

UMR-IWW System Navigation Study NECC/ECC Meeting Agenda

**Four Point Sheraton Hotel, Rock Island, Illinois (309-794-1212)
May 16, 2006; 8:00 AM to 3:15 PM**

1. Attendees:

Ron Adams – WIDOT	Dave Hokanson – UMRBA	Paul Rohde – MARC 2000
Richard Astrack – CEMVS	Harold Hommes – IA Ag. and Land	Bernard Schonhoff – IADNR
Butch Atwood – ILDNR	Barry Johnson – USGS-UMESC	Susan Smith – CEMVD
Mark Beorkrem – MRBA	Brian Johnson – CEMRS	Rebecca Soileau – CEMVP
Tom Boland – MACTEC	Martin Konrad – IADNR	Chuck Sptizack – CEMVR
Sandra Brewer – CEMVR	Dick Lambert – MNDOT	Jeff Stamper – CEMVP
Dru Buntin – MODNR	Richard Manguno – CEMVN	Max Starbuck – NCGA
Jack Carr – CEMVR	Nick Marathon – USDA	Janet Sternburg – MODOC
Mark Carr – MEMCO Barge	David McMurray – UMIMRA	Holly Stoerker – UMRBA
Bob Clevensine – USFWS RIFO	Nicole McVay – CEMVR	Charles Theiling – CEMVR
Hank DeHaan – CEMVR	Mark Muller – IATP	Michael Wells – MODNR
Jeffrey DeZellar – CEMVP	Barb Naramore – UMRBA	Scott Whitney – CEMVR
Jon Duyvejonck – USFWS RIFO	Rick Nelson – USFWS RIFO	Rebecca Wooden – MNDNR
Al Fenedick – USEPA Reg 5	Craig O'Riley – IADOT	Richard Worthington - CEHQ
Dan Fetes – CEMVR	Don Powell - CEMVP	Scott Yess - USFWS

2. Calendar:

- **May 24-25** – Ecosystem Services Science Panel Workshop – Holiday Inn Express St. Louis Mo. **May 26** – Ecosystem Service Team (Science Panel Workgroup), same location.
- **June 19-21** – RRAT Trip
- **July 26-27** – ECC Workshop – St. Louis, MO
- **August 22** – NECC/ECC – La Crosse, WI

3. Action Items:

- Identify additional ECC participants and provide those names to Jack Carr/Nicole McVay – **ECC/NECC**
- Provide comments on Shippers' Response study or upcoming surveys to Rich Manguno and Jack Carr – **ECC/NECC**
- Provide Shippers' Response Questions to ECC/NECC – **Jack Carr**
- Notify NECC/ECC when Pool Management Plan teams plan to meet with landowners – **Hank DeHaan**
- Provide NESP/EMP Issue Paper comments to UMRBA – **ECC/NECC**
- Provide non-grain forecast info to Jack Carr/Manguno - **ECC**
- Finalize updates to ECC Charter – **Jack Carr**
- Reply to Naramore and Group regarding how NETS deals with responses to survey vs. actual behavior – **Manguno**
- Post PowerPoint slides from this meeting to the internet - **McVay**

4. Notes:

- **Introductions and Opening Remarks (Ken Barr/Jack Carr)**

8:05 – Barr welcomed everyone. Had attendees introduce themselves

- **NESP Program Status (Chuck Spitzack/Rich Worthington)**

Worthington – Gave a brief status of the Water Resources Development Act (WRDA): There is an amendment coming out of the committee – there are no major changes to the Upper Miss. legislation. His understanding is that there has been some discussion between the Committee and Senate leadership regarding floor time for WRDA. It is his understanding that there may be some floor time after the Memorial Day holiday. That time would include time to allow for amendments. Next he gave a brief update on the Chief's Report, which is a conditional report: The Secretary of the Army has pulled that report back from OMB and is holding it, pending the new economic models. Finally he discussed NESP FY07 Funding: There is no funding for Upper Miss in the President's Budget.

Questions/Comments:

None

Spitzack – There was a meeting in Early March between Corps officials and the ASACW (Woodley). Mr. Woodley requested a report due 1 Oct, 2007 discussing results from the economic models. FY06 funds were redirected toward this effort – while maintaining a focus on early construction starts. As far as planning for the FY07 work plan – we are assuming \$10M for PED. This would keep us on track for some early construction in 2008, provided we get a WRDA bill. You should have received an email with this information, if not, you will get it soon. (**Attachment 1**)

We had public meetings for LD22 – there were 38 people there. The people attending were supportive of both the lock extensions and fish passage projects. There were some concerns regarding disruptions, construction, safety etc. Later in the year there will be a public meeting at LD25. There may be more impacts at 25, and we are carefully preparing for that meeting.

In our effort to move toward an integrated River Council we have put together a Commander's agreement. It emphasizes more upfront and thorough program integration and development, formulation and implementation of the River Council, as well as an identification of the Upper Miss Program including a website. This agreement is currently being signed by the 3 Colonels. The biggest challenge is to develop an understanding with the stakeholders on the NED process, how we characterize the uncertainties of the economics, as well as an understanding of the 3 additional accounts (RED, social effects, environmental quality). Gen Riley want's all four accounts in the Oct 2007 Report.

- **NESP Economics Evaluation Study Status (Rich Astrack)** – (PowerPoint-Attachment 2)

Rich said he was going to give an overview of the Re-Evaluation Study and what the major pieces are. Then Rich Manguno and Jack Carr will discuss the individual topics in greater detail.

Slide 2 – Traffic Management – Appointment Scheduling– you could also call this non-structural measures. The Oct 2007 Report is not just the economic information of the large scale-measures, but on all measures. University of Missouri, St. Louis (UMSL) had determined that the system doesn't need appointment scheduling with current traffic. However, this group did not look at the projected increases in traffic. So we are going back to them with the traffic projections and having them evaluate the potential benefits of appointment scheduling with these other traffic levels. **Slide 3** – Rich provided background on the Chief's Report, ASACW... The Feasibility Report said the study team would prepare a Notification Report three years after authorization and a Re-Evaluation Report when the complete suite of economic models was available (assumed 7 years from authorization). Because we assumed these Reports would be prepared after the authorization, we hadn't been working on either of these reports. However, based on the conversations with Mr. Woodley – this is now the main priority of the NESP. **Slide 4** – Col Gapinski guidance: reallocation of funds, coordination and interactions – that is why many of you are here today. We have some standard data collection and analysis that we do. However, you need to help us by providing the information you have. We also need you to provide some real life double checks to our information. **Slide 5** – General Re-evaluation Report (Navigation ONLY) (this slide was not in the handout.) **Slide 6** – this is also not in the handout. Note some assumptions that go into the Interim Report (Oct 2007 Report) – not all data is available, not all of the data is new because the progress in research is not there yet and will be a few years before it is available. For the Interim report we will evaluate ONLY the recommended plan: 7 Locks in the first increment, moorings, switch boats, and scheduling. We will also evaluate all 4 accounts: NED, Environmental Quality, Regional Economic Development (RED), and Other Social Effects. In the General Re-Evaluation Report (GRR) we can formulate additional alternative plans. This is the significant difference between the Interim Report (Oct 2007 Report) and the GRR – evaluate current plan and see if it is still good vs. are there better plans that we could be implement, given new information. **Slide 7** – Economics Study Steps – some products will be produced by NESP and some by NETS. Traffic Base; Transportation Rates (multi modal); Forecasts (Grain 50%, non-grain); Demand curves – NETS, Survey Model (NETS). Rich also mentioned that we have a new Corps process to certify models and NETS will do the certification. **Slide 8** – Traffic Base – he discussed incremental analysis. For the Feasibility Study we used 2000 data, now we will probably use 2004 data, but will evaluate more current data to ensure we aren't missing anything. This will provide the existing condition – this is our starting point. **Slide 9** – Transportation Rates – how much does it cost to move commodities by water, rail, and truck. This will be done by TVA. **Slide 10** – Forecasts – we are trying to establish what is the unconstrained traffic on the system. For Non-Grain – this is a series of predictor tools – NETS hasn't started on this, so they won't have these tools available for us. We will have to hire a contractor to determine this for us. **Slide 11** – Demand Curves – Initial Data was done through surveys This is the Mid-American Grain Study – [this report is available on the internet](#) – they are going to collect some more data this year, based on comments receive through the review process. NETS is also going to collect non-grain data this year. **Slide 12** – Survey Model – using the updated/corrected Demand Curves. Once you enter the new data, you enter the

performance of each measure so you can do the analysis to determine traffic and the associated benefits. **Slide 13** – Gantt Chart. Showed where we would have to update mitigation analysis, if necessary based on traffic data.

Questions/Comments:

Stoerker – Asked what the Re-evaluation Report will focus on. **Astrack** said that the Oct 2007 Report (Interim Report) will only look at the Recommended Plan as described in the Feasibility Report. However, the Re-evaluation Report will then look at additional alternatives, if necessary. **Stoerker** asked what would happen if it turns out that the Recommended Plan is not beneficial. **Spitzack** said that the Oct 2007 Report will be a decision point. Depending upon how the Recommend Plan stands up to this additional evaluation will determine what additional steps are necessary.

Naramore asked about the decision role after the Interim Report (Oct 2007 Report) – is this entirely Corps, or is OMB involved in this? **Astrack** said that once we start to get some initial data, we will have public meetings. **Worthington** said that when the Interim Report is published, the Chief of Engineers will have to make a decision as to whether or not he/she changes their report (the Chief's Report). Based on that, the ASACW may have to change his/her recommendation to Congress. Added to this complexity, by the time the Interim Report (Oct 2007 Report) is published we may have an authorization.

Adams asked if there would be no administration budget for this project until FY09? **Worthington** agreed – based on the current actions of the Administration, that assumption could be correct.

Stoerker asked about what Astrack saw as the role of the ECC, and what the Corps anticipates their needs of the ECC to be. **Astrack** said that now is the time to get the ECC back involved in this program. Rich asked for the audience to please let the Corps know if there are others who should be notified of ECC meetings. Sometimes the ECC will have to have meetings, but he would also like to be able to provide new reports to the ECC and get their feedback. This is not a closed group – please forward this information to others who may be able to provide feedback. Feedback is what we will be looking for.

- **Update (on Relevant Products) from NETS Program (Rich Manguno)**
(PowerPoint - Attachment 3)

Slide 2 – NETS background – a research and development program managed by the Corps IWR. The goal of NETS is to advance the Corps' world-class engineering with state-of-the-art tools and techniques for economic modeling and analysis. **Slide 3** – NETS team. **Slide 4** – NETS vs. Upper Miss. NETS is a program that has a much broader focus than just inland navigation on the Upper Miss. They have focused on specific needs of NESP, but that is not their entire objective. Ultimately, when NETS has finished a product, it still remains the responsibility of the NESP team to determine how and which NETS products to use. NESP has been coordinating closely with NETS, so there should not be major decision points that need to be made – however it needs to be remembered, that NETS and NESP are not the same. **Slide 5** – NETS activities. **Slide 6** – NETS Product Update – Shippers' Response to Changes in Transportation Costs and Times: Non-Grain Commodities – same as Mid-America Grain Study, but with non-grain. If you think back to the various reviews, specifically

the NRC review – these studies address two of the main comments received by the Feasibility Study. #1 – Not having an empirical basis to define demand curves. The Forecasting model was the other area that the NRC commented on, and the World Grain Model addresses this. These three products go a long way toward addressing the two main NRC comments. **Slide 7** – Mid-America Grain Study: Kenneth Train and Wesley Wilson are experts in this field. These surveys collect information about recent shipments, what alternatives are available to shippers, what factors might change the shipper’s decision to do something different than what they have done. These survey responses are put into a model. The plan is to take the results of this report and use it to develop the demand curves that were so criticized in the Feasibility Report. **Slide 9** – The Mid-Americas Grain Study has demonstrated that it is possible to collect the necessary information to estimate shipper response and that the results confirm the shortcomings of the Corps traditional representation of demand curves . **Slide 10**. **Slide 11** – For Non-grain – they want to do the work a little later than originally scheduled due to the impacts of the hurricane and the availability of survey responders.

O’Riley asked what is the geographic area of the people being surveyed. **Manguno** replied that it was very broad – they did not get a 100% return on the surveys, so they wanted to do another set of surveys to ensure that they had adequate coverage. **Barr** asked if there was a geographic component to the results – how far shippers are from the river. **Manguno** said that the geographic location certainly influences the responses.

Rhode asked if the survey is coming out this year – will it go out to those who responded, or to everyone. Did it go to the lower Miss? **Manguno** said that the intent is to get surveys from a broad audience, so it will go out to more than the original responders. He also said that this is system-wide.

Mark Carr felt that the response rates from the operators will be very low, they would get a better response from the main headquarters offices, as the operators are very busy and don’t have the time to answer surveys from the Corps. **Barr** asked if Rich knew what the response rate was. **Rich** didn’t know, but said it was in the report on the web. He also said that if people had trouble getting information from the web to let him or Jack know and we could get a hard copy or electronic copy to them. **Beorkrem** said that 33% of the shippers on the IL responded, they responded from ND, SD... none responded from MS, or LA.

Manguno said to get any comments to him or Jack Carr and we would get them to NETS and ensure you get a response back.

Adams asked how many times the shipper said that the modes were dictated by the receiver rather than the shipper. **Manguno** said that he hadn’t heard those comments.

Marathon asked if the ECC could get copies of the Survey questions. **Barr** replied yes.

Manguno continued with Shipper Responses: Non-Grain Commodities. These surveys are scheduled to begin in May (this week), with completion by fall of 2006, and final results by early CY07. Next he discussed the World Grain Model – The intent is to build this spatial model for the flow of grain so that the relationships and assumptions that drive the model are transparent and can be modified to test the significance of specific inputs. The Sparks’ Model addressed many of the items of this World Grain Model, but modelers couldn’t “get behind” many of these variables. Conceptually this

is like the Sparks' scenarios, but the World Grain Model is much more explicit in defining the relationships. It may allow us to tweak individual variables of interest. We've explicitly asked for inclusion of the issues of South American trade, policy developments in China, ethanol, and ocean freight rate deviations (Gulf, vs. Pacific NW). The Study Team may be able to identify which variables are more important. So, we will end up with multiple scenarios. These will then be limited to the most likely scenarios. What do you do when you generate the scenarios, run the model and then get the various, and typically far ranging answers? We hope to do more risk analysis than has been done before. The draft model has been reviewed. Model modifications have been made, and we are anticipating that this modified model will be ready for additional review. When this model is ready for review we would like to share it with this group and receive our feedback. This piece is on a time-line with what are needs are for producing our Interim Report for the Oct 07.

Barr asked if this model would be ready for our July workshops? **Manguno** said that he thinks the timing should work out very well. He is certain that Keith will be open with taking these draft results and sharing them.

Barr asked about the elasticity piece – are there “knobs and bells and whistles” to pull to evaluate the effects of this? **Manguno** said that elasticity is different from forecasts. He said that while this data is empirically determined, we need to have a range of confidence intervals.

Miller – is there any hope that this World Grain Model will help to determine the scenarios you use? **Manguno** – you could take this model and with a little bit of work, you may be able to find out what variables are important – maybe some things are not as important as others. Presumably you would want to capture those variables that are most significant in impacting the results.

NETS website: www.corpsnets.us

NETS NEWS: www.corpsnets.us/NETSnews/news_signup.html

- **NESP Ecosystem Component Update (Ken Barr)** – (FY06 Workplan Attachment 4)

FY06 Budget Reprogramming: First Priority – Interim Report (Oct 2007 Report)
Second Priority – projects that will be ready for a construction authority.

Questions/Comments:

Benjamin said that she would have been more comfortable with this had there been more coordination with the partners on this. She said that it looks like the numbers have been balancing out, which is good. She thinks it is very important to key into public involvement. This program does not have the best reputation – public involvement is key if we want to have authorization and RRCT. He said that Spitzack and Barr hear the stakeholder and agree with them. **Spitzack** agreed with Gretchen – he felt the email from Col. Gapinski should have gone out earlier and we should have had a conference call. He did mention that some of the public involvement issues that seem to be missing are being brought back in through the Re-evaluation effort. We will put out newsletters through this effort, as well as progress development of the website.

