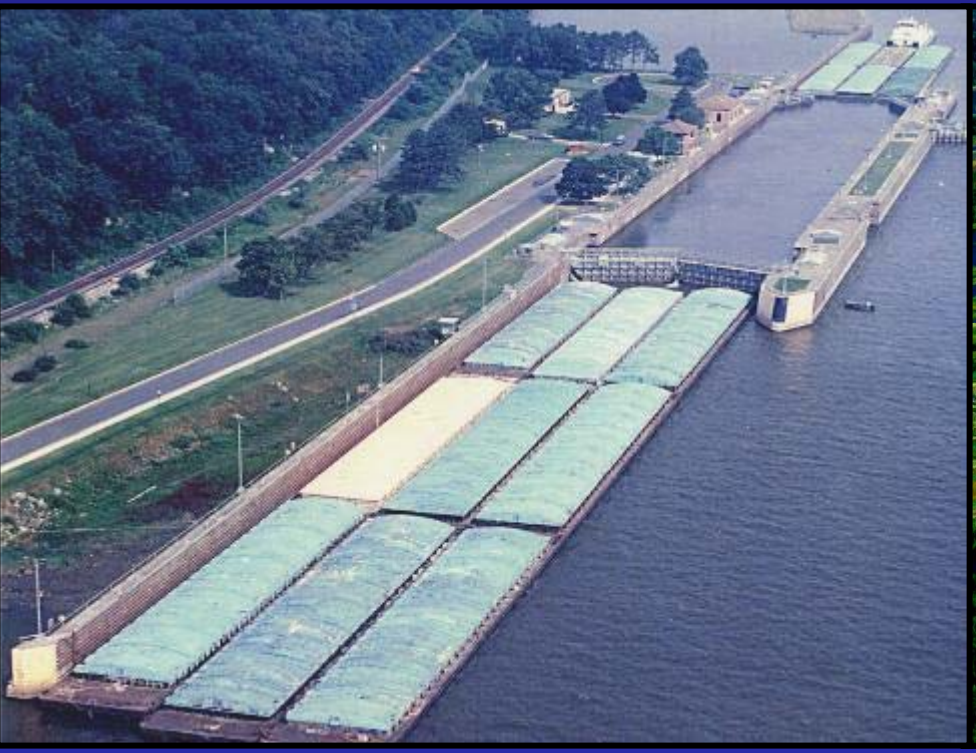
Upper Mississippi River System





Navigation & Ecosystem Sustainability Program (NESP)

One Team: Relevant, Ready, Responsive and Reliable

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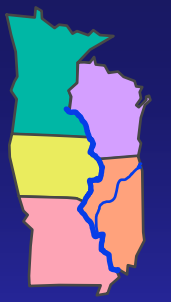
Reevaluation
ASA(CW) Direction



- Feasibility Report (Sep 04)
  - Notification Report – status at 3 years
  - Evaluation Report – updated models (~7 yrs)

- ASA(CW) Direction (Mar 06)
  - Updated economic analysis – Sep 07 (Interim Report)

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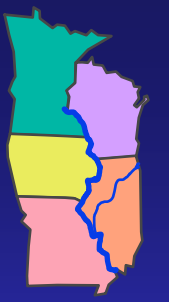
Reevaluation Scope & Purpose



- Addresses navigation component
- Starts with reevaluation of recommended plan
- Uses updated models and data
- Interim Report serves as a decision document on how to proceed with the rest of the reevaluation
- Allows for more consideration of other accounts

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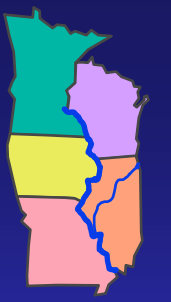
Navigation Efficiency
Recommended Plan



(All Cost estimates, cost indexed to Oct 2006 values)

- Small scale structural and non-structural measures ($256M)
  - Mooring facilities @ Locks 12, 14, 18, 20, 22, 24 and LaGrange
  - Switchboats @ Locks 20 through 25
  - Develop and test - appointment scheduling system
- New 1200’ locks at Locks 20 through 25, LGR, and PEO ($1.95B of which $235M is for mitigation)
- Lock Extensions at Locks 14 through 18
- Switchboats at Locks 11 through 13

