

Appendix A

Planning Models Improvement Program Task Force Meeting # 1 – NOTES

Day 1

The following notes are an attempt to represent the activities of the first Planning Models Improvement Program (PMIP) Task Force Meeting. Included at the end of the meeting notes, is a Memorandum of the Meeting, a List of Participants and the Meeting Agenda.

Welcome and Introductions went well. The Task Force consisted of a representative from each Division (mostly District personnel) plus the co-chairs from NWD and IWR.

Purpose/Charge/Objective: Wagner/Orth/Kitch: A pre-meeting survey conducted via E-mail yielded the following results:

We heard nothing about, what's a planning model, or about an Inventory or survey of models.

Concerns were expressed for a Framework for organizing models, by project type – navigation, ecosystem restoration, flood damage reduction, multipurpose, etc. and national vs. local/regional scales.

We did hear about:

- Mandatory/discretionary/information for models, mostly NOT mandatory and if we make models mandatory, is that a good thing?
- Peer Review of Models. Peer review teams should be interdisciplinary. Allow enough time and funds for review, and determine who will conduct and or be responsible for the reviews?
- Prioritizing modeling needs. Suggestions included Trade-off analysis, NED-NER trade-off analysis, Watershed and basin wide models, Evaluation ecosystem restoration plans and Leveraging model development – PA Program and Masters Program.
- We heard the most about Criteria for a good model. Models should be state of the art, based on a centralized interactive database – maintained centrally. Should be intuitive to use and provide true representation; realistic. Based on good theory and built to minimize human error. Should be transportable, maintained, documented, flexible, easy to use and make the user think better.
- Do we need to improve models or processes? How often will these models be used? Do we have enough projects being studied to make model use worthwhile?

Based on these responses, the following charge was made:

1. Review Process – beyond “peer review”

Meat-grinder: in goes a model, out comes a judgment – yes, yes if modified, no
If yes – can use the model nationwide without questioning the tool
Need regional, maybe even local district meat-grinders (reviewers)

Reviewers: Independent – outside Corps
Internal – will it work in the Corps

Review questions: Science Validity – good science – PANEL APPROACH
Performance – documentation, easy to use, inexpensive, transportable, et al.
Policy – do we really want to use it? Legal constraints

2. Toolbox/Library/Catalog/Collection of models

Models should be consistent for national application
From office to office
From user to user
From study to study
Over time

Models should meet quality standards for:
Documented with instructions
Has training
Adaptable to local conditions
Data – not too much, not too expensive
Easy to use
Transparent – can see and understand
Results are documented and clear

3. Modeling needs

Trade-off analysis
Monetary valuation
Plan formulation
Public involvement

Invited speakers:

What is a successful Task Force? Dunning:

- Capability problem, need corporate commitment, sense of urgency, 6 months to complete.
- Committed co-chairs – full time job that was added to their regular job

- Knowledgeable and motivated team members
- Face time is precious – do advance work
- Meet in nice locations
- Strategize how to tell story, anticipate criticisms “yes-but...”
- Visual recording, brainstorming
- Steering committee – early reality check
- Co-chairs write report with follow-on briefings after report is done

What makes a good model? Nolton

- Corps examples of good models – HEC Models
- How are models supported (funded)?
- Model maintenance program
 - Subscription service
 - Cottage industry for support
- Future model maintenance

Jim Smyth perspective

- Flexibility – do a good job with this program – “PLEASE” on bended knee!
- Consistency over geography/organization
- Planning models are a little more nebulous due to prediction needs, etc.
- Model outcomes > large sums of money potentially depend on these outcomes
- Broad application, consistency, ease-of-use, believable results, credibility, supportability, durability over time
- Technical soundness, transparency > no more black boxes; people that do the modeling must be able to explain them
- Credibility > peer review, many definitions, etc, perception of objectivity in review
- Models must account for increased transition/turnover in the organization
- Believability...do the results make sense?
- Questions: OMB – contractor models JS thinks contractor models become ours when used
- JS feels in today’s world, review should be outside of Corps
- Communication, or ability of our folks to communicate the workings of a model; outside review.