Benjamin stressed that we need to provide more information to the public, to change how the public perceives this project. **Spitzack** said that the Districts' are aware of this, and this is recognized in the Commander's Agreement.

Mark Carr asked what is the plan for handling these adjustments if Congress does not allow reprogramming of funds? **Whitney** said Congress is addressing reprogramming between MOJOR PROJECTS. We are simply moving money around within one project.

Beorkrem asked about how the reprogramming is affecting the Science Panel. **Barr** said that there is still substantial financial support for the Ecosystem Adaptive Management.

Stoerker asked if Ken could elaborate on the decision making process for how these adjustments were made. **Barr** said it the management team worked with individual PDT leaders to accomplish this task.

Three Districts Review:

Brian Johnson – St., Louis (PowerPoint - Attachment 5)

Fish Passage at Mel Price: looking at fish densities below the lock. It looks like this may be the second year in a row that the dam won't go into open water conditions. New surveys were completed at Mel Price and L/D22 in April. Fish Passage at LD 22: St. Louis survey crew did a survey just prior to the Dam going out of the water. When the survey crew got done the dams went out of the water 1 hour later. We saw lots of fish below the dam. However, when they went out a week later, all the fish were gone. (Slide 4) Yellow dots are "big fish". Brian said not to focus on the fact that there are big fish – need to focus on the numbers of fish. Dam Point Control Work in Pool 25: PDT working on Ecosystems Function Model – based on Hydraulics and fish species. The PDT is happy with the initial results. Will take those results back to the stakeholders. Herculaneum: The teams Year 1 ends in June and their Year 2 starts in July. They are making good progress with this project. Buffalo Chute: Their year 1 monitoring is done and are starting in year 2. They are pushing for construction. The project recommendation looks like it will be to put some notches at the lower end of the structure. Harlow Reach Management Plan: the PDT is now focused on sub-area evaluations. There were no particular efforts in MVS that were significantly hurt by the reprogramming of money. Mostly modeling certification was delayed, contracts that weren't funded were pulled.

Ken Barr – Rock Island

Pool 18 Management Plan: This is working with Pool 18 Channel Maintenance Pool Plans. PDT is working with our local partners and O&M folks as well as the other Pool specific PDTs (Water Level Management in Pool 18). Right now we are working through the alternatives evaluation efforts. We are developing sub-area alternatives. There are a lot of things that have to be balanced – ecosystem needs, industry needs, floodplain needs. **Beorkrem** asked if the environmental groups could be notified when the PDT will meet with landowners so that we can here about the landowner concerns. **DeHaan** said yes. There was also some discussion regarding NRCS, they were at the RRCT meeting and will be contacting the appropriate NRCS representative for Pool 18. Environmental Mitigation – this should be under Nav Efficiency. We took our dollars to finish the trawling sampling in order to finish the sampling that we committed to in the EIS. If we find out that our assumption in the Feasibility Report (adult fish move

out of the way) is wrong, we will have to reevaluate our systemic mitigation plan. Right now all three nets have been damaged and are being repaired. Working in high water with these nets is a real challenge. The team is hoping to be back in the water back for the IL River sampling that is proposed to occur in a few weeks. This time we are using a fully loaded working tow. Water Level Management Pool 18 – going well. Science Panel – Met with several PDTs. In June we will meet with the IL Science Advisory Committee and the Peoria Pool PDT. We are very excited about meeting with them. On May 24-26 there will be an Ecosystem Goods and Services Workshop – Robert Davis, who was on the NRC, will be participating on this.

Jeff DeZellar – St. Paul

Pool 5 Drawdown – Drawdown is being funded through O&M, but the monitoring is funded through NESP. Last year there were concerns regarding mussels, so the PDT is dedicating \$50,000 for the mussel surveys this year (MNDNR will be doing the work). The feeling is that whatever damage was done last year is done, won't have the same problems this year, as we are drawing down the same areas. Also doing vegetation response work – UMESC. We do not have a good way to quantify benefits – biomass may be a good way to do this. Public meetings were in April – went well. Need to get another deviation from the water control plan. Plan to start June 12 – Sept 20. There will be no advanced dredging this year. We are hoping for a 1.5 foot drawdown for this year, but the main channel surveys will tell us this. Recreational access is still a concern. We have promised users “reasonable access”. Pool 9 Drawdown we have had good questions from the WIDNR regarding the drawdown – we need to have some more comprehensive information regarding impacts to mussels. Currently there is not enough money to do this right now. This is something that may have to wait until we are authorized. WIDNR is asking if this is even an appropriate pool in which to do a Drawdown. These decisions in Pool 9 are stakeholder driven. Lock and Dam 8 embankment lowering – Our initial thoughts were to remove a few feet of height from the embankment for a few hundred feet. Just downstream of the embankment is a valuable and complex ecosystem – we don't want to harm that. We are doing hydraulics studies on Reno Bottoms to better understand this. We need to determine the availability of our H&H folks to ensure that they can do the work this year. Again, this is a stakeholder driven approach. Project G Mooring Cells – Want a draft design report at the end of the year. Forestry Management – that entire team was deployed during some time this fiscal year. They promise to have a Draft Forest Management Plan by the end of the FY. Floodplain projects – Root River, MN, and Pierce CO WI – have all the documents drafted up – still waiting for a few comments from the States before we can finalize these document. Systemic Public Involvement and Institutional Arrangements – these two projects have been effectively halted due to the reprogramming. However, some PI will be done through the Economic Reevaluation.

Beorkrem asked about the drawdown for Pool 9 – how did it come out to be a priority project, but now looks like it shouldn't be one. **DeZellar** said that Pool 9 was identified by the Water Level Management Green Report and then MVP picked out 5 pools from that report. Pool 9 is a very rich pool, with a very robust mussel population including Higgins eye mussels. **Barr** added that some of the pools that we picked had “pre-NESP” inertia – including Pool 9. **DeZellar** said that MVP was planning to do a drawdown in 2003 to do a minor drawdown. However, there was a problem with the

IASHPO, which cause a cessation of this project in 2003. However the mussel issues are new. **Beorkrem** asked where the drawdown actions fell out in the State/FWS Pool Plans. **Benjamin** said that drawdowns are a potential tool identified for all of the pools for the Pool Plans. She said that each of these projects was put identified on paper but through adaptive management more information comes to light. **Beorkrem** said that we have to be as efficient as possible – we need to have our ecosystem models used and determine priority prior to going to design mode. We don't need to be confusing people by changing plans. **Barr** said that we are standing by the recommendations of the Chief's report. We do anticipate doing some kind of drawdown in Pool 9; however, we are not ready to do that in the near-term – there are too many information needs for now. **Beorkrem** said that there are still a lot of questions in Congress about whether we need to have ecosystem restoration, or do we need the amount of funds that we have asked for. We have not done a good job of explaining ourselves to Congress.

Rhode asked about using NESP GI funds for advanced dredging. **DeZellar** said that there is no NESP funding for any kind of dredging. Right now the money is only used for labor on the planning team. The CG funds are what can/will be used for this.

Brewer asked if the SAV monitoring is using the LTRMP protocols. **Barr** replied yes. **Barr** added that many of these issues were discussed at the RRCT and the other River Resource Forums.

Johnson said that the RRAT trip will be happening in mid-June – if you'd like to attend, please let us know.

Stoerker asked about the Science Panel's Goals and Objectives report. **Barr** said that the Science Panel took the recommendations from the NECC/ECC and are putting those into the report. The Science Panel will also work on the G&Os from the top down – they will be developing 6-7 objectives for each reach. He said that these should be ready for review within the next 3 months. He thought this would be a good topic for the next meeting.

- **UMRBA Issue Papers (Advisors & Congressional Reporting) (Holly Stoerker) – (PowerPoint - Attachment 6)**

Last fall UMRBA identified 11 legislative issues assuming the authorization of the NESP and how that would/could affect the future of both the NESP and EMP/LTRMP. At this series of meetings this week we will look at “The role of ‘advisors’” and “Reports to Congress”. She reviewed the process – there is a steering committee, make presentations to the NECC-ECC, UMRBA, and EMP-CC. Comments should be sent to UMRBA reps or staff. Expedite the Process (**Slide 3**) – There was some thought that the Senate may take up WRDA in spring, the UMRBA was forced to expedite this process by talking about what were the biggest issues: Monitoring and Consultation and Funding agreements. Monitoring – see proposals in handout. Problem – no trend monitoring provisions explicitly mentioned in NESP – LTRMP needs to continue if EMP no longer funded. Solution – add monitoring authority to NESP, Link directly to LTRMP authority, authorize \$\$ if not funded through 1986 authorization. Consultation and Funding Agreements: Problems: NESP does not explicitly include authorization for consultation and has no provisions for interagency agreements. Solution: Add provision requiring consultation with Interior and the States and add authority for funding transfer agreements with Interior, UMRBA and States. Holly thanked

everyone for participating in this expedited process and providing good information/ideas along the way.

Naramore discussed Issue #6 – Reporting to Congress and Role of Advisors. Issues – each have provisions for Congressional reporting and advisors, but not identical – how do resolve this? Congressional Reporting: EMP – 6 year reporting cycle, COE must consult with State and DOI, report specifications. Role of Advisors: EMP – Independent Technical Advisory Committee, size and composition not specified, \$350k/yr authorized FY99-09. Since 1999 EMP has not received its full funding, so this group hasn't stood up. Congressional Reporting: NESP - 4 or 5 year cycle...reports must address baselines, milestones, goals, priorities... Role of Advisors: NESP – advisory panel required, sole charge is to provide independent guidance in development of implementation report. Members for each state, USDA, DTO, USGS, FWS, EPA, and landowners plus 2 members from Env. and industry groups.

Options – Reporting to Congress – see slides. Considerations – see slides. One of the questions that came up with this discussion – do these advisory panels really do anything outside of what we are already doing? You can easily provide questions/comments now, or provide more in depth comments to your UMRBA rep.

Questions/Comments:

None

- **Update on Non-NETS Economic Products (Carr/Manguno)** (Continuation of PowerPoint slides in **Attachment 3**)

.**Jack Carr** started with Transportation Rate Analysis. **Slide 18** – least costly all overland routing (which will be rail).

Astrack asked about the alternative mode – if you go from here to NO by water the alternative will be from here to NO by rail? **Carr** said that first we will go to same destination using alternative mode, however, then we will look at alternate destinations.

Mark Carr – The export destination – meaning export to the Gulf. What about intra-network movements – moving from the Upper Miss to the Ohio. **Jack Carr** said that he used NO as an example.

Jack continued with his presentation.

Astrack asked NECC members to let us know if they wanted to get all the ECC communications.

Marathon asked about the 1300 origins/destinations. **Jack Carr** said that where we don't get actual rate information from the 1300 movements in the sample we will estimate rates by means of rail/barge costing models. **Marathon** asked if there are really 1300 origin destination pairs. Could you limit these? **Manguno** said that 1300 is the number in the sample – there are actually a lot more than this. Our experience is that we have gotten some very good responses with our face-to-face and phone calls and that this data is very good.

Lambert asked about this 1300 sample – how many repetitions qualify? **Jack Carr** said that we did it by tonnage, repetitions, local in the river. **Manguno** said that what we are looking at are aggregates (the annual total tonnage for a particular origin and destination). If there was one barge load of a particular commodity to a particular

location it won't get picked up here (selected as one of the 1,300 observations in the sample) because of the extremely small tonnage. **Lambert** said that it sounds like you are taking a picture, and depending upon the time of year, or the year, it won't have much meaning later. **Carr** said that this is 2004 data. **Manguno** said that for grain we are also looking at the quarterly numbers. He said that it isn't exclusively a snap-shot in a time for the grain. **Barr** said that this was last done in 1994 –is that right. What would cause this to be different than what we found in 1994. **Manguno** said that it was done in 1994. He said that there are several variables that will contribute to change over time. However, it is difficult to capture the relative importance of these variables.

Manguno – Non-grain Traffic Forecasts As it is currently programmed in NETS, NETS is considering developing forecasting models for the non-grain commodities that would be based on the framework developed for the grain forecasting model. However, the schedules to develop these models are not specific and the models will not be ready for the NESP team to use in the Interim Report. However, Rich does not necessarily think that those NETS forecasting models would be appropriate for non-grain – what is important to grain, may not be appropriate for non-grain. The amount of work for developing a similar type model for each of these types of non-grain would be a huge. Having said that, what do we need to do to review and/or update the forecasts for non-grain commodities? We need to look at historic traffic, understand primary drivers and develop a set of forecasts for each of the 7 commodity groups – Coal, petroleum and petroleum products, industrial chemicals, agricultural chemicals, iron and steel and products, building materials, a miscellaneous group. So what we will probably do is go out to a contractor to have this work performed. What Rich asked this group is for things that might be explicitly included in this effort? One example is containers on barges and what will that mean for the inland waterway.

Rhode asked what is the best way to communicate this request to the industry folks who aren't here today. **Manguno** said to send the information to Carr, Astrack, and Manguno.

Mark Carr said that there is one group which has made some connections for north bound markets for containers. Osprey is the company (largely owned by Kirby). This information could be applied to other markets – assuming that investment in infrastructure was made. **Manguno** said that he isn't sure of the exact method that the contractor would use to capture these forecasts, but this could be a possibility.

Lambert said that there are some studies on containers on barges – he said that they (Minnesota?) did a study, but the contractor didn't finish. He recommends that the Corps look into these existing studies as well as talk to Osprey before the Corps invests in this.

Worthington asked about rate analysis for alternative modes. How does it work with a system that has a demand curve and a system with a forecast coming into the demand curve? **Manguno** we have traffic forecasts, demand curves, and rates. Generally the way the Corps has addressed forecasts in the modeling is to define the forecast as a potential flow on the waterway. We have a rate for the existing condition – this is a single point on the demand curve. The demand curve is the relationship between price and quantity. The system model will predict traffic on the waterway given the demand curve. **Worthington** said that you are asking people how much it would cost you before you moved off the waterway to an alternative mode or vice versa. What is the

rate analysis? **Manguno** said that those responses are helping define the shape of the curve, the rate analysis gives us that one point.

Manguno continued with the Survey Model – model development is a NETS effort, using it for the Upper Miss is a NESP effort. NETS set out to look at building a new model – focused on taking the framework of the existing benefits model by modifying it to have demand curves based on empirical data. The objective of the Survey Model is to take the information from the Mid-America Grain Study and the follow-on data from the non-grain study (2006) and fit it into the existing ESSENCE model. Does this product address everything the NRC said? The answer clearly is no, this is not the 100% solution. But does it need to be the 100% solution? He thinks that it does not have to be 100%. The NRC recommended developing spatially specific models that explicitly represent all the different markets. This is an extreme that represents the 100% solution. The NETS work shows that we can get quite a way down the road to addressing the NRC comments by incorporating the survey derived demand curves into the ESSENCE Model. **Slide 27** - shows traditional demand curve, **Slide 28** shows the hypothetical demand curve used in the Navigation Study, **Slide 29** shows demand curve resulting from the Mid-America Grain Study. Overall conclusions – elasticity isn't the same over the entire range of the function. **Slide 32** Rate Change – in the area of the existing equilibrium, the elasticity is relatively high (quantity is responsive to price change), but it is less so as you move away from the existing equilibrium.

Benjamin asked if the two demand curves are significantly different. **Manguno** said I would look at the existing equilibrium (where those lines cross on the bottom right hand side of the graph) and see how things change from that point. This is the range of quantity that is most important. Quantity is more responsive to price changes than used in the feasibility report – therefore the benefits you see would be a little bit less. However, the combined effect of all the movements and total system benefits are what we need to look at. It is defiantly different – different enough that we want to know about it.