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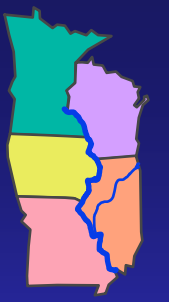
Reevaluation
Dealing with Uncertainty



- The benefits of extra capacity and efficiency won't begin to be realized for many years …
  - UMR Locks 2017 – 2024
  - IWW Locks 2022 – 2026
- Long-term trends do not exist for some key considerations

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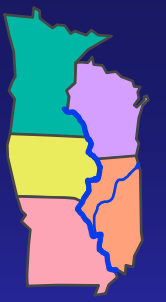
Reevaluation Evaluation Criteria



- National Economic Development (NED)
  - Traditional Considerations
  - Non-Traditional Considerations
- International Competitiveness
- National Security
- National Transportation Strategic Goals
- Regional Economic Development (RED)
- Environmental Quality (EQ)
- Other Social Effects (OSE)
- Adaptive and Acceptable

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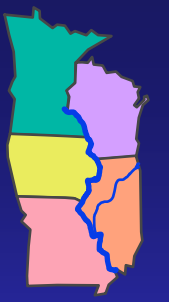
Reevaluation Traffic Scenarios



- Base Case Scenario (BCS)
- High Traffic Scenario (HTS)
- Low Traffic Scenario (LTS)
- Constrained Scenarios (LTSC & HTSC) (non-traditional NED considerations)

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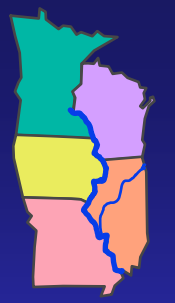
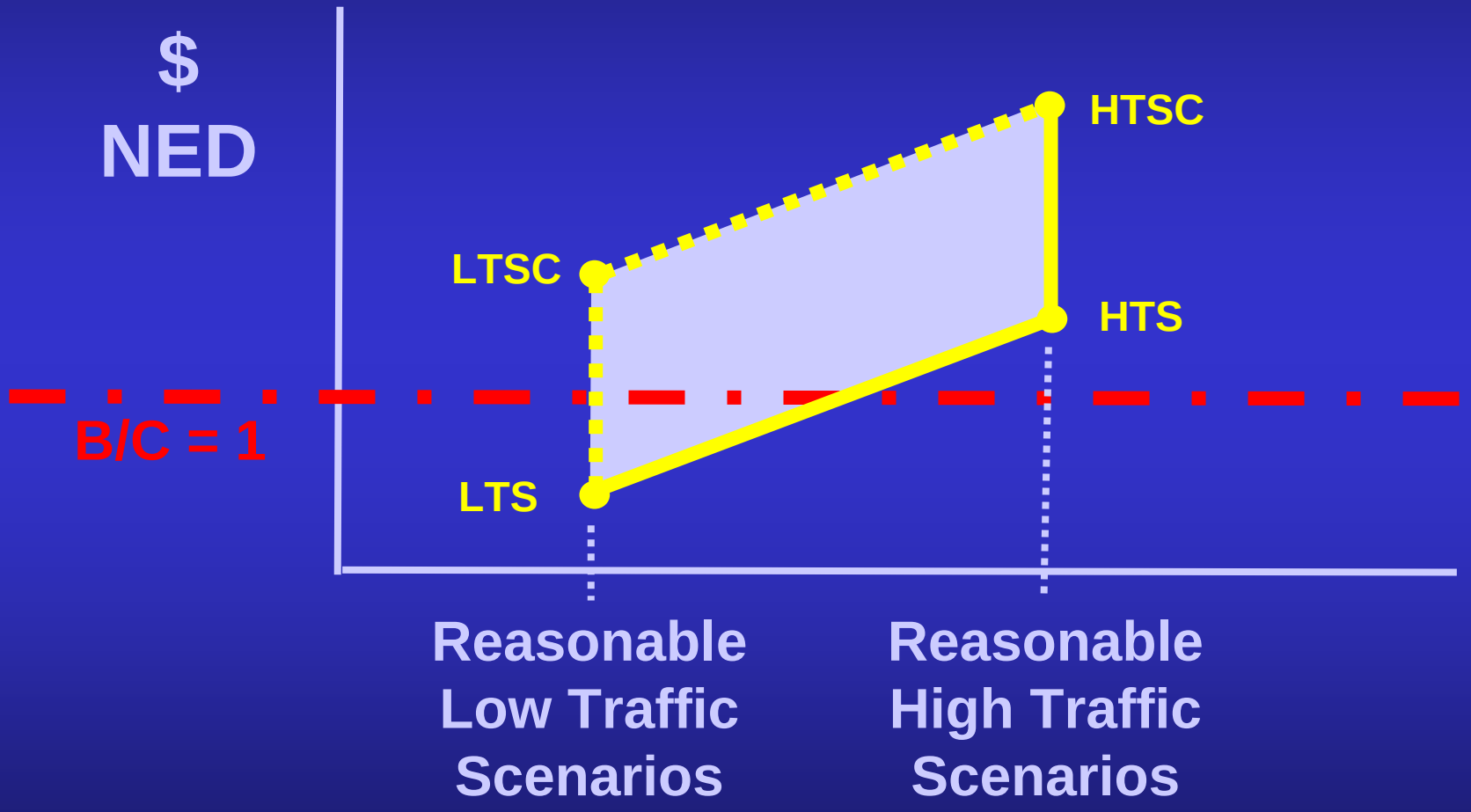
Reevaluation NED "Window"