MG Griffin:

- Counting on you to steer the future.
- Home-grown models don’t get it.
- Need collaborative process
- Planning models:
 - National and regional levels – in and outside the Corps
 - Professionally defendable
 - Certification, validated
- Where do we draw the line?
- Retain national respect

- Give us the “**Light Saber**”
- “**We’re ‘gonna’ do what you say.**”

Brainstorming

- Daily summaries
- Higher-up perspective, but, from dist perspective, need flexibility, cost effectiveness – balance those views with what we’ve heard already
- Centers of expertise, communities of practice, etc.
- Internet makes world smaller > cataloging, POCs, etc.
- Periodic, outside review, because all studies are different
- Capture lessons learned from previous and other related TF’s; internal to Corps
- “All models are wrong, but some are useful” (George Box)
- Tendency @ districts to downplay the limitations
- Different levels of validation for different models
- Using limitations 2 ways – flaws and data limits
- State limitations up front
- Maybe involve critics sooner in the process
- A round table is what folks say we need to leave this meeting with: focus organization in a certain direction in charge of future of the Corps
- Report, but not for reports’ sake
- How are we going to do this, what is the timeline?
- PMP
- Framework or process
- Business process model
- Task list and responsible parties
- Flow chart/process for choosing models
- Agreement that this was a useful meeting; agreement on the fundamentals
- Which models to focus on and validation or peer review framework
- Process > future meetings, when to engage stakeholders, homework, taskers
- Potential threats – apathy or antipathy
- SOW what will we/or not deal with
- Objectives, and focus on what we can accomplish, plan of action
- Task oriented
- Clearly defined problem statement
- Conceptual framework

Outline for final report

What will mean success of the first meeting?

- Charge – We is the future of the Corps
- Define report
- How are we gonna do it? Time line
- PMP 7 or 8 times mentioned
- Process – what to consider in developing models

- Model for each step or purpose?
- List of tasks and responsible parties
- Process for choosing models, framework
- Something that we can agree upon
- Which models to concentrate on
- Review Framework
- Meetings, products, stakeholder involvement
- Potential threats to this process
- Define scope - what will/will not deal with
- Layout objectives – what can we do
- Task orientation
- Carefully developed problem statement
- Conceptual framework for study
- Outline for final report

NAS Study J. Jacobs NAS/NRC/WSTB

- Few models are recognized or used nationwide
- Studies conducted by volunteer expert committees
- NAS established in 1863, NRC is an operating arm of the NAS; NRC est. in 1916, NRC staff 1200-1400 people. The National Academies
- NAS has no Federal budget, they are not a Federal agency. This gives them more credibility and independence – They have their own internal review process > Report Review Committee, all studies externally reviewed
- New Directions in Water Resources Planning for USACE (1999) a critical look at the Corps Planning Process > Report Review Committee, all studies externally reviewed
- Cites FDR Risk Analysis Report, UMR-IWW study report (UMR, model structure actually quite good, but data inputs bad) current review of UMR will produce report next summer.
- Mo River Ecosystem Study; Review Procedures for Water Res. Project Planning (peer review) COE would make call on what is controversial, expensive, complex and thus should be reviewed; NRC would need a concise summary document rather than volumes of documents
- S 216 studies: peer review, project planning and methods, adaptive management, river basin/coastal system planning, coordinating committee for the four panels
- Draft reports not for public release until RRC approves, but, some key topics from the 216 studies:
 - Corps will do less construction, more management of existing infrastructure
 - Are Corps project outcomes being evaluated?
 - 100K/year perhaps inadequate for recon studies
 - heavy reliance on B/C analysis may need reconsideration
 - clear statement of fixed planning objectives, assumptions, etc. transparency

