

APPROVED MINUTES

26th Meeting of the NECC
July 20, 1999
Holiday Inn - Moline, IL

by

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Navigation Environmental Coordination Committee (NECC)

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1. Welcome and Approval of Minutes of Last Meeting

The twenty-sixth meeting of the NECC was called to order by Rich Fristik. Ken Barr, NECC Chairman, was unable to attend due to illness. An attendance list is provided as *Attachment 1*. The minutes from the May 4-5, 1999 meeting had not yet been distributed for Draft review. Scott Whitney apologized for the delay, indicating that other commitments had prevented the timely completion of the minutes. They will be forthcoming in the near future.

2. Gary Loss – Dry Run of Public Meeting Presentation

Gary's Powerpoint presentation is provided as *Attachment 2*. Gary reviewed the various alternatives and their economic cost / benefits. He also briefly reviewed the various environmental studies that have been conducted, indicating that this effort was still ongoing and environmental modeling results would not be ready until later this fall. The Powerpoint slides are self explanatory and will not be summarized in the text of these minutes.

Suggestions for Improving Presentation

Steve Johnson: What is a powered kevel? Do you think the public will know?

Bill Bertrand: Some confusion on Alternative plans, specifically as to where they are occurring and where you are tracking the benefits.

Al Fenedick: Emphasized the need to keep continuity throughout discussion

Jon Duyvejonck: Liked the presentation since it provides a comparison of cost and benefits for the various alternatives. However, it is important to point out that the improvements will affect the entire system and that is the reason we are showing upriver to downriver effects.

Steve Johnson: Need to reiterate the fact the total costs include site specific costs but do not include system environmental impacts costs.

Jon Duyvejonck: Why not include cost:benefit ratio, as that is how the Corps commonly reports their project justification?

Gary Loss: The Principles and Guidelines looks to annual net benefits (annualized benefits minus annualized costs) as the federal government assesses what plan appears to offer the greatest economic benefits to the Nation. While we often display a benefit-to-cost ratio (BCR), one must understand that a plan with a high BCR can have less net benefits than a plan with a smaller BCR.

Sandra Knight: Why not put a slide at the end of the presentation which summarizes all alternatives?

Mark Beorkrem: caution showing these numbers without environmental costs

Jack Carr: We are still optimizing the Economic model and evaluation of alternatives, it is possible that we may identify other factors or combinations which may result in further construction cost savings or benefits.

Tom Pullen: In order to fit everything in you have to speak very quickly, which may lose a portion of the audience.

Sandra Knight: I think it is important to repeat the matrix showing the alternatives.

Gary Loss: Facilitators will have a laminated copy of alternatives and will discuss these, presentation is designed to provide an overview of the alternatives

Steve Johnson: May need a technical person in each breakout room allowing you to cut down on the information needed in the slides; will not get the necessary feedback since the individuals will still have a number of questions after the presentation and before going to the breakout rooms.

Gary Loss: We have issued a newsletter, 6 weeks in advance, which will show the alternatives and provide some background information to allow attendees a basic level of understanding coming to the meeting.

Tom Pullen: Focus of local area, could we give a local flavor by providing a brief update for each area.

Gary Loss: These are really regional meetings and local area is still way too large to provide for a local focus (i.e. Pools 19-11 covered by Bettendorf meeting).

Ken Brummett: Some may not even know what pool they are sitting on, a map would be advisable.

Bill Bertrand: Would suggest some simplification to the maps

Jon Duyvejonck: Maybe a display board showing the areas and location of proposed projects.

Denny Lundberg: We will have a handout showing pictures.

Steve Johnson: Still need to add that local flavor, what does it mean to each section of the river. The public wants to know what can I expect to see change or see occurring in my area?

Gary Loss: We will try to refocus attention on specific areas.

Mark Beorkrem: These meetings are premature since we are still lacking environmental costs. Have a sense that we are being a front-loaded with economic information and environmental information is coming in the back door.

Steve Johnson: Try to bring up the large volume of information that exists behind the scenes that is not public knowledge and has not really been covered in this presentation. I am concerned that the public will not get what they want and the Corps may not get what they want and the public will get upset and that is not fun for anybody.

Mark Beorkrem: Sierra club will be holding concurrent information (poster displays) sessions at the public meeting locations. We will be staffing the room from 12 –9:00 PM. In addition we have sent out a mailing to over 12, 000 individuals, and will have radio, newspaper, and television advertisements.