(unconstrained and constrained)

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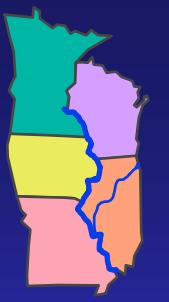
Reevaluation Interim Report Format



- Executive Summary *(stand alone)*
- Introduction
- National Transportation System
- Inland Waterway System, UMR-IWW, Recommended Plan
- Forecast & Evaluation
- Conclusions & Recommendations

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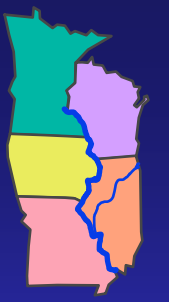
Reevaluation Schedule



Distribute Global Grain Model	12 Jan
Economics Workshop	14 Feb
Future Scenarios (LTS and HTS)	**2 Apr**
Second Economics Workshop	**? Apr**
Model Runs	10 Jul
Biological Assessment	9 Aug
Interim Report – Internal Review	7 Sep
Submit Interim Report to ASA	**13 Sep**
Final EPR and ITR	11 Oct
Public Review and Meetings	14 Nov
Final Interim Report	31 Dec

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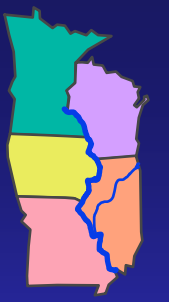
Reevaluation Review & Comment



- NETS Products – Shipper Responses (Ag & Non-Ag)
- NESP Products – Transportation Rates (Mar), Non-Grain Traffic Forecasts (Apr)
- Formulate scenarios (HTS & LTS) … for review and comment between now and 31 Mar
- Assess Impacts of Congestion and Capacity Constraints in the National Multimodal Transportation System on Use of the Inland Waterways and the UMR-IWW … for second workshop in April - May?

Interim Report - Messages

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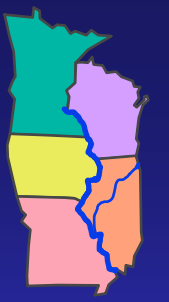

Long-term sustainability of the economic uses and ecological integrity of the UMRS

UMR-IWW is a valuable, integral part of the national transportation network

Use of UMRS for navigation is an environmentally acceptable mode of transportation

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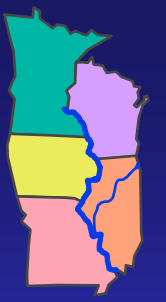
Work Plan – FY 2007