- COE maybe has more problem with criticism of its institutional rigidity vs. loss of intuitional knowledge
- Jess will provide their internal review protocol
- Harry: from clients point of view...we had no contact with the group once they began their process of selecting a panel – Corps had no influence except panel as is, for most part, NRC process does not allow us to get involved – influence
- Has heard groans from COW over members, but tries to get a balance
- Model review – may need to consider specific circumstances and technical requirements – limited in ability to turn things around quickly
- Harry: a good kernel of advice for the TF? COE doing good things...how do we do better forecasting?
- Harry: \$\$ in 04 budget to do ex-post reviews, but may not pas congress, even though it has OMB support
- Centers of expertise: status...8MSCs, 9 different proposals, chief says go – then may be another creation at a higher level, eventually...

(NETS) Navigation Economic Technologies: Hofseth

- Ease of use, transportability, transparency
- NETS part of PMIP – establish/develop peer reviewed models, develop techniques for estimating model inputs; develop body of knowledge from which to judge credibility of future study efforts
- Why? Need improved models, structure, inputs, use
- FRG includes Wes Wilson, U of Oregon, will be an IPA at IWR soon, plus Bruce Carlson, in addition to main FRG, plus many others, several known scientists
- NETS symposium May 9-10: set agenda for priorities under NETS; focus on inland, but not forgetting deep draft (major issue on latter is multi-port analysis)
- NETS a funded R&D program
- ITR process: did the study use a peer-reviewed model? Were inputs collected/estimated using peer-reviewed techniques? Were the correct tools used correctly?
- Summary: develop peer review process for navigation models; develop peer-reviewed techniques for estimating – collecting data.
- Develop models separately or as part of studies
- Pre-workshop: Carlson buzz phase corporate consistency with regional flexibility

Summary way ahead thoughts

- Dennis: good foundation being laid today for specific topic discussions
- Harry: ideally, in Sept. we have a report that he can take around GAO bldg. And have people anxious to vide \$ to use.

What's a planning model – Group Discussion # 1

- Keith feels we cold never answer
- Forecasting/back casting
- Real world
- Planning process; inform decision-making process

- To meet specific purposes required by regulations and guidelines
- How do we identify which models to include
- Spreadsheets to formal models
- Universe of models > criteria for selection
- Lots of discussion: count successes, how do we transform homegrown models; look at all models
- Ken: what skill sets use models
- Habitat models included? Yes
- Navigation models
- Abstraction of reality; that helps us make a decision
- Classification of models:
 - Homegrown
 - Developing/proven
 - Proven

Task Force Meeting # 1 – NOTES

Day – 2

What's a planning model?

- Must reflect real world
- What kinds of things do we consider
- Business process
- Inform the decision-making process
- To meet specific purpose – defined in regulation or guidance
- How do we identify which models to include from spreadsheets to formal models like computer software
- Model must be capable of receiving data/inputs in various formats and make use of that information – to inform the decision making process
- Need a catalog of models keyed to purposes
- Physical models – planning models
- Any model used in the planning process
- ID small homegrown spreadsheets
- Planning models are used by plan formulators, scientists, economist...
- Ecosystem models – HEP, HGM
- Navigation models – NAVSYM, HarborSym

Classifications of models

- Homegrown – spreadsheets
- Developing – proven
- Proven
- Clear, consistent ways to present results
- Contribute to decision making
- Explainable, understand limitations (peers, hill, stakeholders, sponsors, critics)

- Able to be validated, both theory and computationally correct calibrated to use at hand
- Reliable and defensible reflect reality, user friendly
- Has training and support
- How much does it cost
- How well does it communicate
- Not always easy to use
- Trade-offs: for example: easy vs. reflects complexity, reliable vs. flexible, cost vs validity
- How often does the user use the model
- Documentation – user’s manual
- National recognition
- Professionally dependable
- Available data
- Training on the job training.