Spitzack asked about alternative modes prices– is it always a constant? **Manguno** said that the short answer is yes, they are a constant. This follows the Corps' guidance in the Principles and Guidelines (P&G). If you want to show how other modes perform over time given varying levels of traffic – it would redefine how we use this model – and we don't have the capability to do that at this time. **Barr** summarized that if there is additional information out there regarding other modes/commodities then we need this information.

Manguno continued with **Slide 38** Survey Model Execution – Lock Performance – this is defined by transit curves which show the relationship between average expected delay and traffic volume. The transit curves that will be used are the same one that were used in the feasibility study. Transit curves are produced for each efficiency measures that is evaluated Model inputs are scheduled by March 2007, model evaluations done by June 2007, report by Oct 2007.

Questions/Comments:

Naramore asked what is the correspondence between stated preference vs. revealed preference. **Manguno** said that the particular approach being used in the Mid-America grain Study is Stated Preference and Revealed Choice. **Naramore** said that when you talk to the American consumer they will give you all the alternatives as to what they

may do when gas prices rise; yet when price actually rise they don't do it. So how do these survey results reflect this difference between what you say you are going to do and what you actually do. **Manguno** said the he understood her question, but wasn't sure of the answer, he would provide this information to Keith and get a response back.

Barr said that with our meetings with NRC our two biggest issues were multi-modes and probabilities of the scenarios. We need DOT and Dept Ag to help us with theses. Ken asked if the Grain models would help us with probabilities. **Manguno** didn't think that simply generating several scenarios would provide probabilities of the scenarios. However, there is going to be a meeting of the modelers to try to assess some probability. **Barr** asked about uncertainty of the demand curve. **Manguno** said he is not seeing uncertainty numbers published in the new reports.

- **ECC Charter and Evaluation of all 4 Principles and Guidelines Accounts** (NED, RED, EQ, and Social Effects) - **Chuck Spitzack** (ECC Charter – **Attachment 7**) (External Peer Review Memo – **Attachment 8**)

Spitzack reviewed the existing ECC Charter (**Attachment 7**). He said that “Navigation Study” will be changed to “NESP”. He said there will be some joint meetings of NECC/ECC. But there will be some meetings that will only be focused on economics. However, he anticipates that all correspondence will be sent to both groups. He asked if this was OK.

Questions/Comments:

Wooden asked why the NECC was invited today – the one hour of project briefing could have been done during the EMP the next day, and not spend a day of the NECC time and money to be here. **Barr** replied that it is anticipated that this group (NECC/ECC) would move to an integrated RMC.

Benjamin said that if a meeting were purely economic she may, or may not attend, but would hope that WIDOT would attend.

Duyvejonck said that if economics is going to have a larger role in the NECC/ECC meetings then maybe we can split them apart. If this was an unusual event we as natural resource managers need to here this. However, if there are going to be a focused and sustained effort on needing additional economic coordination he recommends that they be separate meetings.

Benjamin suggested having a ½ day joint meetings and then split into 2 separate meetings.

Lambert said that he doesn't attend the joint NECC/ECC meetings because they did not explicitly discuss the economics. It is nice to blend it, but when you don't have the expertise it is hard to stay awake – it isn't on your radar screen and you have another state rep that is paying attention to that.

Wells said it is obvious that we (ECC) need to reengage. I don't have any recommendations until I know what is expected from me.

Astrack asked if there were concurrent meetings would anyone need to be at both meetings. Is it possible to have concurrent meetings? If you do have an issue, you need to get this to Carr/Barr.

Fenedick said that the EPA is one of the agencies that questioned the economics. We do need to get information from both groups.

Rhode – With the ECC being dormant for a while some of the NGO’s let it fall off their interest. Bringing them back is a process. If there was a way to distribute the materials that were presented today and facilitate a conference call to help reengage these folks – at least once, maybe twice before the meeting in August so it gets on their “To Do” List.

Spitzack continued with his memorandum (**Attachment 8**). The NESP PMT wanted to set up a Navigation Economic Science Panel. There was some internal discussion regarding this Navigation Economic Science Panel. It was decided that this group would act as an external peer review group for NESP economic products. We propose that we establish a panel of 5 or so economists who would review draft documents from the economic team, but also respond to the NECC/ECC. Look under 3E of the memo for purpose of peer review. As of yet, we don’t know if this proposal will be acceptable to the Navigation Planning Center, who is ultimately responsible for the Corps Peer Review Process on Navigation Reports.

Questions/Comments:

Beorkrem asked what the timeline was for the peer-review process. **Spitzack** said that he’d like the panel to be in place within a couple of months. Then the reviews could be very timely on the products that are coming out, as well as a review of the Oct 2007 Report. He would like the group in place by the July workshop. He would like to provide selection criteria to the NECC/ECC and get feedback on these, then get a list of nominees. He asked if the group thinks this is a good suggestion. **Beorkrem** said that as this is laid out, it is good. However, information review needs to be concurrent and timely. The timeliness of information sharing is very important.

Hommel he said that the Corps has very open to meetings, participants may come when they want. He is optimistic to the schedule – the last one was 6 years. He is trying to think about what Iowa can do to help. He wants to make sure that TVA is aware that industry may be willing to share contract rates. He is confident with the process. He was involved in the review process on the scenarios. He thought that this panel method worked. The older panel had industry reps on the group – 3 profs, industry and myself. He thought it was effective, raised some questions that prepared them for what was down the road, and answered some questions.

Wells asked Rich Worthington if WRDA is authorized as written, how important is this reevaluation? **Worthington** said that it is critically important in order to be included in the administration’s budget.

- **Partners Feedback (Group)**

O’Riley – In terms of both meetings – have a short summary for each group, but keep them separate. Supports independent Peer Review.

Stoerker – Meeting Orders – UMRBA may go back to the middle, may want to think about that

Marathon – The Upper Miss is an important part of US agriculture. The best that the USDA does is a 10 year forecast for grain production. In the long-run, the US will always produce a certain amount of grain. We will always have an excess supply – the waterway is a critical part of our export policy and should have a future. USDA will be working with the team.

McMurray – There should be some separation between the ECC and NECC. There should be some real business people involved in the discussions. Elements of having some separate meetings on the economics side would be good – as would having some coordination between ecosystem and economics. Need to get a better handle on recreation and economics. Will get some information to Rich Astrack in terms of objectives. The issue of flood damage reduction should be discussed in this. Role of MRC in role of oversight on this process.

Nelson – FWS has little expertise in economics on navigation. However we are very interested in the process as we support the recommended report.

Adams – Let's get it done

Lambert – This format today was very good. I commend the Corps in trying to get everyone involved and still follow all the planning rules. Keep us involved – send info out to the ECC group and we will do our part to get everyone to respond.

Benjamin – She was glad that she got to hear a lot of the economic. If the economics includes recreation she will want to be a part of it.

Attwood – Will continue to participate. Economics is interesting.

- **Next Meetings:**

- ECC Workshop – July 26-27, St. Louis, MO.
- NECC/ECC Meeting – 22 Aug, 2006 – La Crosse, WI



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ECC/NECC

Re-Evaluation Study Status

Rich Astrack



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Traffic Management Appointment Scheduling



- **Write Scope of Work specifying appointment scheduling tasks involving UMSL (May)**
- **Develop contractual mechanism and proposed budget (Jun)**
- **UMSL simulation model and analysis in determining traffic growth/congestion level where use of appointment scheduling would benefit the UMR System (Sep)**



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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 – 30 Sep 07**
 - **No. 1 priority**
 - **Take advantage of NETS progress**



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- **COL Gapinski guidance -**
 - **Priority 1 – complete Interim Report – 30 Sep 07**
 - **Priority 2 – Decision documents and P&S toward construction award**
- **Reallocate FY 06 funds**
- **Will be –**
 - **Fast paced**
 - **Require extensive coordination/interaction**



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Economics Study Steps



- 1. Traffic Base - NESP**
- 2. Transportation Rates - NESP (by TVA)**
- 3. Forecasts**
 - **Grain - NETS**
 - **Non-grain – NESP (by AE)**
- 4. Demand curves - NETS**
- 5. Survey Model - NETS**



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1. Traffic Base



- **Waterborne Commerce data**
 - Data on individual barges
 - Feas study 2000 data, now 2004 data

- **Aggregate to movements**
 - Sample (~1,300+ movements) to trans rates

- **What the traffic is now – Existing Conditions**



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2. Transportation Rates



- Rates for water, rail and truck
- Rates – cost today for transportation
- Establishes point on the demand curves



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3. Forecasts



- **Unconstrained traffic**
- **Assumption - can add traffic w/o congestion**
- **GRAIN**
 - **NETS forecasting model**
 - **Scenarios**
- **NON-GRAIN**
 - **Consultant**
 - **Estimated similar manner for Feas Study**



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4. Demand Curves



- **NETS developed**
 - **Example – Mid-America Grain Study**

- **Create demand curves**
 - **Price and quantity relationship**

- **Transportation rates provide 1 point, demand curves allow you to determine all**



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5. Survey Model

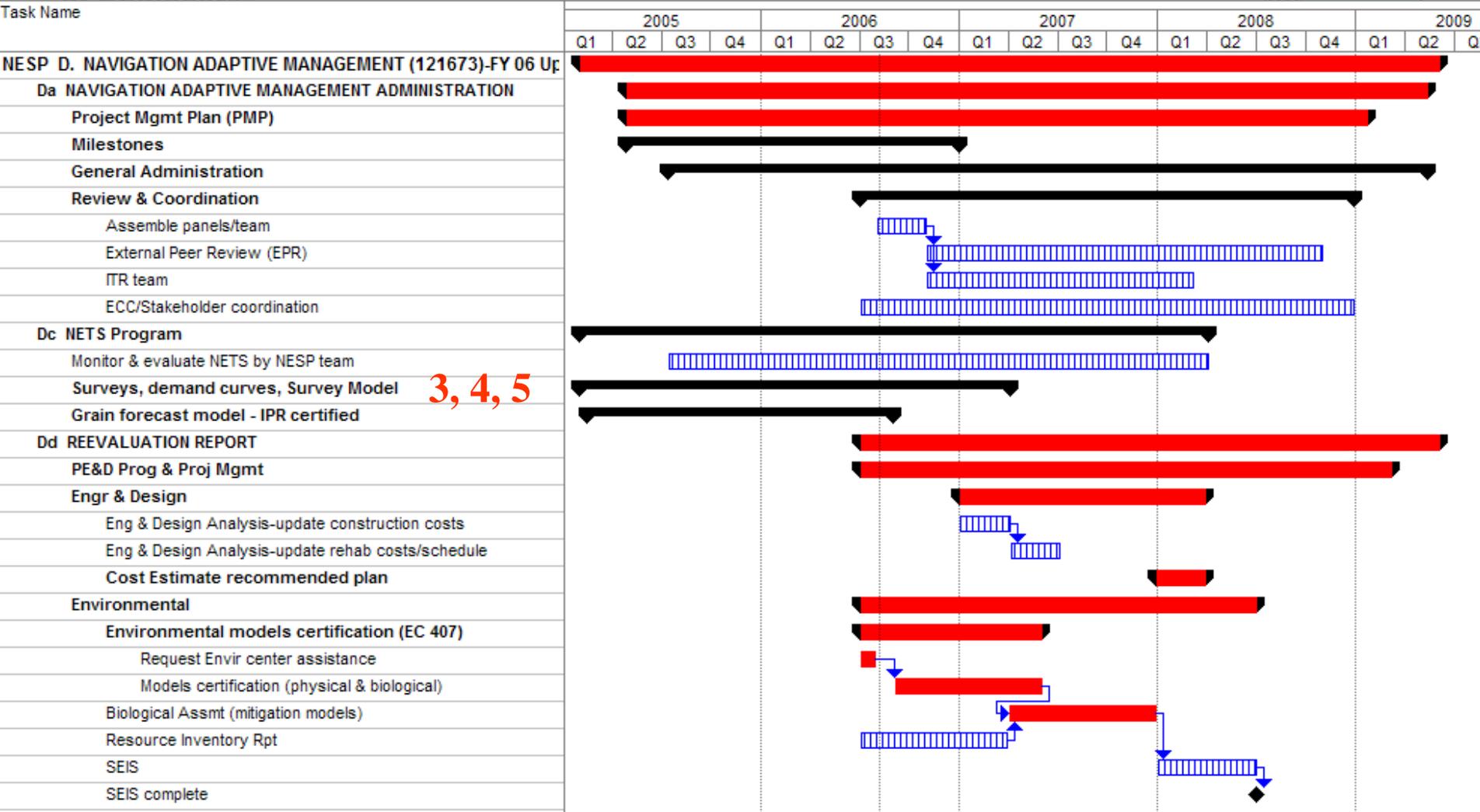


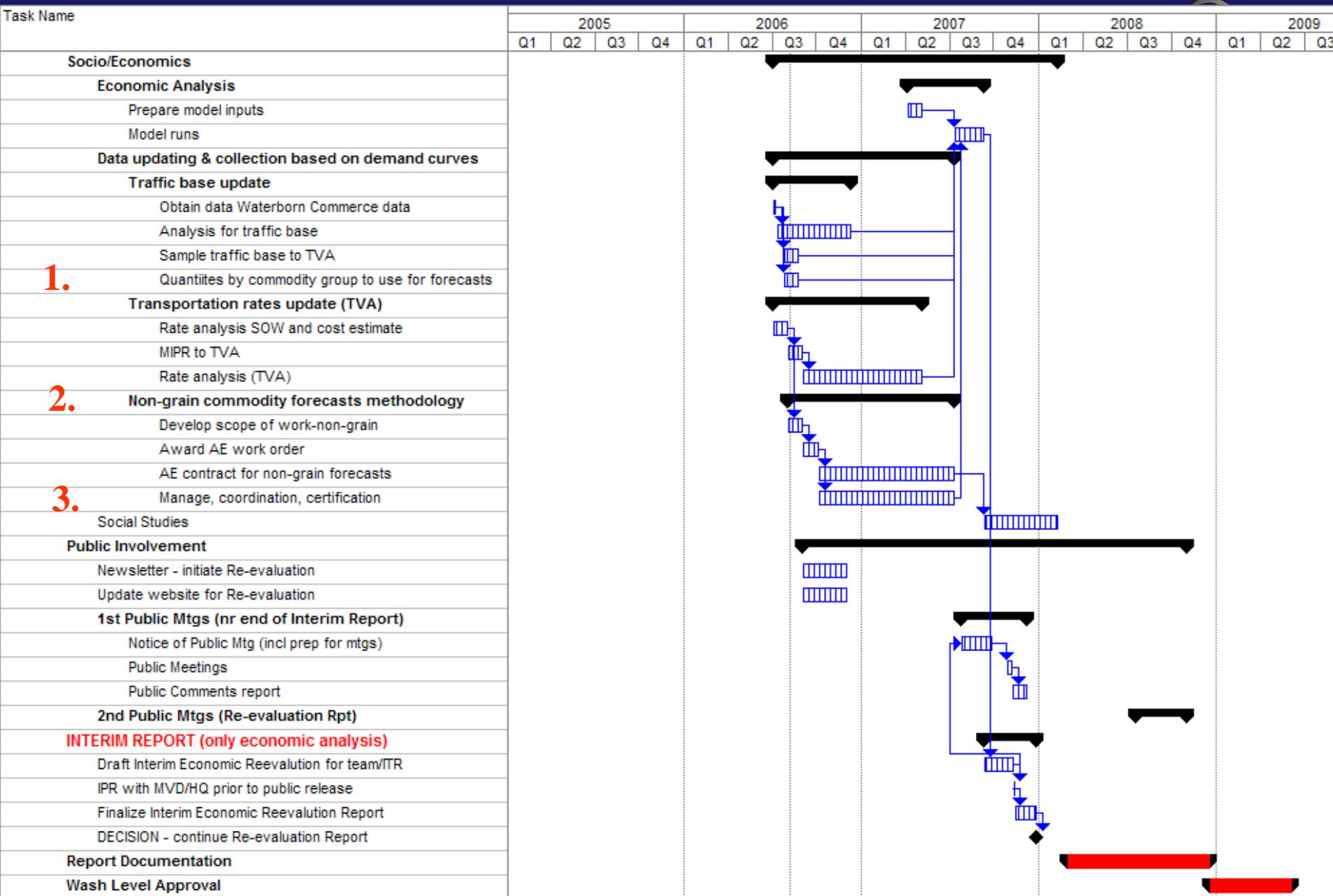
- **Input above data + lock performance**
- **Output – traffic and associated NED benefits for without condition**
- **Change lock performance, i.e., w/project**
- **Net of w/o project and w/project = benefits**



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Timeline







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Next – Update on the NETS Program



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Navigation Economic Technologies (NETS)

One Team: Relevant, Ready, Responsive and Reliable



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NETS

- NETS is a Research & Development program managed by the Corps' Institute for Water Resources.
- The goal of NETS is to advance the Corps world-class engineering with state-of-the art tools and techniques for economic modeling and analysis.