- Presentation at the Nov UMRBA Meeting
  - Work Plan is draft through CRA
  - Allocations are based on **$10 million** budget
  - "Thumbnail" of expected outputs for FY 07
- Plus Up Exercise

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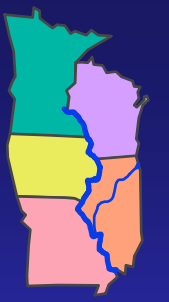
Work Plan – FY 2007 Plus Up Exercise



- MVD request - additional capability in preparation for interaction on FY 2007 funding allocations
- MVD Expectations – full obligation + high expenditure
- NESP identified + $8 M ($18 M total)
- Other Programs (EMP + $2 M, 519 + $2 M) also identified higher capability

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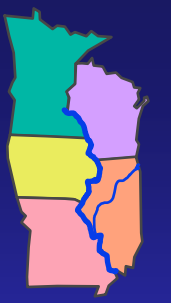
Work Plan – FY 2007 Plus Up Exercise



NESP	$10 M	$18 M
Programmatic	0.600 M	0.975 M
Reevaluation	2.000 M	2.300 M
Navigation Efficiency	3.700 M	9.275 M
Ecosystem Restoration	3.700 M	5.450 M

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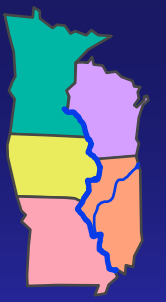
Work Plan – FY 2007 Plus Up - Assessment



- More opportunities for NESP-NAV
- More access to resources for NESP-NAV
- Didn't expect differential to be as great
- Didn't seek to identify new starts …
- Differential goes away if EMP and Section 519 plus ups are considered
- Decided to submit maximum capability…
- Achieving expectations - monumental effort

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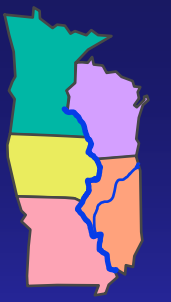
Work Plan – FY 2007
Projects - Greatest Increases



- Locks 22, 25, and La Grange
- LD 22 Fish Passage
- Systemic Environmental Mitigation
- Economic Reevaluation
- Pool 18 Islands Project (new)
- Corps' UMRS Website

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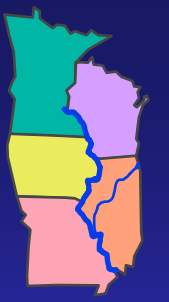
First Increment Ecosystem Restoration



- Challenge is reaching a $100 M per year restoration program by 2010 … capable of being sustained for many years
- Solution requires new planning paradigm for ecosystem restoration
- Solution requires understanding and acceptance of the new planning paradigm
- (Draft) First Increment Plan - August

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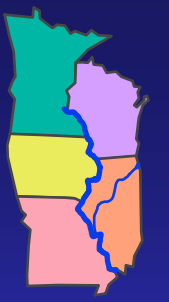
First Increment Navigation Efficiency



- Challenge is achieving as close to optimum implementation as possible – least cost, least impacts, maximum benefits
- Solution requires clear, concise communication on costs and benefits under a range of funding scenarios
- (Draft) First Increment Plan - August

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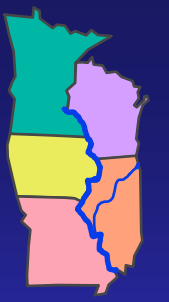
USACE – UMRS Website



- Integrated presentation of Corps UMRS programs and projects …
- … and how it develops and manages them in collaboration with partners
- Objective – clear, concise, complete, and accessible information about the URMS and Corps management in the UMRS