Models are typically decided in the first week of a study

Homegrown models need to be validated

We have models for:

- Benefits
- Costs
- Mitigation

EXAMPLE:	Car	Model	National Certification
	Gas	Data Assumptions	ITR
	Driver	Planners	Training

Criteria for a good model

- Transparency – can see inside, explainable
- Portability
- Ease of use – users quickly up to speed
- Computationally correct
- Theoretically correct
- Is it the best tool available
- Model inputs
- Which models should be reviewed?

A model should be:

- Capable of receiving esoteric inputs and provide information to the decision making process Raw Data > Something useful
- Robust not so limited – works in the tails
- Works – gets the job done
- Accurate depiction of future reality using appropriate variables

- Transparent – no black box
- User can manipulate – flexible – not dependent on 1 person
- Can be used on any computer system – updatable/gradable
- Technically sound foundation – not based on expert opinion – can point to data used to construct
- Produce a range of outputs that can be replicable
- Should reflect basic principles & theory – Making errors in theory, etc. before
Theory $\leftarrow\text{---}\rightarrow$ Reality
- Consistency among models – common delivery framework
- Corporate consistency – regional flexibility
- Need clear and consistent way of presenting results
- Needs to contribute to decision making process
- Need well defined assumptions – explainable to whom ever needs to know
- Needs to be able to be validated/calibrated
- Reliable/defendable, user friendly
- Need training/documentation – user friendly technical support
- How much does it cost
- How well does the model communicate outputs
- Good models are not always easy to use
- Trade-offs: easy vs. results – complexity
- Reliable vs. flexible
- Cost vs. validity
- How often does the user use the model
- Documentation – users manual
- National recognition
- Professional defendable
- Available data
- Criteria for a model user
- Criteria for the “gas” – data, assumptions, theory

FRAMEWORKS

Analytical tools and models

Jim Fredericks – Sort model needs by mission area

- Ecosystem restoration
- FDR-Coastal Storm Damage
- Navigation
- Hydropower
- Watershed
- Water Supply
- Recreation

Negative common things left out – e.g., interest rate

Linda – Planning (PDT) Function

- Plan formulation
- Environmental
- Economic
- Engineering
- Cost
- Social impact/cultural/historical
- Public Involvement
- Real Estate
- Legal
- Regulatory

Dan – Planning Steps

- Problems & Opportunities
- Forecasting
- Formulation
- Evaluation
- Comparison
- Selection

Dennis – Phase of Planning (Timing)

- Large (Recon-Feasibility-PED)
- Large GI (Geographic Complexity, Space/Complexity)

Watershed/Traditional GI/CAP

National Model -> Home Grown

- Geographic
- Timing
- Budget
- Level of detail
- Level of certification

Geographic Scale: Watershed/GI/CAP

Model “STATUS”

Homegrown – is/can it be certified?

Can R&D community help with further development by ensuring that it includes criteria for a GOOD model

Model types:

- Statistical
- Empirical
- Static/dynamic

EIS Matrix Tool

Define all the information needed to develop a report – where does that information come from, how do we get it?

User ratings

MANDATORY

- Must
- Should
- Have you considered
- Please
- Whatever

What's the spectrum?

OPEN DISCUSSION

- Sponsor, external, contractor off-the-shelf models
- If we use it – who defends it?
- What are the weak links in models?
- Court cases as tests of models?
- At some point, we have to trust someone – DRI, Delft
- Is there an industry standard for validating models?

Fundamental Questions on Peer Review

- Could we do non-peer review?
 - Academic/local sponsor
- To what degree of independence do we need?
- How do we define independence?
- Who selects reviewers?
- Team vs. individual review
- Should we pay for review?
- Should review be iterative?
- How would the “centers of Expertise” play in review?
- Physical reviewers vs. virtual reviewers
- How do we resolve conflicting opinion?
- Which models need to be peer reviewed?
- How do we define peer review?
- How to include sponsor, contractor models?
- What kind of framework would review panels need?
- Qualification criteria for reviewers
- What's exempt?
- What components would be subject to review?
- Role of outsider reviewers
- What's already “certified”? Delft?
- Does the model fit the study at hand? Strength/weaknesses of model. Interface with a study.