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NETS Team

- **Includes:**
 - ◆ **Academics from seven universities**
 - ◆ **Representatives from**
 - ◆ **ORNL**
 - ◆ **TVA**
 - ◆ **Corps Centers of Expertise for Inland and Deep Draft**
 - ◆ **IWR**



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NETS vs. Upper Miss

- **NETS is a research program aimed at both Inland and Deep Draft navigation economic evaluation.**
- **Many NETS research efforts have focus on the Upper Mississippi River in the hope that some products would be useful to the Upper Miss study team.**
- **It is up to the Upper Miss study team to determine the usefulness or appropriateness of any NETS product to the Upper Miss study.**



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NETS Activities

- 1. Modeling**
- 2. Data Gathering**
- 3. Knowledge Base**
- 4. Peer Review**
- 5. Communications**



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NETS Product Update

- **Shippers' Responses to Changes in Transportation Costs and Times: Mid-America Grain Study**
- **Shippers' Responses to Changes in Transportation Costs and Times: Non-Grain Commodities**
- **Longer-Term Forecasting of Commodity Flows on the Mississippi River: Application to Grains and World Trade ("World Grain Model")**



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Mid-America Grain Study

- **Professor Kenneth Train of the University of California at Berkeley and Professor Wesley W. Wilson of the University of Oregon and the Institute for Water Resources form the study team.**
- **A survey of grain shippers was conducted to obtain information about the mode and origin/destination (O/D) of their shipments, the next-best alternative mode and O/D, as well as factors that might induce the shipper to switch to the next-best alternative.**



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Mid-America Grain Study

- An econometric model was estimated on the combined revealed-preference data (the shippers' observed choices in the market) and stated-preference data (the choices that shippers said they would make if transportation costs or times rose for their current mode and O/D.)
- This study has gone through an independent peer review process and the final report is complete. Also, a paper illustrating this study was submitted to the Transportation Research Board (TRB) for publication and presentation at the January 2005 conference.



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Mid-America Grain Study

This study demonstrated several things.

- **The most important being that it is possible (though difficult) to collect the necessary information to estimate shipper response.**
- **Also, the study confirms the shortcoming of traditional methods. Specifically that the reservation price (alternative rail price) understates the willingness to pay and that perfectly inelastic demand overstates willingness to pay.**



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Mid-America Grain Study

- **The results of the study form the basis for estimating demand curves for water transportation.**
- **Study results will be compared to a second survey to be initiated June 2006 for validation. Final results by early CY 2007.**



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Shipper Responses:

Non-Grain Commodities

- Will employ same stated preference and revealed choice techniques as the Mid-America Grain Study.
- Scheduled to begin May 2006
- Survey completion by fall 2006, final results by early CY 2007.



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World Grain Model

- **The purpose of this study is to illustrate the development of a spatial equilibrium model to forecast international commodity flows from a specific region.**
- **The methodology will be robust enough to provide credible projects in flows for 50 years.**
- **The uncertainties of key variables will be explicitly considered.**



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World Grain Model

- **Forecasting of policy variables will be evaluated using “scenario analysis.”**
- **The methodology will be illustrated by an application to the grain sector on the Mississippi river system.**
- **Review of draft model and model results has been completed; model modifications are ready for review.**



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- **NETS web site: www.corpsnets.us**

- **NETS NEWS!**
 - **An email alert with summary information about new developments will go out to team members and other interested parties. The email will provide a link to the product on the NETS web site. To subscribe or unsubscribe from NETS News, log on to**

www.corpsnets.us/NETSnews/news_signup.html



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NESP Economic Products

One Team: Relevant, Ready, Responsive and Reliable



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NESP Product Update

- **Transportation Rate Analysis**
- **Traffic Forecasts: Non-Grain**
- **Survey Model**
- **Model Certification**



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TRANSPORTATION RATE ANALYSIS

STATEMENT OF WORK

The basic work to be accomplished is the identification of ultimate origins and final destinations, and the development, and documentation of transportation rates and charges on a sampling of the commercial traffic that moved via the Upper Mississippi River Navigation System.



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STATEMENT OF WORK...

MORE DETAILS

The Contractor shall document or determine for each movement in the sample the total origin-to-destination shipping costs for:

- ✓ **The existing waterway routing,**
- ✓ **The least-costly all overland routing,**
- ✓ **One other alternative routing if deemed feasible & appropriate (generally St. Louis transfer location),**
- ✓ **For grains (only), a Pacific Northwest (PNW) routing.**



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STATEMENT OF WORK...

MORE DETAILS

Total origin-to-destination costs will include:

- ✓ **Loading/ unloading charges at origin and destination,**
- ✓ **Rates for movements to or from the line-haul,**
- ✓ **The modal line-haul rate,**
- ✓ **Any inter-modal transfer, handling and storage costs.**



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TRANSPORTATION RATE ANALYSIS

Tennessee Valley Authority (TVA) is our contractor for this study, and they are also the contractor for the Transportation Rate Study for Ohio River Main-Stem System Study.

The Scope of Work (with the Rate Sheet attachments) for this effort has been completed, and will be available soon for your review at our web site.



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TRANSPORTATION RATE ANALYSIS

Survey Forms and Letter of Introduction for TVA are complete and will also be available soon at our web site.

TVA will begin interviewing terminal operators by telephone and in person later this month, pending OMB approval of the survey forms. We ask that you get the word out that these surveys are important.



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TRANSPORTATION RATE ANALYSIS

From the 2004 WCSC database, the Corps' study team and the TVA have selected a sample of approximately 1300 origin-destination waterway movements.

The sample is based on movements with the highest tonnage segmented by commodity group and by waterway reach to assure adequate coverage.



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SCHEDULE AND PHASING OF WORK

Initiate work with OMB approval of surveys, and transfer of funds to TVA (May 2006).

Data collection, sample movements, telephone interviews and surveys complete(15 Nov. 2006).

Individual rate sheets for each movement with all cost components broken out separately, and a draft final report (15 February 2007).

Final Report incorporating revisions resulting from review of the draft final report (15 April 2007).



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Traffic Forecasts: Non-Grain

- **Scope of Work currently under preparation**
- **Work to be performed by contract**
- **Completion programmed for early CY 07**



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Survey Model

- **Motivation for a new economic model stems from the desire to address the limitations that were identified at various stages of the feasibility study review process.**
- **The Survey Model attempts to accomplish this by replacing the demand for water transportation function in the economic model developed during the feasibility study with a demand function that is based on empirical data.**



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Survey Model

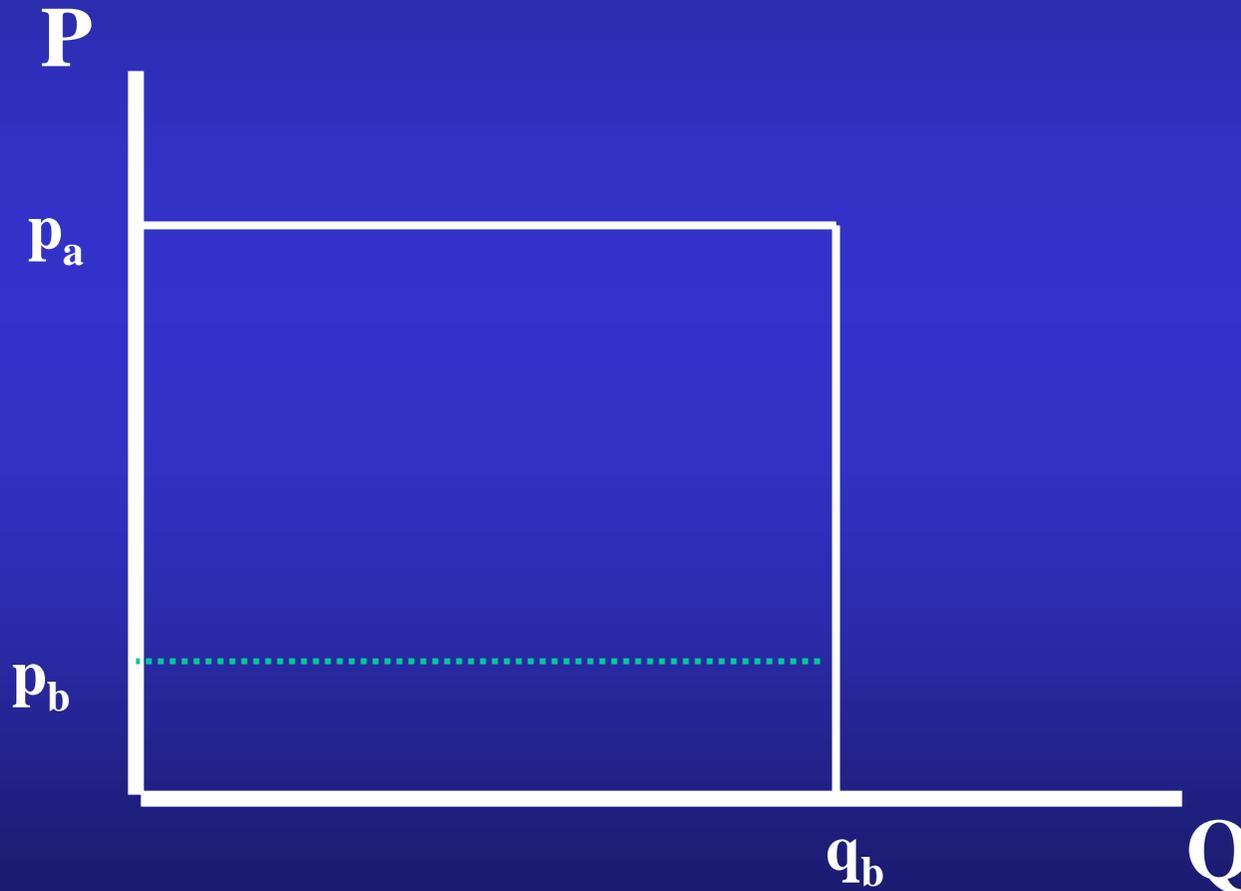
Objective: Incorporate the results found in “Shippers Responses to Changes in Transportation Costs and Times: The Mid-America Grain Study” into the framework of the existing economic system model **ESSENCE.**



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Demand Function

Inelastic Demand

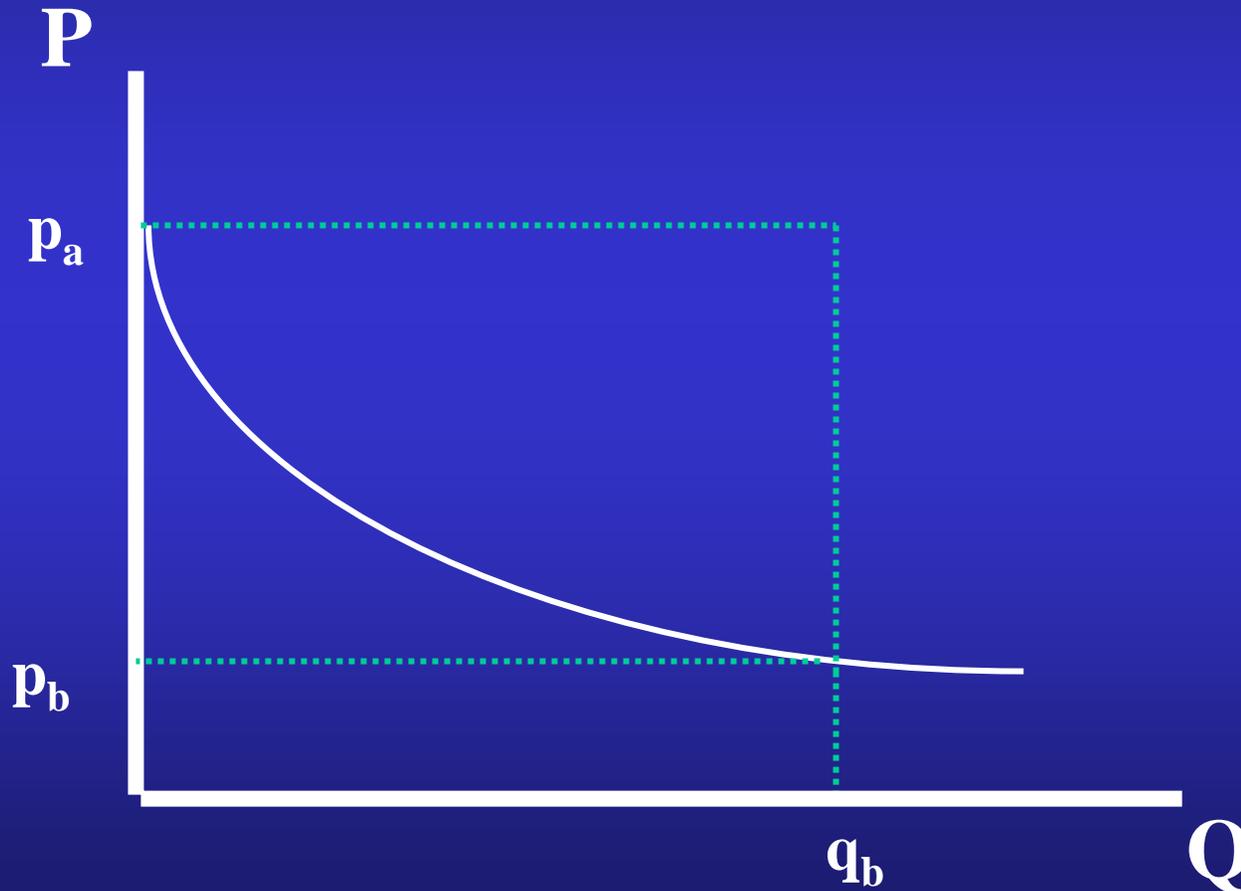




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Demand Function

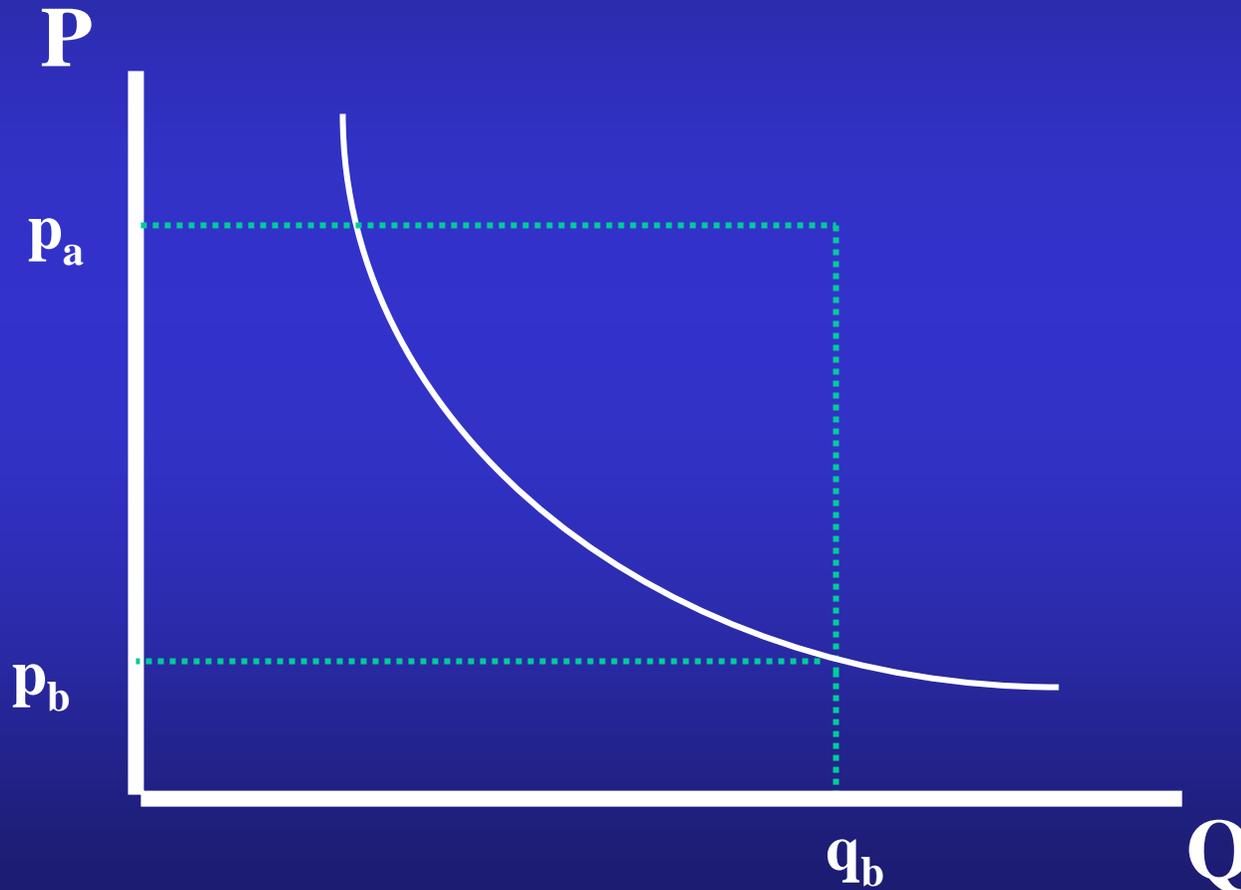
ESSENCE





Demand Function

US Army Corps of Engineers® **Mid-America Grain Study - Survey Model**





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Mid-America Grain Study

- **Econometric analysis using survey results as input into a theoretical shipper's modal choice model**
- **Used to estimate arc elasticities of shippers' responses to both rate and time increases**