Upper Mississippi River System

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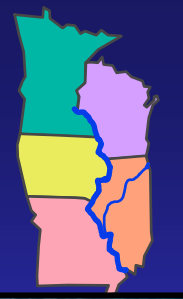
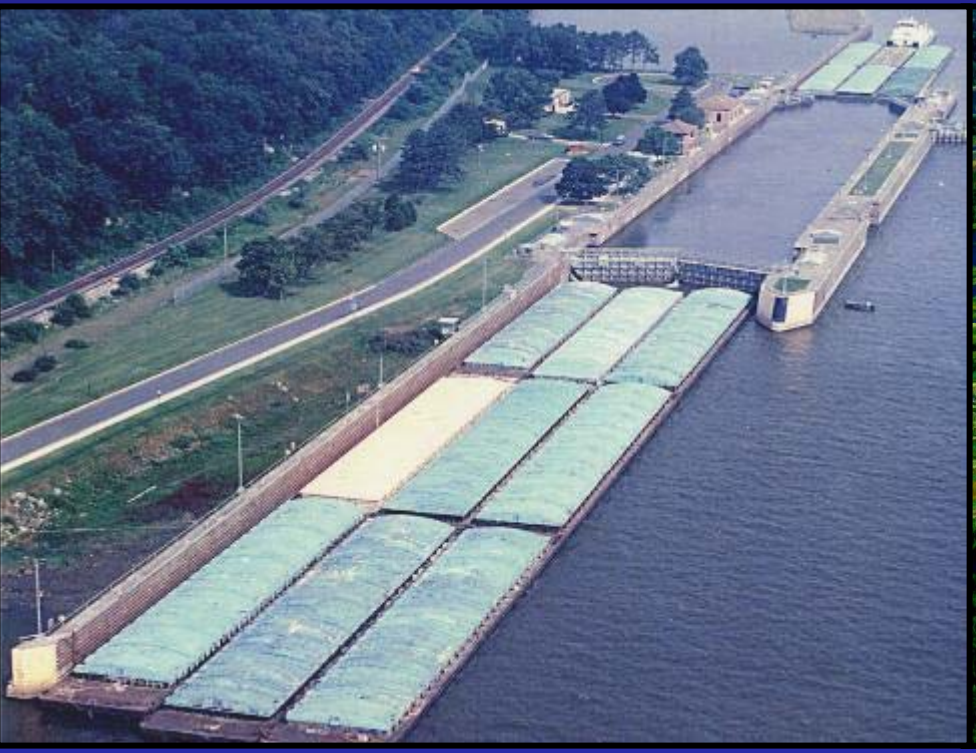




To seek long-term sustainability of the economic uses and ecological integrity of the Upper Mississippi River System

One Team: Relevant, Ready, Responsive and Reliable

NESP Project J: Ecosystem Restoration and Management

Status Report to NECC:

Ecosystem Restoration Benefits Evaluation Workshop With the Science Panel

21 February, 2007

St. Louis, Missouri

Evaluation Objective

- Develop an method to associate sub-area objectives with standardized restoration and management action costs and benefits
- Sequence the order of sub-area restoration based on the cost-efficiency of meeting objectives.

(Sec. 3.3.10 Draft Reach Planning Framework)

Status Report – Reach Planning

- Initiated Spring 2005
- Used three reach approach to consider diverse environmental and social conditions
- Incrementally developed and test-drove ten step planning framework
- Presented Planning Framework and Reach Objectives to SP Fall 2005

SP Recommendation - Fall 2005

- SP should lead development of a system-wide PDT
- Progress during 2006
  - System/Reach G&O
  - Pool 5 Modeling Team
  - Ecosystem Services

- SP/SET also produced Project Sequencing Procedure

PDT Progress - 2006

- Pilot Reach Team refinements (separate reports)
- Investigated evaluation procedures
- Reviewed evaluation with stakeholders
- Consulted with plan formulators and reviewers
- Prepared draft report
- MVR Planning/Policy Charette

Conclusions

- Reach planning teams succeeded in identifying monitoring information needs, sub-area/reach objectives, linking objectives to appropriate restoration measures, and assessing reach plan evaluation procedures.
- Evaluation Methods do present rank ordered sub-areas, but information feeding the evaluation process was vague.
- Projects in concept were difficult to evaluate.
- Standard project costs and benefits left project area and project type as the only variables differing among sub-areas.
- Priority reach objectives did provide a weighting mechanism to better rank and sequence projects.