- When to peer review
- Does P.R. give us assessment of appropriate applications and limitations?
- National P.R. vs. local/regional P.R.
- What's demand for P.R.?

What would be a good administrative scheme?

- How to select reviewers?
- Do reviewers have veto power?
- Use existing resources/structure?
- Tried & proven
- 2-step reviews In-house before external
- Create corps wide expert panel Corps "board" of model review
- Where does funding come from?
- Don't reinvent wheel NAS & industry standards EPA
- Done at IWR as a pass thru like NAS (national models)
- Include users in P.R.
- What's the cut-off for things that fall below P.R.
- Effort that goes into O&M
- Who follows this process?

Key requirements / are there better tools?

- Who should use the model?
- Criteria for a good model?
- Theoretical/scientific validity
- Does it work?
- How might it be improved?
- Can results be replicated?
- Description of user audience
- Does the model do what it's supposed to do?
- Is documentation adequate?
- Is train & support available?
- Need flow chart/check list of criteria for a "GOOD" model.
- Theory correct?
- Reviewers should be able to replicate results
- Review with reasonable cost and schedule – timely.

Survey of Planning Models

- Acceptable
- Efficient
- Effective
- Complete

Why do a survey?

- Define the number of models in use

- Define redundancies

Should we conduct a survey? YES

How should the survey go to the field?

- Under cover letter from DCW to MSC's DEs

What models?

- Formulas, spreadsheets, software
- Ask for models by business area

Phased survey

- How many models/how often used

Models that could be reviewed thru ITR vs. those that can't.

The survey should state:

- Objective of the PMIP
- Objective of the survey

What will we do with the responses?

Process to review, improve, validate models used to make decisions (T.F. purpose)

Model QA/QC.

- Survey purposes
 - Redundancies
 - Areas with gaps

What studies are ongoing, headed towards, PMP – what models are needed?

REASONS TO DO SURVEY!

(Model amnesty program!)

- Inventory
 - Gaps
 - Redundancies
 - FY04 905(b)s

What would help districts most?

- Coastal storm damage/erosion
- Ecosystem restoration
- Trade-off analysis
- HEC-FDA
- Interest during construction
- Problems with navigation studies
- When do we anticipate problems?
- Navigation studies need spreadsheets for analysis – no models

Identify current/viable models

- What are their characteristics
- What is the process to “pin the rose on a model?”
- Validation/certification/underwriters lab
- Priorities based on problems
- Validation & documentation

Categories of problems: Challenge to the group – Define this evening

LIST OF PROBLEMS

LIST OF RECOMMENDATIONS FOR THE REPORT

Task Force Meeting #1

Day – 3

Day 3 started with a brief summary of the previous 2 days of the meeting. There was a very pointed statement made to lead the discussion:

WE NEED A COMPLETED REPORT TO THE DIRECTOR OF CIVIL WORKS BY THE END OF SEPTEMBER 2003!

The summary proceeded with a re-statement of the problems and an attempt to prioritize the problems by the group.