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Mid-America Grain Study

- **Changes in transportation rate and transit time both affect level of shippers demand for a mode or destination**
- **Arc elasticities decrease at a decreasing rate with larger percentage increases in both time and rate**
- **A large share of shippers is insensitive to changes in transportation rates and time**

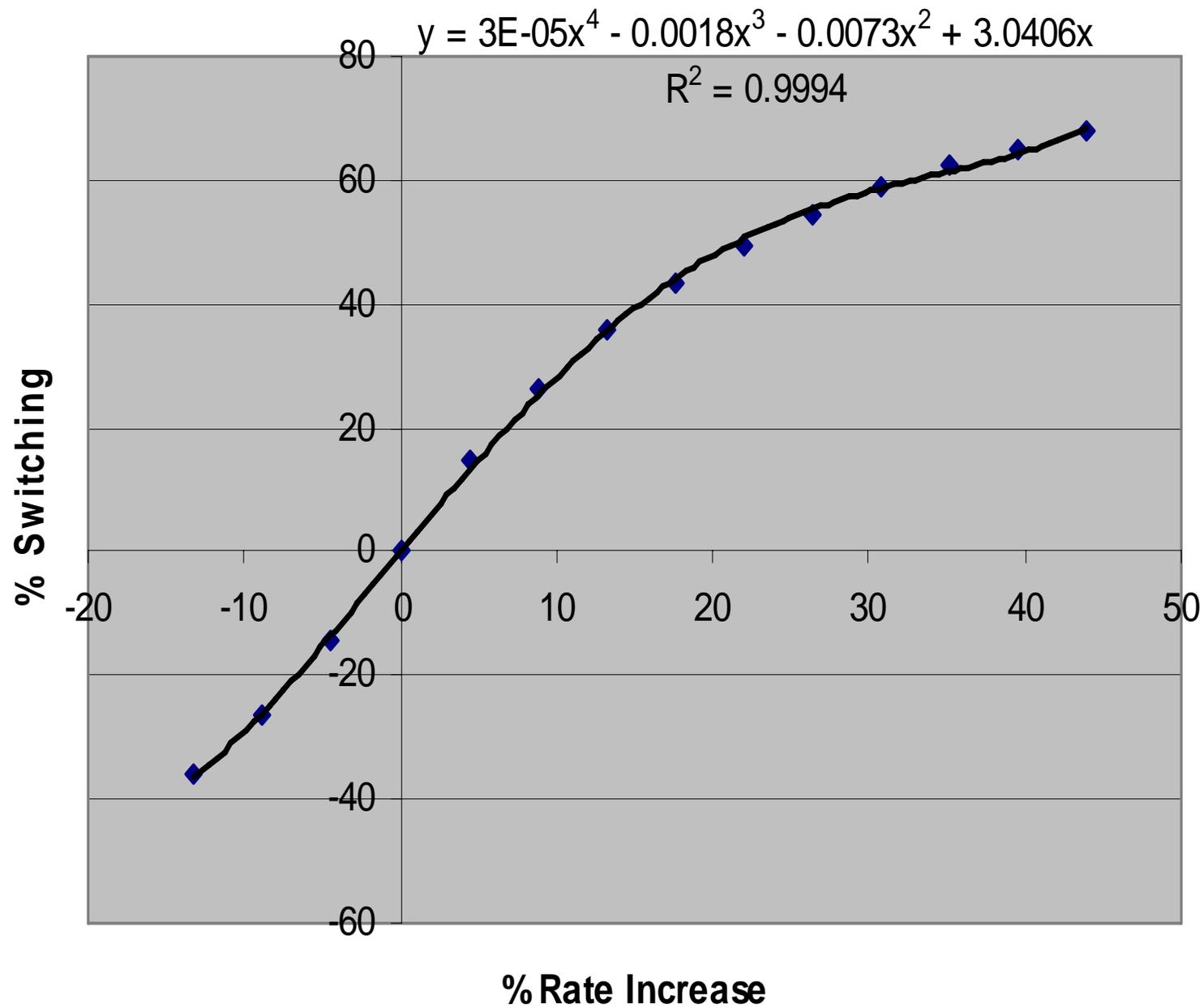


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Shipper Response to Rate Change

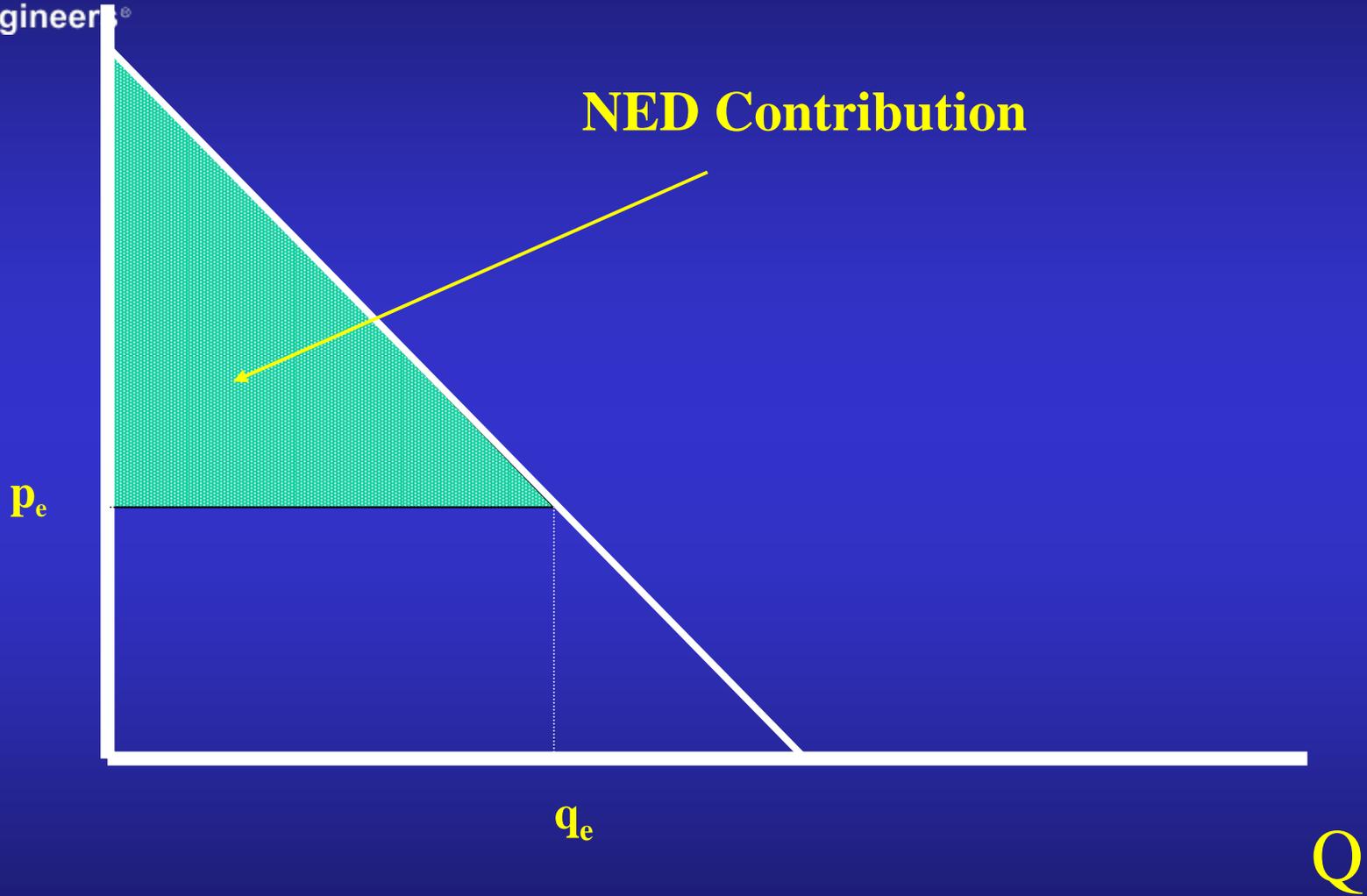
Percent Rate Increase	Percent Switching
-13.20	-35.85
-8.81	-26.37
-4.40	-14.54
0.00	0.00
4.40	14.54
8.81	26.37
13.20	35.85
17.60	43.45
22.00	49.59
26.40	54.61
30.80	58.76
35.20	62.24
39.60	65.19
44.00	67.71

Total Shippers' Response





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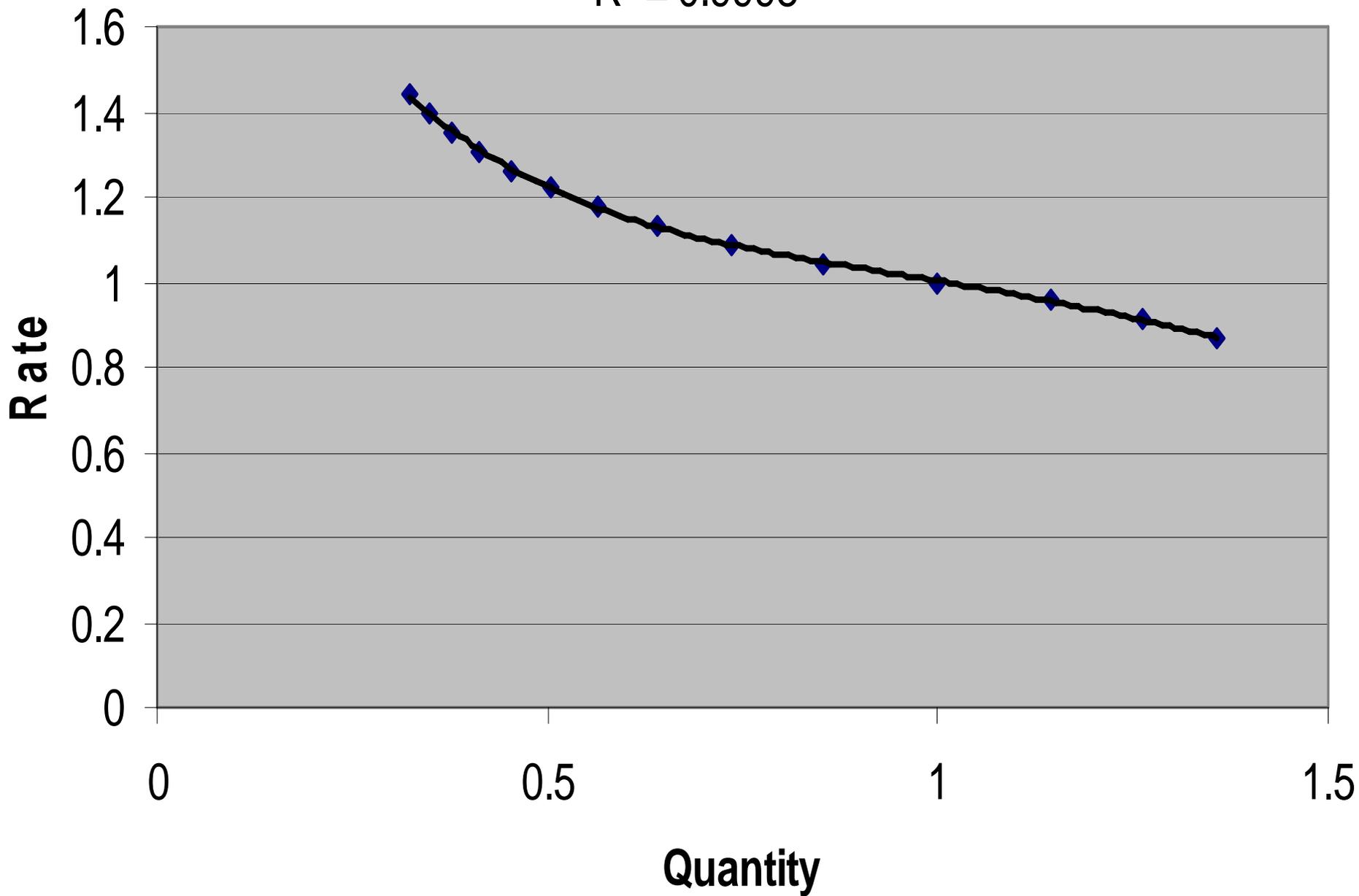
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Shipper Response as Inverse Function of Rate

Proportion of Rate	Proportion of Shipments
0.868	1.3585
0.912	1.2637
0.956	1.1454
1.000	1.0000
1.044	0.8546
1.088	0.7363
1.132	0.6415
1.176	0.5655
1.220	0.5041
1.264	0.4539
1.308	0.4124
1.352	0.3776
1.396	0.3481
1.440	0.3229