- **Reach Planning teams determined the Science Panel sequencing strategy of ranking high, moderate, and low priority projects was appropriate to the level detail in their study reaches and scale of the planning effort.**

Checking in With the SP

The NESP Ecosystem Restoration and Management Team requested a workshop of Science Panel members to review the process

A successful evaluation tool will meet several criteria:

- Acceptable to Division/HQ reviewers and stakeholders
- Unbiased
- Objective based
- Process driven
- Sensitive to type of change anticipated
- Measurable
- Understandable by the public
- Etc……(additional SP recommendations)

Ecological Considerations for Restoration Project Sequencing

- Ecological merit/benefits
- Attention to restoration of natural processes & features
- Benefits over multiple scales of time and space
- Critical habitat gains
- Sustainability projections
- Contribution to learning via monitoring and experimentation
- Compatibility with existing plans.

NESP SP Report

Issues:

Scale and Resolution
Process or Landscape?
How Much is Enough?
How Much is There?
What is the Potential?

The Big Picture

We can use landscape scale information to define reach and system objectives, then use site scale problem analysis and physical process models to determine action required to effect desired physical changes. Process-based ecological models should be calibrated and validated through response monitoring and those outcomes can be extrapolated to back to landscape scale modeling outcomes for planning.

Conclusion

- Science Panel generally agreed with PDT and encouraged progress
- Science Panel and SET are cooperating on HREP sequencing and criteria analysis. Results will likely benefit reach planning evaluation.

Next Steps

- Finish Reach Plans & Continue at Geomorphic Reach Scale
- Use HEP at Project Scale
- Continue DSS Development
- Construct Multiple Reference Conditions in GIS
- Coordinate With Modelers and Sequencers

Adaptive Management Workshop

May 23, 2007

Quarterly Meeting

AM Workshop

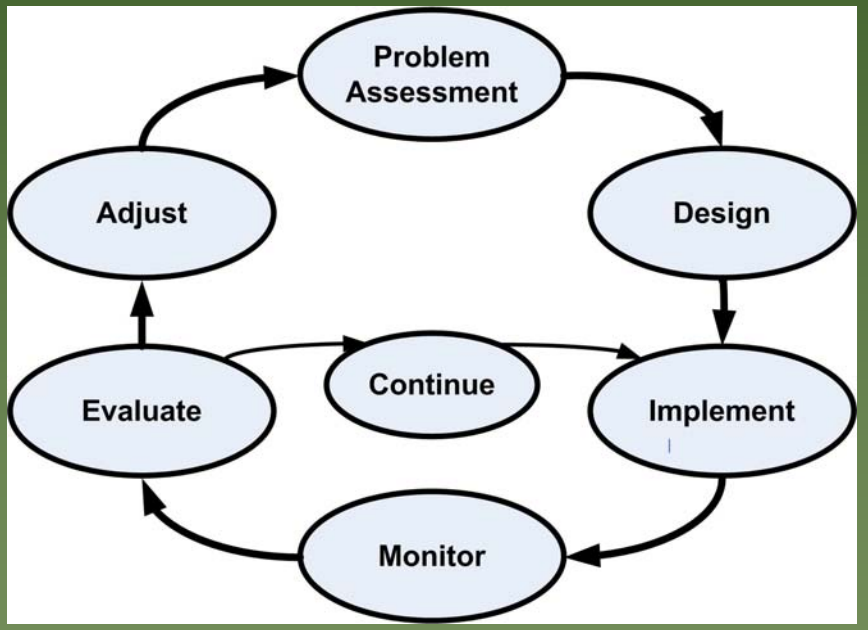
- Science Panel charged to help implement adaptive management as part of the Feasibility Study recommended plan.
- Sans NESP authorization, partners have expressed interest in exploring adaptive management in the context of ongoing programs.
- DOI and USACE guidance pointing that direction.

Audiences for Workshops

- Administration
  - Provide resources
  - Engage at AM steps 1, 5, 6
- Agency Field Staff/Management
  - Implementation/practitioners
  - Engage at all steps in AM cycle
- Stakeholders
  - Articulate societal goals
  - Engage at AM steps 1, 2, 5, 6

“Generic” Adaptive Management Cycle

- Steps common to a number of source references.
- Suggested by the Science panel to the Institutional Arrangements Team.
- Deceptively simple in appearance, not simple in execution.