PROBLEMS

Not certain of the extent of the modeling problem

Models need appropriate users – not everyone can run a model

Most users don't (can't understand) look at model outputs

Project-R-Us

Validation/poor review of models

Transparency

Perceived low credibility of analysis

Models used without soundness (review) check

Need for ecosystem restoration tools

Haphazard approach to developing models

Difficulty in communicating results

Trust and acceptability, communications

Lack of understanding of theoretical basis for computations

Large-scale models are non-national

Disillusion (dissolution) of project review

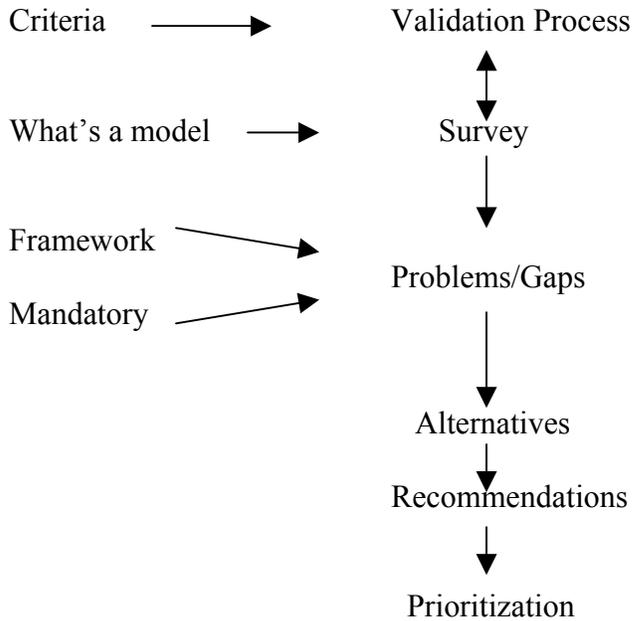
Not enough attention to model inputs

Inadequate commitment of study team to technical issues. PMP Projects-R-Us

Lack of funding to address problems
 Lack of priority to address problems
 Small problems don't fit large models
 Tools for 200 Section 205 projects
 Ethical problems – training
 Push on schedule, costs, not results
 Focus on customer – advocate
 HEC developed national H&H models
 Don't have similar center/funding for economics, environmental
 Study time spent developing models vs. time spent running models
 Models should be developed outside the study
 Educate PM and PDT on planning model issues
 Manage models better
 Establish a certification/validation process
 Identify future “essence” models – large models
 Centers of Expertise for models
 Earmark funding Implementation Plan
 Identify weak links in models - assumptions
 Meet MG Griffin/J.S. expectations: process to assure Corps has and correctly applies models
 Define a suite of models for each business function
 Written documentation, help desk
 Leverage QA/QC, Centers of Expertise
 Maintain and develop fewer models
 Identify areas where models don't exist (Gap Analysis)
 Communication Plan for Model Review Process and models for large studies
 Criteria for a good model
 Survey of what's in use
 Annual Survey of future model needs (905(b) new starts - WRDAs)

Topics for the Report and Team Members

1. What's a Planning Model? Where do they come from? (Nolton/Carlson)
2. Criteria for a good model Use of models (drivers license) (Laird/Hubbard)
3. Framework (Hihara-Endo)
4. Mandatory (Fredericks)
5. Review/Validation (Hofseth/Wilbanks/Fristik)
6. Current use and Future Model Needs – Prioritizing Survey (Moser/Sulzer/Peterson/Appell/Durden/other TF members)
7. Main Report – Problems/Recommendations/Where do models come from. (Orth/Wagner/Kitch/Moser)



Schedule to Complete

23 May – 1st Draft Paper to IWR (Nolton) – from each group

30 May – Comments due back to the groups

11 June – Responses due to all

17-19 June Task Force Meeting #2 (Alexandria, VA)

- Survey
- Comments
- Other agencies/parties invited

19-21 August - Task Force Meeting #3 (Alexandria, VA)

Table of Contents

Review Process
 Problem Description
 Models in the Decision/Planning Process
 Assessing the Status of Corps Planning Models
 Opportunities
 Inventory and Status of Models
 Validation/Certification Process
 Model Criteria
 Conclusions and Recommendations
 List of Models to put into the process
 Future Model Needs

Integration with QA/QC, Centers of Expertise
Model Usage Requirements (Drivers License)
Purpose of Report
Assumptions about models
Database of attributes
Communication/Tech Transfer Plan
Presently accepted models
Audience
Communication Plan
Brochures

Stakeholders

Districts/MSD/HQ-PAO/R&D
ASA/CEQ/OMB/Congressional Committees
Waterways Users Board, EAB
Academics/Critics/Professional Societies/NGO's/Sponsors
National Academy of Sciences/Federal Agencies

MEMORANDUM FOR RECORD

SUBJECT: Planning Models Improvement Program Task Force Meeting 15-17 April 2003, Alexandria, VA.