3. **Denny Lundberg – Engineering Presentation**

Denny presented a Powerpoint presentation, **Attachment 3**, which reviewed engineering considerations and remaining alternatives. The Powerpoint slides are self-explanatory and will not be summarized in the text of these minutes.

Questions / Comments

Steve Johnson: Have we looked at where mooring cells are already in place and whether they are used or not. For example, they built a mooring cell in Pool 9, yet the industry has refused to use it.

Denny Lundberg: We have not identified x marks the spot yet and will try improve the design so they will use them.

? Comment: There are other means by which barge captains could be encouraged to use the buoys, i.e. Lockmasters will lock those barges using the buoys before those who chose not to use them.

Mark Beorkrem: In reference to the rehab schedule, what has the time interval been in the past, and why are we projecting for 2 rehabs in the next 50 years?

Denny Lundberg: The first rehab occurred when most of the structures were 50-60 years old. A good share of the maintenance and repair is driven by cycles of use. We expect to repeat the same cycle of use in the next 25 years (more traffic = more use). Within the 50 year planning horizon, there will be two cycles of rehab.

Mark Beorkrem: What does the industry say in regards to the use of powered levels?

Denny Lundberg: Given a choice, industry would rather have new locks. Guidewall extensions with powered traveling levels will provide benefits although there is a lot of uncertainty and variability in the process.

Mark Beorkrem: Aren't there already some approach difficulties at some of the locks and dams that would preclude installing guidewalls.

Denny Lundberg: Such site specific details have been considered during the feasibility study. Although some have obvious solutions, others will require more careful planning during the design phase.

Tom Pullen: Some of these slides would be better in the public presentation (i.e. travelling kevel and lock expansion slides).

Jon Duyvejonck: Would like to have a detailed meeting with Denny to get the specific information and have a sit down for details needed for the CAR. Possibly a one day meeting.

Gary Loss: We are trying not to turn down any request for information on the Navigation Feasibility Study.

Jon Duyvejonck: Could you clarify the Peoria and LaGrange lock extensions?

Gary Loss: The alternative providing the best net economic benefits on the Illinois River would involve guidewall extensions. Lock extensions do not appear to be economically justified in the Illinois.

Denny Lundberg: The impacts to navigation costs are much higher due to the year round navigation in the Illinois. This higher cost offsets the benefits.

Mark Beorkrem: There is currently a large petroleum tank farm at Peoria that would create problems.

Denny Lundberg: The first costs for Peoria improvements include relocation costs for this tank farm.

Gary Loss: There are a lot of the site specific issues which will need to be evaluated once this study goes out of the feasibility phase.

4. **Rich Fristik – Site Specific Refresher**

The Site Specific evaluation began in 1995 and was concluded in 1998, the study report is now available as an Env. publication. The objective of the site-specific analyses was to evaluate potential impacts of the proposed construction measures at locks and dams (20-25 on the UMR and Peoria and LaGrange on the IWW) using quantitative habitat assessment methods. Detailed analyses of site specific impacts, based on any recommended/authorized measures, will not be possible until detailed design information for these measures is available. Such detailed analyses will take a more detailed look at the engineering footprints and potential environmental and socioeconomic effects.

5. Jack Carr – Economics

Jack delivered a Powerpoint presentation (*Attachment 4*) that was shown at the last Economic Coordinating Committee meeting (ECC), held in Chicago. Jack's presentation reviewed elasticity, alternatives, net benefits, and feedback obtained from the ECC. The Powerpoint slides are self-explanatory and will not be summarized in the text of these minutes.

Questions / Comments

Steve Johnson: Could you re-iterate how the 1.2 elasticity value for corn was obtained?

Jack Carr: A panel of experts came up with a range of "N" values for grain between 1.0 and 2.0, much of their decision was based on the *Iowa Grain Flow Survey Report*. Below is the breakdown of how the 1.2 value was obtained (the sum of the percentages multiplied by their respective n values equals 1.2):

IA Crop Region	East	Central	West
N value	1.0	1.5	2.0
% Grain Shipped on River	69%	21%	10%

Mark Beorkrem: Industry was not very happy with the n=1.2 value; have they provided any alternative information?

Gary Loss: We have not received at any better information.

Mark Beorkrem: Barge movement of aggregates is primarily inter pool transfer.

Jack Carr: You are correct, this is a minor commodity and it is primarily only among one or two pools.

Bill Bertrand: I still do not fully understand the n value concept and how it is applied in the model.