AM Workshop

- Primary Audience for May Workshop
  - Agency Administrators, with responsibility for program execution and performance.
- Purpose
  - Develop a mutual/shared understanding of adaptive management principles & process for implementation in context of extant UMRS programs and NESP.
- Timeframe
  - Afternoon of May 23rd, 1 to 5 PM
  - Morning of May 24th, 8 to 10 AM?

Draft Agenda proposed by the Science Panel

- Purpose, intros, housekeeping, agenda review
- Basics, evolution of principles & practices
- Successes/failures lessons learned from case studies
- Architectures and scales of case studies
- UMRS Focus, can our informal approach work?
  - Extant programs and groups
  - Roles of participants
  - Paper trail – function and necessity of charters, MOAs, etc
- Recommendations from practitioners/suggestions

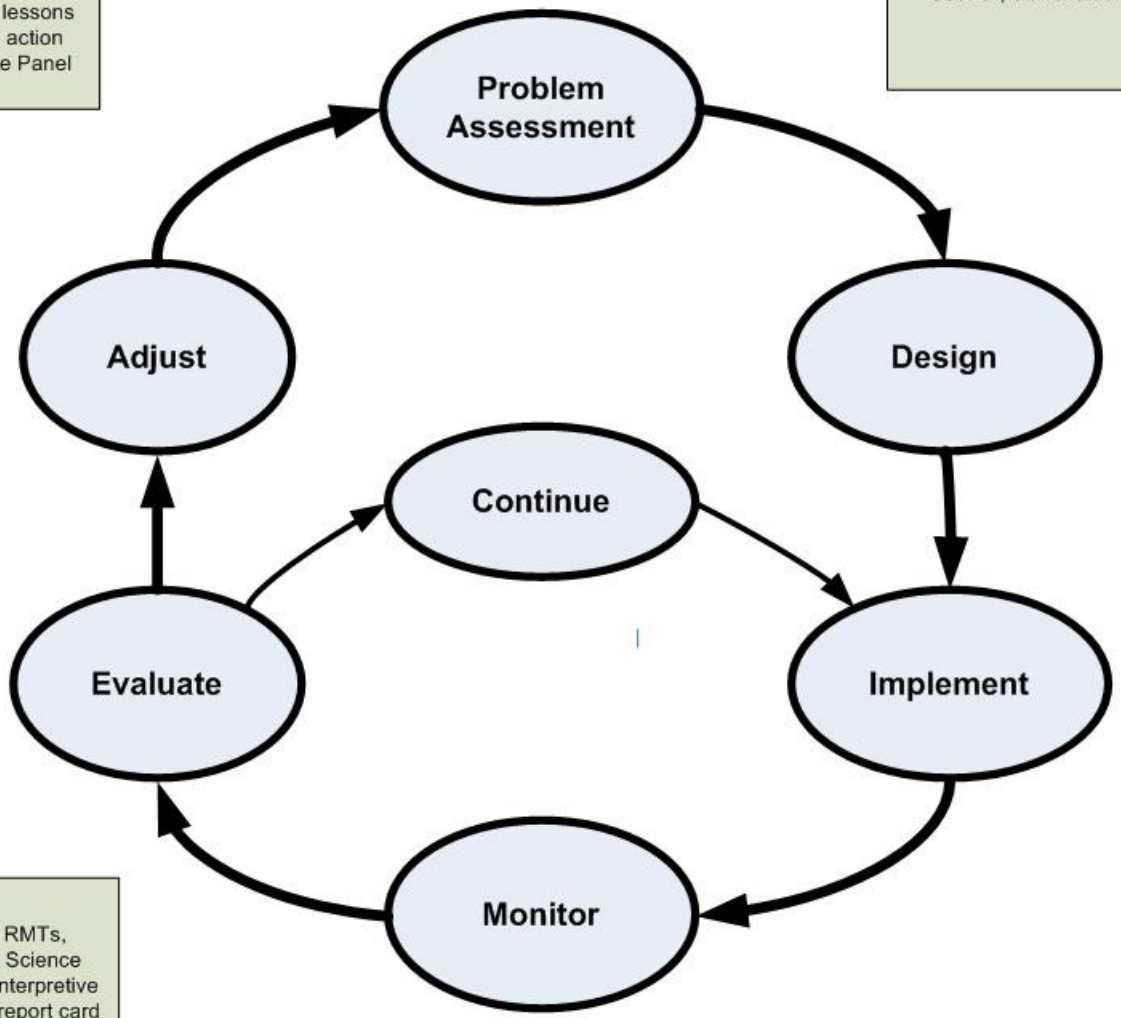
Workshop Material & Support

- Information to convey, May 23, 2007
  - Basics, principles & practices
  - Successes & failures, case studies
  - Architectures & costs
- Invited practitioner expertise
  - Dennis Kubly, USBR, Glen Canyon Adaptive Management Workgroup
  - George Stankey, USFS (ret.) Northwest Forest Plan

Questions & Decisions

- Is the timeframe sufficient for the audience?
- Is the audience complete at EMP-CC level?
- How much is too much information?
- What do administrators need (versus want) to hear?
- I.E. Theoretical (principles), versus practical (implementation realities).
- May 24 followup?

Adaptive management and proposed or extant NESP institutions



Reassess, refine problem statements, management actions based on lessons learned. Council action agencies, Science Panel

Council, stakeholders

Action agencies

Collaboratively among RMTs, PDTs, Field-level coordination groups, Science Panel

Council members evaluate report card elements, project and program performance

COE, FWS, action agencies

First step by RMTs, agencies, and Science Panels to prep interpretive syntheses, and report card