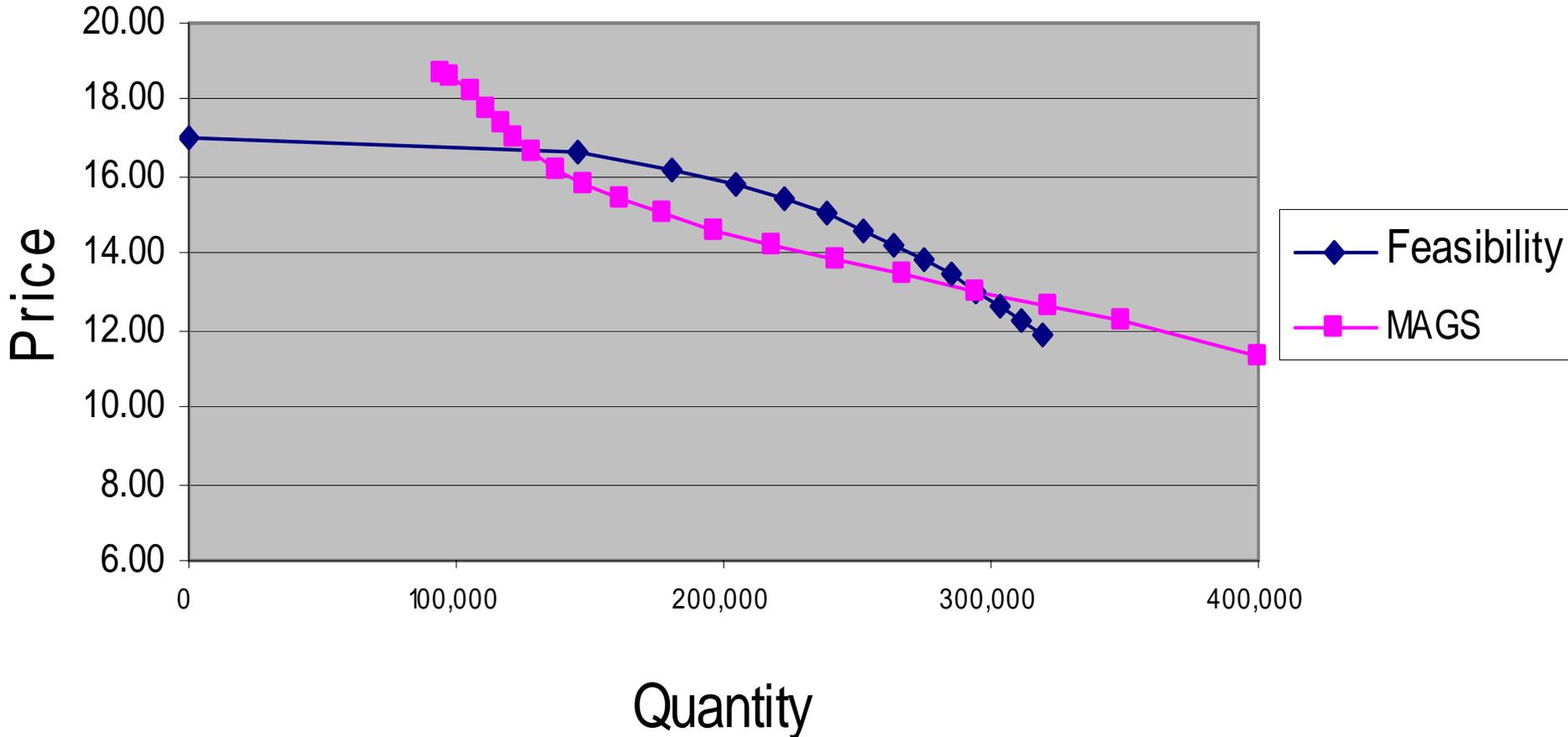
$$y = 0.7257x^4 - 3.3132x^3 + 5.4624x^2 - 4.1964x + 2.3244$$

$$R^2 = 0.9998$$



Demand Function Comparison

Feasibility Specification and Mid America Grain Study
Selected Movement





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Survey Model Execution

- **All model inputs scheduled by March 2007**
 - **Traffic Base**
 - **Traffic Forecasts: Grain**
 - **Traffic Forecasts: Non-Grain**
 - **Transportation Rates**
 - **Water Transportation Demand Functions: Grain**
 - **Water Transportation Demand Functions: Non-Grain**
 - **Lock Performance**

- **Model evaluations performed by June 2007**



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Model Certification

- **Accomplished jointly by NETS and NESP through the Corps' Planning Center of Expertise for Inland Navigation (PCXIN).**
- **Model documentation and other relevant information under preparation for submission to PCXIN.**
- **PCXIN will determine appropriate level of review to address certification.**

SUMMARY OF

FY06 REVISED WORKPLAN

&

1st INCREMENT COST ESTIMATE

FOR

UMRS NAVIGATION AND

ECOSYSTEM SUSTAINABILITY

PROGRAM (NESP)

(5-4-06)

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- 2. Current Program Flowchart (w/1st increment component costs)**
- 3. Navigation Efficiency Component Flowchart**
- 4. Ecosystem Restoration Component Flowchart**
- 5. Baseline Schedule – Navigation Efficiency**
- 6. Baseline Schedule – Ecosystem Restoration**
- 7. 1st Increment Annual Cost Estimate by Component**
 - a. Table showing annual cost estimates**
 - b. Graph showing cumulative annual costs**
 - c. Graph showing component annual costs**

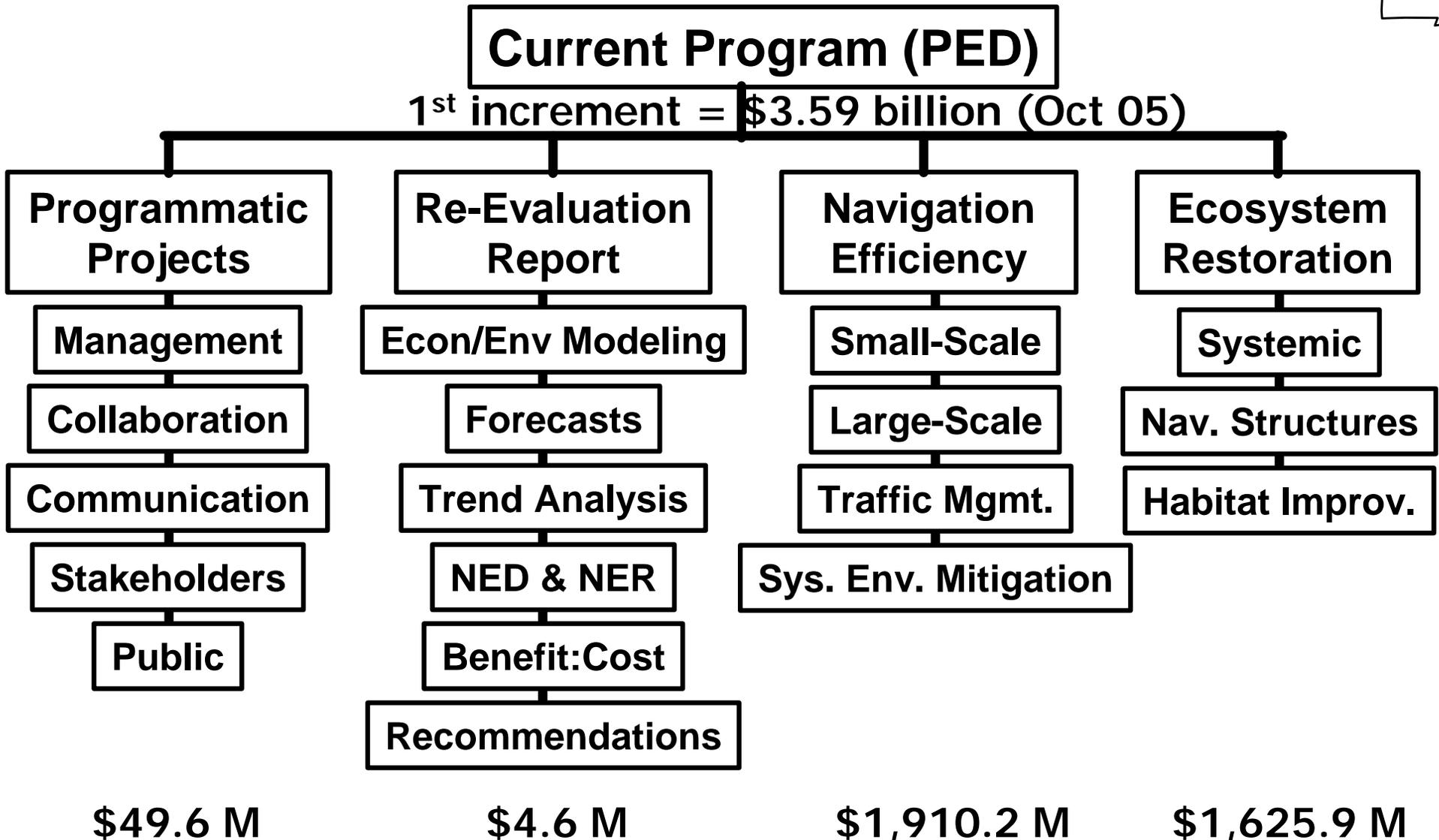
REVISED - FY06 NESP BUDGET ALLOCATION

Last Updated: 5-4-06

Projects Activities	REVISED FY06 PED \$	FEB 10 FY06 PED \$	TOTAL CHANGE
PROGRAMMATIC PROJECTS			
A. Program Management	\$495,000.00	\$725,000.00	-\$230,000.00
B. Institutional Arrangements (PED)	\$62,451.62	\$74,999.93	-\$12,548.31
C. Systemic Public Involvement	\$100,000.00	\$250,000.00	-\$150,000.00
SUBTOTALS	\$657,451.62	\$1,049,999.93	-\$392,548.31
RE-EVALUATION REPORT			
D. Navigation Adaptive Management	\$978,083.14	\$300,000.00	\$678,083.14
SUBTOTALS	\$978,083.14	\$300,000.00	\$678,083.14
NAVIGATION EFFICIENCY PROJECTS			
E. Systemic Env. Mitigation	\$412,136.80	\$335,000.00	\$77,136.80
F. Navigation Appointment Scheduling	\$39,000.00	\$40,000.14	-\$1,000.14
G. Mooring Cells and Buoys	\$66,000.00	\$50,000.00	\$16,000.00
H. Switchboat	\$50,000.00	\$50,000.00	\$0.00
I1. Lock 22	\$1,661,434.74	\$1,674,999.77	-\$13,565.03
I2. Lock 25	\$1,729,859.73	\$1,874,999.90	-\$145,140.17
I3. Lock La Grange	\$95,619.59	\$100,000.30	-\$4,380.71
SUBTOTALS	\$4,054,050.86	\$4,125,000.11	-\$70,949.25
ECOSYSTEM RESTORATION PROJECTS			
J. UMRS Ecosystem Rest. Plan	\$400,000.00	\$400,000.00	\$0.00
K. Ecosystem Adaptive Management	\$1,144,948.75	\$1,152,337.95	-\$7,389.20
L. System Cultural Stewardship	\$205,000.00	\$375,000.00	-\$170,000.00
M. Forest Management	\$148,060.00	\$149,999.60	-\$1,939.60
N. Fleeting Plan	\$75,000.00	\$125,000.00	-\$50,000.00
O. Island Building - Pool 11	\$80,000.00	\$100,000.18	-\$20,000.18
P1. Fish Passage - L&D 26	\$214,323.40	\$234,000.23	-\$19,676.83
P2. Fish Passage - L&D 22	\$591,467.39	\$435,000.00	\$156,467.39
Q2. Floodplain Restoration - Root River, MN	\$38,000.00	\$50,000.00	-\$12,000.00
Q3. Floodplain Restoration - Pierce County, WI	\$18,000.00	\$25,000.00	-\$7,000.00
Q4. Floodplain Restoration - Emiquon West, IL	\$34,999.80	\$34,999.80	\$0.00
R1. Pool Water Level Management - Pool 5	\$167,500.00	\$150,000.00	\$17,500.00
R2. Pool Water Level Management - Pool 9	\$90,000.00	\$114,999.62	-\$24,999.62
R3. Pool Water Level Management - Pool 18	\$118,000.00	\$118,000.00	\$0.00
S. Backwater Restoration - IWW Peoria Reach	\$69,806.00	\$80,000.01	-\$10,194.01
U1. Side Channel Restoration - Buffalo Chute	\$197,187.00	\$208,000.00	-\$10,813.00
U2. Side Channel Restoration - Scheniman Chute	\$0.00	\$10,000.00	-\$10,000.00
V1. Wing Dam/Dike Alteration - Herculaneum	\$176,000.00	\$185,000.00	-\$9,000.00
V2. Wing Dam/Dike Alteration - Pool 2	\$2,662.49	\$2,662.49	\$0.00
W. Island Shoreline Protection	\$83,199.76	\$85,000.29	-\$1,800.53
X. Dam Point Control - L&D 25	\$216,260.00	\$225,000.00	-\$8,740.00
Y. Dam Embankment Lowering - L&D 8	\$125,000.00	\$150,000.00	-\$25,000.00
Z. Reduce Water Level Fluctuation - IWW	\$14,999.79	\$14,999.79	\$0.00
SUBTOTALS	\$4,210,414.38	\$4,424,999.96	-\$214,585.58
TOTALS	\$9,900,000.00	\$9,900,000.00	\$0.00



NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM (NESP)



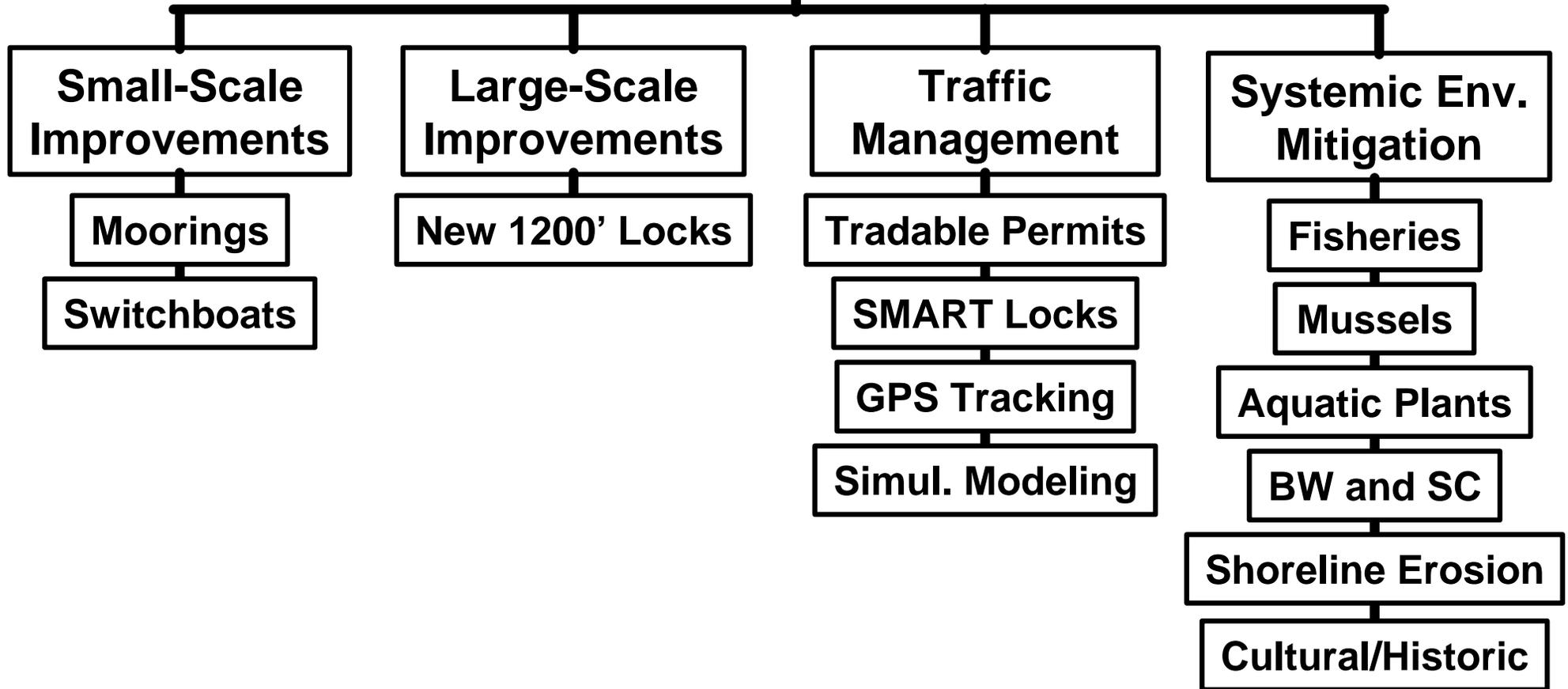


NESP Navigation Efficiency Projects

1st increment = \$1.91 billion (Oct 05)