Gary Loss: Explained elasticity as an exponent function. The "N" value serves as the exponent and can therefore have a significant effect on the formula output.

Mark Beorkrem: I thought the delay hours at locks 20-25 were the most significant?

Gary Loss: Explained using table for new locks at 10 sites showing a 30 hour delay (avg.) at L&D 22 because it is the bottleneck. Optimization of the Economic model will occur before we get to the NED plan.

Jon Duyvejonck: Would like to get an electronic copy of these slides.

Scott Whitney: We will try to get these out to you in electronic format.

Jack Carr: Jobs created for construction were considered, but we did not look at jobs lost due to tourism.

Rich Fristik: Detailed site specific analyses will evaluate the opportunities gained and lost at each location.

Sandra Knight: Did you look at container transport of commodities? There seems to be a global shift towards container shipping.

Jack Carr: No. That was not one of the alternatives evaluated since most of the commodities shipped on the UMRS do not lend themselves to container transport, they are bulk commodities.

Mark Beorkrem: Unsubsidized systems are forced to be innovative in order to stay competitive. They are continually looking for alternative modes which are potentially more cost effective.

Mark Beorkrem: In summary, improvements we make to the navigation system today will lead to additional problems into the future? (i.e. congestion is likely to increase).

Ken Brummett: Have we evaluated the future political considerations of the Panama canal?

Bill Bertrand: The future demand for grain and shipping is based on an increasing demand for exports. Our European customers are expressing great concern and reluctance about buying genetically engineered grain, do we assume this will change?

Jack Carr: The traffic forecast assumes that anything not consumed domestically is available for export.

Jon Duyvejonck: – where is the increase in corn commodities coming from?... a shift from rail or increased yield?

Jack Carr: Overall the growth in grain primarily comes from increased yield, some from land changes

Jon Duyvejonck: Are we assuming that grain yields will increase indefinitely?

Jack Carr: Projections for grain yields are based on Sparks forecast, which was coordinated with USDA

Rich Fristik: Another report addressing the potential for accidents and hazardous spills is being prepared by St. Louis District, should be completed in a month or so.

Tom Pullen provided a brief update on the Biological Assessment (BA) of the Operation and Maintenance of the Nine-foot Navigation Channel. In May 1999, the Corps completed the BA, the USFWS responded with a letter asking for additional information. The Corps is presently in the process of responding to this request. Headquarters has become involved, their lawyers requested some significant changes in wording and a decision is expected this week. Once this happens, a letter will be drafted to respond to the USFWS request for information.

BREAK - LUNCH

Rich Fristik briefly re-visited the slides from Gary Loss' draft workshop presentation which illustrated traffic projections for some of the alternatives (slides 37-40). Rich wanted to emphasize the relative magnitude of traffic increases projected

for the without project condition and the three alternatives, as well as point out the differences by pool (i.e., relatively smaller numbers in Pool 13 versus Pool 26, little monthly variation in LaGrange pool) due in part to length of navigation season and other factors. Impact assessments will account for this variation since they will be conducted by pool and month.

6. Steve Bartell – *Traffic Projections and Fish Impact Assessment*

Steve started out presenting a series of spreadsheets displaying traffic projections without project and for three possible improvement scenarios (*Attachment 5*).

Questions/Comments:

Steve Johnson: Why do the numbers of barges in Saint Anthony Falls and pool 2 differ. There are no destinations in this area and the numbers should be the same.

Steve Bartell: These spreadsheets were provided to me from the Economic modeling workgroup. Someone more familiar with the economics model should answer this

Sandra Knight: The 1992 data is based on observed barge traffic in that year. There may have been anomalies in that year that warrant further evaluation but are currently not explainable.

Steve reminded the group that he has only been handed this data within the last few weeks. Since that time he has spent most of his time running the environmental models for species specific impacts in the trend pools. He displayed a series of outputs for these species specific runs for larval fish entrainment in the trend pools showing percent difference between without and with-project navigation traffic (*Attachment 5*). From these initial model runs a list of fish species potentially at risk was generated for each of the trend pools.

The "*Effects of the incremental increase in Commercial traffic on Fish Spawning Habitat*" was also discussed via a nine slide Powerpoint presentation. The presentation reviewed the formulas used to compute a "Spawning Index" (SI) and results for selected species (*Attachment 5*).

Questions/Comments:

Dan Wilcox: Re-iterated that this assessment is only for fish in the main channel. 10% of these fish are only in the main channel during their larval life stage.