PDT members, FWS, USGS, COE, agency staff, contractor

"*Adaptive management is the rigorous application o management, research, and monitoring to gain information and experience necessary to assess and modify management activities. [It is] a process that uses feedback from refuge research and monitoring and evaluation of management actions to support or modify objectives and strategies at all planning level*

Main Channel Trawling

NESP Project E. Systemic Mitigation

NESP Programmatic Environmental Impact Statement

Workshop
Adult fish entrainment

27 March 2007
12:00 – 4:00

Conference Room ABC
Corps Rock Island District Office,
Clock Tower Building
Rock Island, IL

NECC State & Federal Representatives

- **Review of winter entrainment sampling**
- **Review of FY07 workplan and PEIS commitments**

ECOSYSTEM RESTORATION PROJECTS

J. UMRS Ecosystem Rest. Plan	**$555,000.00**
K. Ecosystem Adaptive Management	**$1,000,000.00**
L. System Cultural Stewardship	**$260,000.00**
M. Forest Management	**$230,000.00**
M1. Forest Management - Reno Bottoms	$130,000.00
M2. Forest Management - Emiquon West, IL $	$100,000.00
N. Fleeting Plan	**$95,000.00**
O1. Island Building - Pool 11	$10,000.00
O2. Island Building - Pool 18	$200,000.00
P. Fish Passage	**$1,250,000.00**
P1. Fish Passage - L&D 26	$674,150.00
P2. Fish Passage - L&D 22	$575,850.00
Q. Floodplain Restoration	**$0.00**
Q1. Floodplain Restoration - Emiquon West IL	
Q2. Floodplain Restoration - Root River, MN	
Q3. Floodplain Restoration - Pierce County, WI	

R. Pool Water Level Management	**$470,000.00**
R1. Pool 5	$160,000.00
R2. Pool 9	$40,000.00
R3 Pool 18	$270,000.00
S. Backwater Rest - IWW Peoria Reach	**$250,000.00**
U. Side Channel Restoration -	**$190,000.00**
U1. Buffalo Chute	$170,000.00
U2. Scheniman Chute	$20,000.00
V. Wing Dam/Dike Alteration	**$265,000.00**
V1. Herculaneum	$230,000.00
V2. Pool 2	$35,000.00
W. Island Shoreline Protection	**$175,000.00**
X. Dam Point Control - L&D 25	**$350,000.00**
Y. Dam Embankment Lowering - L&D 8	**$150,000.00**