Navigation Efficiency Projects



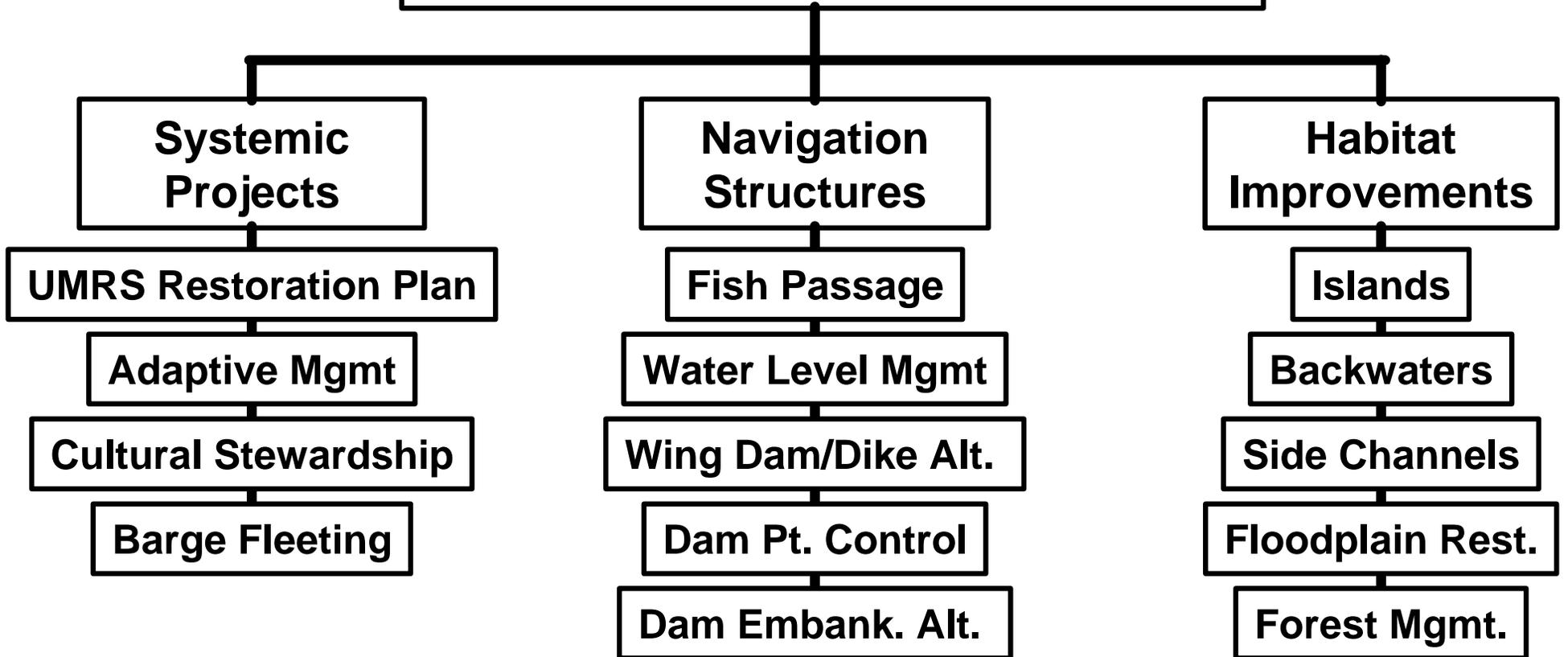


NESP Ecosystem Restoration Projects

1st increment = \$1.63 billion (Oct 05)



Ecosystem Restoration Projects



UMRS Navigation and Ecosystem Sustainability Program (NESP)

BASELINE SCHEDULE - NAVIGATION EFFICIENCY COMPONENT

Last Update: 14 April 2006

ASSUMPTIONS: Program Authorized by end of FY07; FY07 Funding \$10M GI (PED) and \$0 CG (Const.); FY08 and beyond program funded CG to full capability as displayed in attached table dtd 4-4-06.

KEY: - Baseline Schedule on track
 - Baseline Schedule Disrupted
 - Schedule extension due to disruption

BCS - Baseline Construction Start
RCS - Revised Construction Start

Navigation Efficiency Component Management Actions	Schedule for First Increment (FY)																			
	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1) Moorings																				
(a) Locks 14, 18 & 22		BCS	RCS																	
(b) Locks 24 & LGR		BCS	RCS																	
(c) Locks 12 & 20			BCS	RCS																
(2) Switchboats																				
(a) Locks 22 & 25		BCS			RCS															
(b) Locks 21, 24, and 20				BCS			RCS													
(3) New 1200' Locks																				
(a) Locks 22, 25, LGR					BCS			RCS												
(b) Locks 21 & 24								BCS			RCS									
(c) Lock 20 & PEO											BCS			RCS						
(4) Systemic/Site Sp. Env. Mitigation																				
(5) Notification Report (Interim Report)																				
(6) Evaluation Report																				
(7) Revised Programmatic Feasibility Report																				

Systemic/Site Specific Environmental Mitigation - Includes anticipated systemic and site specific projects for fisheries, submersed aquatic plants, bank erosion, ecological monitoring,
Notification Report (Interim Report): Report on development and testing of appt. scheduling system,new spatial economic models, demand elasticity data, monitoring of traffic delays and patterns,domestic and global grain market conditions, land use, crop yield technology, effects of switchboats and moorings.
Evaluation Report: Extension of the Notification Report and include updates on all items listed above in addition to a complete economic re-analysis utilizing update economic models
Revised Programmatic Feasibility Report: Similar in scope to the original 2004 Feasibility Report, completion of this document would occur before end of first increment. Would seek

Reasons for Schedule Disruption: Program Remains Unauthorized, Annual Appropriation levels (FY05-07) significantly less than expressed capability required to meet baseline schedule.

UMRS Navigation and Ecosystem Sustainability Program (NESP)

BASELINE SCHEDULE - ECOSYSTEM RESTORATION COMPONENT

Last Update: 5 May 2006

ASSUMPTIONS: Program Authorized by end of FY07; FY07 Funding \$10M GI (PED) and \$0 CG (Const.); FY08 and beyond program funded CG to full capability as displayed in attached table dtd 4-4-06.

KEY:  - Baseline Schedule on track
 - Baseline Schedule Disrupted
 - Schedule extension due to disruption

BCS - Baseline Construction Start
RCS - Revised Construction Start

Ecosystem Restoration Components	Schedule for First Increment (FY)																							
	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
(1) UMRS Ecosystem Adaptive Management	Green	Yellow																						
(2) UMRS Systemic Forestry Management Plan	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(3) UMRS Cultural Stewardship Plan	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(4) Systemic Barge Fleeting Plan	Green	Yellow	Yellow	Red	Yellow																			
(5) Island Building	Green	Yellow	Yellow	BCS	Yellow																			
(6) Fish Passage	Green	Yellow																						
(a) Lock and Dams 22 & 26	Green	Yellow	Yellow	Yellow	BCS	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Yellow											
(b) Lock and Dams 4 & 8	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red		
(7) Floodplain Restoration	Green	Yellow																						
(a) Phase 1 (12,000 acres)	Green	Yellow	Yellow	BCS	RCS	Yellow	Yellow	Yellow	Red	Yellow														
(b) Phase 2	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	RCS	Yellow	Yellow	Yellow	Red	Yellow								
(c) Phase 3	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	RCS	Yellow	Yellow	Yellow	Red		
(8) Water Level Management	Green	Yellow																						
(a) Phase 1 (Pools 5, 9, 18)	Green	Yellow	Yellow	BCS	RCS	Red	Yellow																	
(b) Phase 2	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	RCS	Red	Yellow														
(c) Phase 3	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	RCS	Red	Yellow											
(d) Phase 4	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	RCS	Red	Yellow	Yellow	Yellow	Yellow		
(9) Dam Point Control	Green	Yellow																						
(a) Lock and Dam 25	Green	Yellow	Yellow	BCS	Yellow																			
(b) Lock and Dam 16	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	BCS	Yellow	Yellow	Yellow	Yellow	RCS	Yellow	Yellow	Yellow	Yellow		
(10) Backwater Restoration (Dredging)	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(11) Side Channel Restoration	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(12) Wing Dam/Dike Alteration	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(13) Shoreline Protection	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(14) Topographic Diversity Restoration	Green	Yellow	Yellow	BCS	RCS	Yellow																		
(15) Dam Embankment Lowering	Green	Yellow	Yellow	BCS	Yellow																			

Reasons for Schedule Disruption: Program Remains Unauthorized, Annual Appropriation levels (FY05-07) significantly less than expressed capability required to meet
Island Building - Schedule slippages also due T&E species (mussels) concerns.
Floodplain Restoration - Schedule slippages also due to delayed decision on cost sharing policy with NGOs.
Dam Point Control - Schedule slippages also due to LERRDs issues.



NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM (NESP)



COST Breakdown for Implementation of 1st Increment

4-May-06

(\$millions)

COMPONENT	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Ecosys. Rest.	4.432	4.060	28.050	39.380	79.501	97.398	68.138	87.397	115.627	133.532
Nav. Eff.	4.940	5.155	19.500	22.932	32.824	47.830	69.163	87.631	144.917	152.953
Programmatic	1.814	0.685	1.500	1.850	2.200	2.600	3.000	3.200	3.400	3.500
TOTALS	11.187	9.900	49.050	64.162	114.525	147.828	140.301	178.228	263.944	289.985

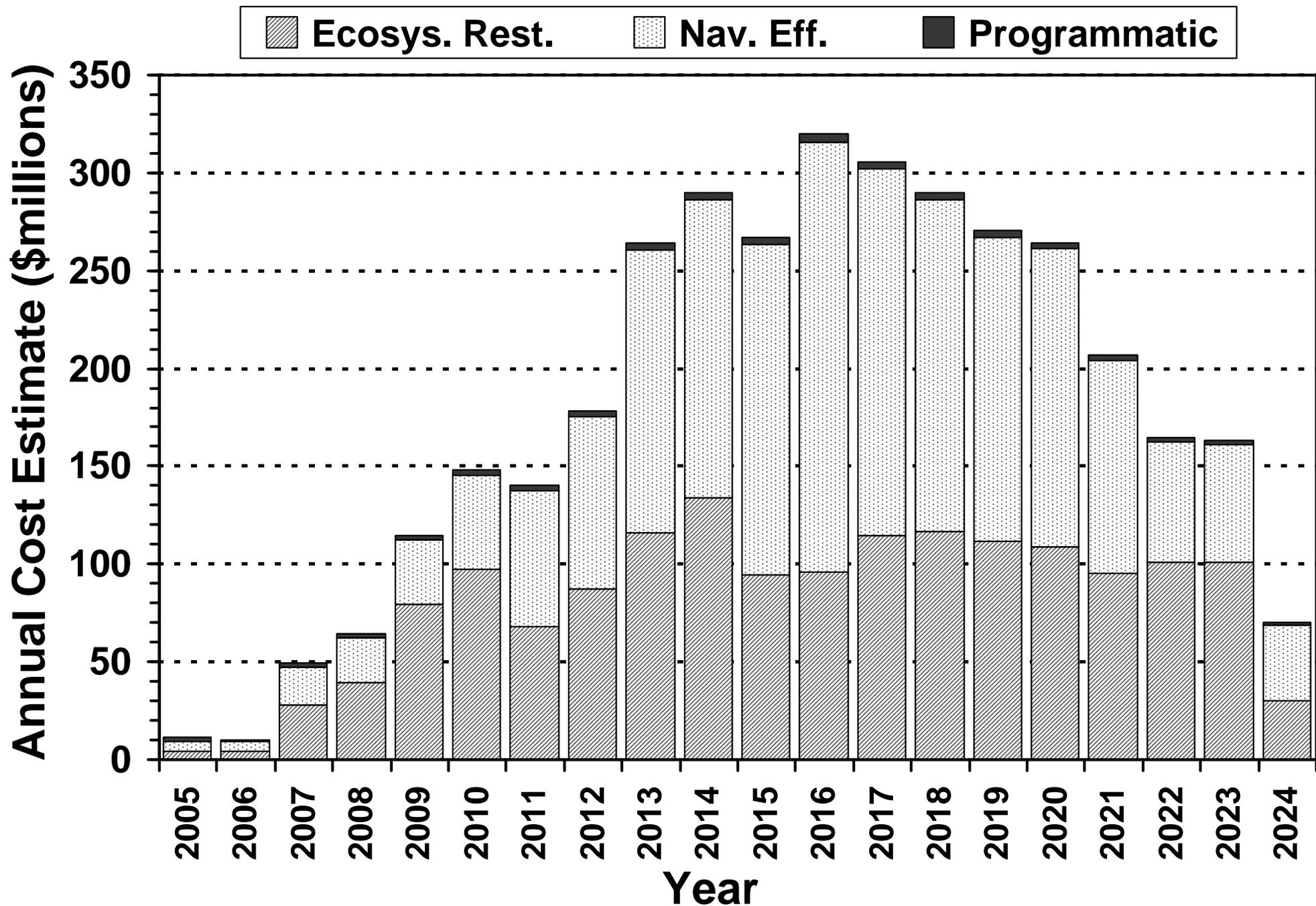
COMPONENT	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Ecosys. Rest.	94.316	95.963	114.457	116.627	111.440	108.617	94.980	100.813	100.880	30.315
Nav. Eff.	168.893	219.882	187.402	169.350	155.534	152.568	108.799	61.547	60.292	38.056
Programmatic	3.800	4.000	3.900	3.700	3.500	3.200	2.900	2.000	2.000	1.500
TOTALS	267.009	319.845	305.759	289.676	270.474	264.385	206.678	164.360	163.171	69.871

COMPONENT	Total
Ecosys. Rest.	1,625.9
Nav. Eff.	1,910.2
Programmatic	54.2
TOTALS	3,590.3

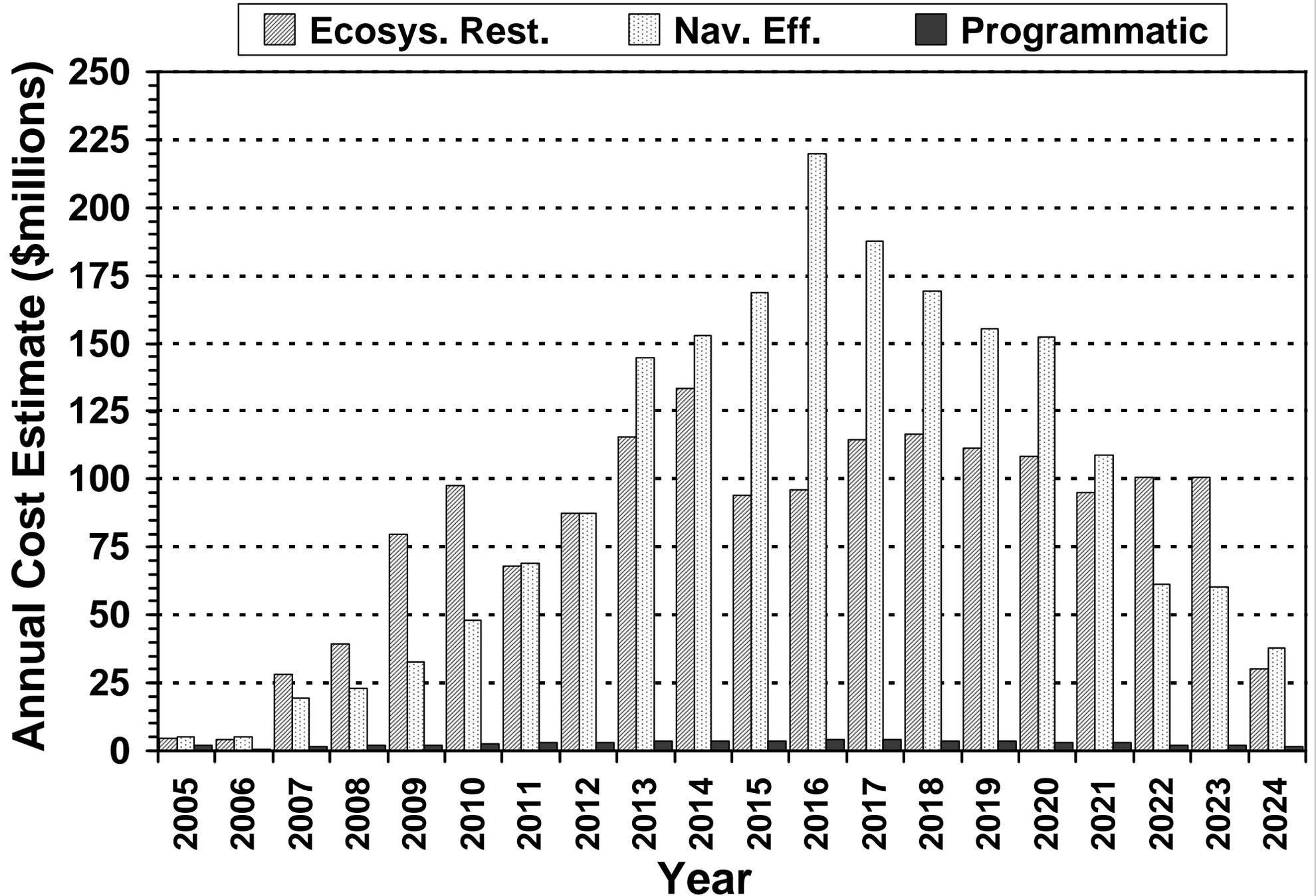
NOTE: All values reflect Oct 2005 Price Levels