Mark Beorkrem – We need to have this information in advance of negotiations coming up this fall and winter.

Steve Johnson – Re-iterated the need to get this information out to the NECC members

Jon Duyvejonck: Is this unconstrained traffic level forecasts.

Steve Bartell: The relaxing of constraints comes with the improvements being added.

Kevin Szcodronski: An increase from 10% to 13% is not a 3% increase in mortality, it is a 30% increase!

Steve Bartell: We have been looking at the percent change between the with- and without-project condition. We could evaluate our outputs in this manner by normalizing the data by year. This would be useful for comparing scenarios but we would still need to compute the numbers of individuals impacted in order to evaluate significance and mitigation alternatives.

Mark Beorkrem: What can we do to expedite the release of this information to allow politicians and managers to react to what this information is telling us?

Rich Fristik: Our current schedule is locked in for /draft EIS in June 1999.

Steve Johnson: We need to seriously re-think the meeting dates of the GLC since they can not be asked to adequately evaluate a proposal without all the available information.

Jon Duyvejonck: Only once we receive these numbers can we identify problems, mitigation, and significance. What can we do to help realize the unrealistic nature of the current schedule.

Tom Pullen: the best thing you can do is to give this concern visibility, through letters, phone calls, etc..

FISH SPAWNING

Steve presented a short Powerpoint presentation which revealed how the effects of commercial traffic on fish spawning were being addressed (*Attachment 5*). Several representative fish species from various guilds were selected to evaluate the effects of commercial traffic. Habitat Suitability Index (HSI) models have been developed for these species. The HSI model mathematically describes important variables which determine the suitability of habitat. Outputs range from 0 (cannot spawn) to 1 (optimal spawning). A suitability index is being computed for each cell and each vessel event. The index will be used as a screening tool to identify those areas that provide optimal spawning habitat. The index will also be used to determine the Average % Impact, which was defined and graphically explained by the last slide in Steve's presentation.

Questions/Comments:

Ken Brummett: How do you put a dollar value on something like this?

Steve Bartell: This will give us some indication as to where to focus mitigation, not necessarily looking to come up with a dollar value.

Dan Wilcox: Essentially we are looking in terms of potential habitat denied. We don't know if the fish were successfully able to spawn in other areas.

Jon Duyvejonck: We would like to see a table that shows a list of potential impacts to plants, fish and mussel beds. When can we expect to see such a table?

Mark Beorkrem: What is timeline before such information is available.

Steve Bartell: Optimistically, this information should be ready in 1.5 to 2 months.

Jon Duyvejonck: Re-iterated concern about addressing incremental effects of these

Rich Fristik: How do the states see this information in terms of discussing mitigation alternatives?

Jon Duyvejonck: I think we need to see the model results before we waste time talking about significance of the predicted impacts or mitigation alternatives.

Rich Fristik: I meant we will provide the information in the form of tables.

Kevin Szcodronski: Are there going to be a finite number of red flags and how do you envision mitigating for them?

Rich Fristik: We use the term hotspots quite often, our mitigation discussions will focus on these areas.

Bill Bertrand: I think our discussions of significance and mitigation will depend on where the hotspots occur.

Gretchen Benjamin: Can you layer the maps to identify hotspots for plants, fish, and mussels separately?

Steve Bartell: Yes, I this may be possible.

Dan Wilcox: We need to first get the location and magnitude of the effect and develop a cost for this impact. It is hard to speculate how much and where these will occur.

Sandra Knight: How you present it is often a problem we need to know how you would like to see this information presented to be most useful to you.

Rich Fristik: Painted-up figures and tables seem to be acceptable.

Dan Wilcox: Outputs should identify the magnitude of effect and spatially where it occurs in the river and temporally when it will occur.

Jon Duyvejonck: We want a table summarizing the endpoints.

Dan Wilcox: There needs to be some consistency in coloring our maps. Colors should be associated with ecological significance, i.e. green = low risk, yellow = moderate risk, and red = high risk.

Sandra Knight: I think it is up to the EIS to wrap up all these outputs in a meaningful way.

Dan Wilcox: We will also have a mitigation planning document which will be part of the EIS.

7. Sandra Knight – Sediment Transport to Backwaters

Sandra presented a series of overheads depicting the visual and tabular outputs for analysis for sediment transport to backwaters in the five trend pools (*Attachment 6*). The visual outputs are a series of GIS maps with the various backwater areas colored one of four colors relating to the potential for impacts resulting from tow resuspension of sediments. The following classification system was used: Blue = negligible, Yellow = medium, Red = high, and Orange = no computations. This classification is presently based on the calculated number of years required to completely fill the backwater. Assumptions were made regarding: (1) Depth required to calculate total volume, (2) Outflow of material was not computed, and (3) Other Sources of sediment inflow were not included.