One Team: Relevant, Ready, Responsive, Reliable

Annual Cost Estimate for NESP 1st Increment



Annual Cost Estimate for NESP 1st Increment





US Army Corps
of Engineers®

NESP Project J. Ecosystem and Restoration Management Plan



Pool 5 Status

- **Sequencing**
 - Sub-area objectives and plans being developed based on:
 - Pool-scale objectives & criteria
 - Environmental Pool Plans, Cumulative Effects Study, etc.
 - Existing data and information
 - Starting with Weaver Bottoms, then move to other sub-areas
- **Two-dimensional modeling**
 - Model is calibrated and verified and can be used for project design
- **Monitoring**
 - Water level drawdown monitoring in FY05 indicates:
 - Increased flow and sediment transport in main channel
 - No increase in backwater suspended sediment



US Army Corps
of Engineers®

NESP Project J. Ecosystem and Restoration Management Plan



Pool 18 Status

- **Developed initial alternative formulation and evaluation structure for Pool 18**
 - Preliminary sub-area alternatives
 - Initial alternative evaluation structure
- **April PDT meeting (reviewed and discussed)**
 - Pool 18 preliminary recommended plan for WLM
 - Sub-area alternative formulation/evaluation process
- **Currently working with PDT to refine alternatives and evaluation process**
- **Planning future meeting with Pool 18 floodplain interests to refine restoration alternatives in these areas**



US Army Corps
of Engineers®

NESP Project J. Ecosystem and Restoration Management Plan



Harlow Reach Status

(RM 128-164)

- **Fisheries monitoring underway, just completed April sample**
- **Team has collectively identified needs and opportunities for each sub-area**
- **Background GIS complete for each sub-area**
- **Team focused now on sub-area evaluations and rankings**

FISH PASSAGE – Monitoring



Mel Price Lock and Dam Survey 05/25/2005



Lock and Dam 22 Survey 06/30/2005

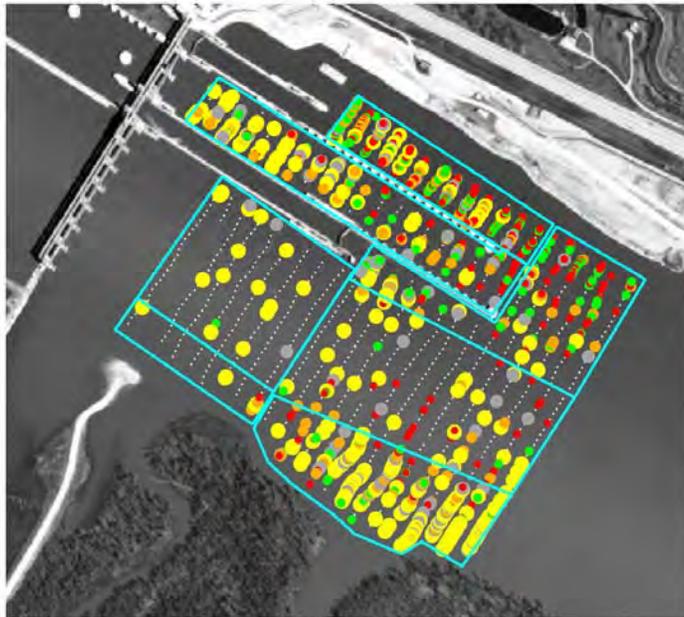
Fish Size (inches)

- < 10
- 10 - 20
- 20 - 30
- 30 - 39
- >= 40

Strata
(for Population Estimate)



100 0 100 Meters



Fish Size (inches)

- < 10
- 10 - 20
- 20 - 30
- 30 - 39
- >= 40

Transects

Strata
(for Population Estimate)



100 0 100 Meters







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







NESP-EMP Strategic Planning

Eleven Issues

✓ *Complete (11-05)*

Future of LTRMP

✓ *Complete (11-05)*

Ecosystem restoration program authority

✓ *Complete (2-06)*

Cost sharing

✓ *Complete (2-06)*

Total price tag

✓ *Complete (2-06)*

Annual vs. total funding authority

✓ *Complete (2-06)*

Funding transfer

✓ *Complete (2-06)*

Partnership provisions

May 06

The role of “advisors”

May 06

Reports to Congress

Table

Comparable progress provisions

Table

Goals and performance measures



NESP-EMP Strategic Planning **Process**

- Steering Committee
- UMRBA, EMP-CC, NECC/ECC Meetings
(Nov 05....Feb 06...May 06)
- Comments to UMRBA representatives or staff
- Consider comprehensive proposal in August 2006



Expedite the Process.....

Senate may take up WRDA in April

What issues pose the biggest problems?

- *Monitoring*
- *Consultation and Funding Agreements*

UMRBA Proposal for WRDA amendment



Monitoring

Problem:

- No monitoring provision in NESP
- LTRMP needs to continue if EMP no longer funded

Solution:

- Add monitoring authority to NESP
- Link it directly to 1986 LTRMP authority
- Authorize \$\$ if not funded through 1986 authority



Consultation and Funding Agreements

Problem:

- NESP does not recognize need for consultation
- NESP has no provisions for interagency agreements

Solution:

- Add provision requiring consultation with Interior and the States
- Add authority for funding transfer agreements with Interior, UMRBA and States



Issue #6 Reporting to Congress & Role of Advisors

The Issue...

- EMP and NESP each have provisions requiring Congressional reporting and advisors
- But the provisions are not identical
- What are the differences? are the two approaches compatible? is one preferred over the other?



EMP Legislative Provisions

Congressional Reporting

Required since the original 1986 authorization

WRDA 99 established six-year reporting cycle, with first report due December 2004

COE must consult with DOI and the States

Reports must

- evaluate HREP and LTRMP components
- describe accomplishments
- update systemic HNA
- identify needed adjustments



EMP Legislative Provisions

Role of Advisors

No advisors in original authorization

99 WRDA requires an “Independent Technical Advisory Committee” (ITAC)

Charge = review projects, monitoring plans, & needs assessments

Size & composition not specified

\$350k/yr authorized FY 99-09 for ITAC



NESP Legislative Provisions

Congressional Reporting

Periodic implementation reports as part of the ecosystem restoration authority

House = 4 year cycle starting June 07

Senate = 5 year cycle starting June 08

Reports must address

- baselines, milestones, goals, & priorities
- progress in meeting the goals

Implicit requirement for a report near the end of the 1st 15 years addressing extension of authority



NESP Legislative Provisions

Role of Advisors

Advisory panel required

Sole charge = provide independent guidance in development of implementation reports

One member from each of the five states, USDA, DOT, USGS, FWS, EPA & affected landowners

Two members each from environmental and agriculture/industry groups

FACA exempt



Options for Reporting to Congress

- A. Retain separate Congressional reporting requirements for NESP's ecosystem restoration component and the EMP
- B. Replace the separate reporting requirements with an integrated approach



Options for Role of Advisors

- D. Don't seek to modify or reconcile the two programs' provisions related to advisory groups
- E. Establish a single advisory panel that would work with both the EMP and NESP
- F. Eliminate one or both of the advisory groups



Considerations

Reporting Schedule—EMP's 6-year cycle less burdensome and better suited to pace of ecological change

Scope of Reports—required content of EMP & NESP reports quite similar

Role of Advisors—ITAC charged with active review; NESP panel provides guidance on reports; do partners have a view on desired role?



Considerations

Composition of Advisors—ITAC not specified, but name suggests members are outsiders; NESP panel composed of agency & stakeholder reps; composition should parallel role

Need for/Redundancy of Advisors—do the advisors add anything to the EMP and NESP's non-mandated policies and practices?

Program Integration—enhanced by combining reporting requirements & having a single advisory group



Considerations

Standing and Credibility—partner efforts to alter reporting or advisor requirements may be viewed with skepticism

Programs' Futures—need to integrate is limited if separate EMP & NESP programs are not maintained over time

20 May 1994

**CHARTER
UPPER MISSISSIPPI RIVER
ILLINOIS WATERWAY NAVIGATION STUDY
ECONOMIC COORDINATING COMMITTEE**

I. The Economic Coordinating Committee will consist of the representatives of the State of Illinois, Iowa, Minnesota, Missouri, and Wisconsin; the Commander of the North Central Division, U.S. Army Corps of Engineers, or his representative; and all parties interested in the economic aspects of the Upper Mississippi River-Illinois Waterway System Navigation Study.

II. All meetings will be open to the public, and scheduled meeting dates and places will be publicly announced.

III. The purpose of the Economic Coordinating Committee will be:

(1) to provide information to all committee participants on economic matters pertaining to the navigation study;

(2) to facilitate efforts by the committee participants to arrive at a consensus regarding items that could be considered in the economic effort; and

(3) to engender a shared set of goals and expectations for the economic portion of the navigation study among all committee participants and the public.

IV. Each meeting will include a period of time for interaction with all interested persons.

V. Meetings will be chaired by a representative of the U.S. Army Corps of Engineers.

VI. The Corps of Engineers will bear the cost of logistical arrangements for the Economic Coordinating Committee. Those participating on the committee will be responsible for their own travel, labor and incidental costs. There will be four Committee meetings annually unless circumstances dictate a need for more or less meetings.

VII. All decision making authority regarding the management of the navigation study will remain under the exclusive jurisdiction of the U.S. Army Corps of Engineers.

10 May 2006

SUBJECT: UMRS NESP – Reevaluation
TO: NECC/ECC Members

- 1) As you know by now the Corps has been directed (by Assistant Secretary of the Army for Civil Works Woodley) to complete an interim report on the reevaluation of the economic feasibility of the navigation improvements recommended in the Chief of Engineers report. The schedule for completion of this interim report is 30 September 2007. The following paragraphs provide some introductory information regarding the scope of the interim report effort and external peer review for your consideration in preparation for discussion at the NECC/ECC meeting next week.
- 2) The “Navigation Science Panel” called out in the email message from COL Gapinski to NECC/ECC (dated 13 Apr 07) will be structured to serve as an external peer review panel that has more independence from the Corps than the Ecosystem Science Panel and will provide technical advice through a review and comment process. In addition, the Corps will contract for specialized expertise from external sources to supplement work by the in-house project delivery team.

Background:

- 3) The Corps recently implemented “external peer review”, the requirements of which are defined in Engineering Circular – EC 1105-2-408, Peer Review of Decision Documents. The following bullets summarize those requirements:
 - a) EC applies to decision documents that require authorization by the U.S. Congress.
 - b) EC applies to scientific information and assessment ... i.e. peer review is focused on technical methodology, data, assumptions, input, etc.
 - c) Policy matters are beyond the scope of peer review.
 - d) Peer review is in addition to Independent Technical Review (i.e. ITR – review performed by a Corps office which has not worked on the study) and policy review.
 - e) Purpose of peer review – conducted to identify, explain, and comment upon assumptions that underlie economic, engineering, and environmental analyses, as well as evaluate the soundness of models and planning methods. Panels may also evaluate whether interpretations of analysis and conclusions based on analysis are reasonable. Panels should be instructed **not** to make a recommendation on whether a particular alternative should be implemented. Panels may offer opinions as to whether there are sufficient analyses upon which to base a recommendation for construction, authorization, or funding.
 - f) Level of independence of panel members increases with project magnitude and risk.
 - g) Peer review should be conducted so as not to cause delays in study completion.
 - h) District responsible for study prepares a Peer Review Plan in coordination with the Navigation Planning Center of Expertise (PCX). The PCX is responsible for accomplishment and quality of ITR and External Peer Review (EPR).

- i) In exceptional cases involving high risk and uncertainty, etc. the Chief of Engineers may direct a PCX to contract both the management and accomplishment of EPR to an outside entity such as the National Academy of Sciences.
- j) PCX shall bar participation of Corps scientists on peer review panels ... although exceptions can be granted.

Following is a recommendation for Peer Review, which will need to be coordinated with the Corps' Navigation Planning Center of Expertise (PCX):

- 4) Assemble a small, responsive external peer review panel, to provide quick turn around response to different products produced by the project delivery team during development of the interim report. This panel would be assembled by the Corps (MVP-MVR-MVS) in collaboration with its partners and approved by the PCX.
 - a) **Membership:** About 5 members with experience and skills among them that are appropriate for review of the items in paragraphs 5, 6 and 7. The Corps will develop selection criteria, solicit for candidates, and select members for the panel that singularly and collectively best meet the selection criteria. The process will be done expeditiously while being as open for review as possible.
 - b) **Focus:** National and regional economic evaluation.
 - c) **Primary products for review:** Project Management Plan; application of NETS products to UMRS; complementary investigations and formulation of alternative future scenarios – see paragraph 6; risk and uncertainty; PDT analysis and evaluation related to NED and RED.
 - d) **Process:** Although called a panel, it will really be a group of individuals who make independent assessments. Members will meet as a panel to discuss their findings and with members of the NECC/ECC before completing their individual assessments. Minutes of the meetings will be taken. All comments will be answered. Administrative and facilitative support will be provided by the Corps, including facilitating meetings, tasking members, taking minutes, and assembling the Peer Review Report for the panel.

Following are preliminary thoughts on general topic areas to be addressed in the interim report:

- 5) Traditional economic analysis and evaluation related to national economic development (NED) using updated NETS products and data.
- 6) Complementary work that goes beyond traditional effort and provides for more complete understanding of the complexity and uncertainty surrounding the forecasting, analysis, and evaluation. Specific areas of investigation will be determined in collaboration with partners (NECC/ECC). Possibilities include - *Understanding strengths and weaknesses of NETS products relative to UMRS; understanding the role of waterways in facilitating U.S. farm policy and international competitiveness and in easing congestion on other modes of transportation; forecasting trends in use of waterways, including its role in transporting non-traditional cargo, such as containers and other uses that have potential to contribute to NED benefits; understanding the impact water transportation has on containing transportation rates for other modes; and understanding the impact of navigation improvements will have on facilitating growth of water transportation dependent industry (regional development).*
- 7) More complete assessment of "regional economic development", including *the impact navigation improvements will have on facilitating growth of water transportation dependent industry.*

- 8) More complete assessment of “other social impacts”.
- 9) Preliminary re-assessment of environmental impacts based on updated traffic forecasts.

It's important to note that the level of study and ability to gather new information will be limited by time and other considerations. Recommendations in the interim report, however, may suggest areas that need further investigations as part of the reevaluation study. As with the effort for the interim report, the level of study and amount of data gathering may need to be restricted for any number of reasons.

I look forward to discussing these topics with you at the NECC/ECC meeting next week.

Chuck Spitzack, PE
Regional Project Manager
UMRS Navigation & Ecosystem Sustainability Program