Questions/Comments:

Jon Duyvejonck: We need to be cautious in how we define when a backwater is full, because environmental uses of the area are highly dependent on depth.

Sandra Knight: This study is proposed as a screening tool to determine where additional more detailed studies may be warranted.

Dan Wilcox: We are not predicting all the other factors causing sedimentation to backwaters. The sediment transport to backwaters will be used as a screening tool to highlight potential trouble areas related to increased traffic.

Jon Duyvejonck: It will be difficult to evaluate compensation or mitigation without having all this information in hand to study.

Bill Bertrand: I would like to see the output presented in terms of acre-feet of filling.

Sandra Knight: The conversion process from years to fill to acre-feet of filling is actually quite simple. We are open to suggestions on the best form to present this information. There is still a great deal to be done for this effort. Predictions for Non-Trend Pools will be made using NAVEFF and sediment samples collected at 5-mile intervals. These computations have yet to be made.

Remaining discussion focused on availability of this type of information prior to upcoming meetings (i.e. GLC). The delays encountered as a result of the Economic Model considerations set the study back several months. In the short time remaining the Environmental components (models) will be forced to work on a very tight schedule to ensure a Draft EIS is available next spring. Model outputs will be made available to NECC representatives as soon as possible.

8. Shyam Nair – Plant Modelling

Shyam joined The Cadmus Group, Inc. in May 1999. Primary job responsibilities with Cadmus, include providing project management support for human health and ecological risk assessments and providing modeling support in source term, atmospheric dispersion, groundwater flow and transport, surface water transport, human exposure and health risk assessments, and uncertainty analysis. He received his Ph.D. in Chemical Engineering in 1987 from the University of Kentucky. Shyam was most recently employed by SENES Oak Ridge, Inc., where he served as Vice President, Director, and Senior Scientist for the Center for Risk Analysis. Worked at *SENES* from June 1994 until May 1999. Primary responsibilities included providing project and organizational management support and technical support in contaminant fate and transport modeling and human exposure and health risk assessments. Shyam will be coding and de-bugging the navigation ecological risk assessment.

Shyam presented a series of spreadsheets displaying plant modeling outputs. For the minutes we are showing that information in graphical form. Shyam's Powerpoint presentation, showing modeling results for wild celery (*Vallisneria*) and sago pondweed (*Potamogeton*) in pools 4, 8, and 13, is provided as **Attachment 7**. The impact zone evaluated by the model included only those areas with depths less than 1.5 meters. A sediment index was developed for each cell by dividing the sediment concentration for that cell by the maximum value. Sediment index of 0 = no sedimentation 1 = maximum sedimentation. Again this should serve as a preliminary screening tool to identify the hotspots for traffic impacts to submersed aquatic plants. Gave example for change in *Vallisneria* dry mass in 0.5 m water depth: under ambient conditions it would be 43 grams dry mass /m² with projected traffic increase would have 33 grams /m². At 1 meter depth the effect was not as severe, reduced from 21g dry mass / m² to 17.39 g dry mass / m².

9. Jon Duyvejonck – Coordination Act Report

Jon provided a handout of a Draft outline for the Coordination Act Report, provided as **Attachment 8**. He went through the outline and provided additional insight into the various sections of the report (i.e. authors, main components). He indicated a Draft of the Car would be sent to the Corps in November 1999 timeframe if the Corps released the Alternatives in July/August.

Jon also provided an update on the status of the Natural Resource Inventory. Digitizing and compiling the locations of significant resources was completed last year. All of review comments are in and they are making the revisions. Likely to be completed in a month or 6 weeks. Will be in both ArcView and pdf formats and distributed on a CD. Will not be published as part of the CAR due to sensitivity of some of the natural resource information. (similar to economic study report Faucett). For the time being it will be an internal document.

10. Next Meeting

The 27th meeting of the NECC will be held at the Holiday Inn, Moline on 20 October 1999. A block of 15 sleeping rooms is reserved for the night of 19 October at a rate of \$59 + 11% tax. Cutoff date is 8 October. When making reservations, please ask your meeting attendees to identify their group as U.S. Army Corps of Engineers/NECC Meeting.