1. The subject meeting took place at the Radisson Hotel, Alexandria, VA. Featured speakers on day one were Mr. Jim Smyth, OASA(CW), MG Griffin (DCW) and Mr. Jeffrey Jacobs, from the National Academy of Sciences.

a. Mr. Smyth greeted the group by stressing the importance of our mission and issuing a plea, on bended knee, PLEASE do a good job. Major points were:

- Models help make decisions about potentially large sums of money
- Need technical soundness and transparency (NO more black boxes)
- The Corps needs Credibility, must ensure peer review of models/procedures
- Models must be believable

b. MG Griffin seconded Mr. Smyth's comments and issued his endorsement by stating:

- 'I'm counting on you to steer the future of the Corps. Do a good job, because we're going to do what **you** say.'
- The Corps needs credibility. "Home-grown models don't get it."
- We need professionally defensible models.
- We need certification and validation of our models.
- We need a collaborative process.
- MG Griffin referred to this task force as the instrument to create the "Light Saber" to lead the Corps into the future.

c. Mr. Jacobs discussed the role of the National Academy of Sciences in reviewing Corps studies. He stressed the need for the NAS studies to be independent and objective and he suggested that major Corps models should undergo similar independent and objective peer review before being adopted and used Corps wide. Mr. Jacobs expressed his appreciation for being invited to participate in the meeting and he was appreciative of the Corps for taking this initiative to bring conformity to planning models.

2. After several other presentations, the task force settled on the business of the meeting by focusing on seven discussion topics:

- What's a Planning Model?
- Criteria for a Good Model
- Framework for Organizing Models
- Mandatory/Discretionary/Information for Models
- Peer Review of Models
- Inventory (Survey of Models)
- Prioritizing Modeling Needs

A lot of good discussion took place, which led to the formation of focus groups within the field task force with support from IWR staff to address the defined topics above.

3. Products & Schedule:

- 24 May Draft Paper from each working group.
- 30 May Comments due to groups
- 11 June Responses to comments
- 17-19 June Task Force Meeting # 2 (Alex. VA)
- 19-21 August Task Force Meeting #3 (Location TBD)
- 30 September 2003 Final report to DCW

Darrell Nolton

Enclosures:

TF Meeting Notes (Combined)

Meeting Agenda

List of Participants

Planning Models Improvement Program

Task Force Meeting # 1

Dennis Wagner, Northwestern Division, Co-Chair

Ken Orth, Institute for Water Resources, Co-Chair

Gloria Appell, Galveston District

Jim Fredericks, Northwestern Division

Linda Hihara-Endo, Pacific Ocean Division

Mitchell Laird, Louisville District

Dan Sulzer, Los Angeles District

Rayford Wilbanks, Mississippi Valley Division

William Hubbard, New England District (Did not attend)

Harry Kitch, Headquarters – Planning Guidance

Bruce Carlson, HQ, Planning Guidance

Darrell Nolton, IWR

Susan Durden, IWR

Richard Fristik, IWR

Keith Hofseth, IWR

Shana Heisey, IWR

David Moser, IWR

Joy Muncy, IWR

Dave Mathis, HQ, R&D

MEETING AGENDA
 PLANNING MODELS IMPROVEMENT PROGRAM TASK FORCE
 Radisson Hotel, Old Town Alexandria
 901 N. Fairfax Street, Alexandria, VA
 15-17 APRIL 2003
 ALEXANDRIA, VIRGINIA

Tuesday 15 April 2003

<u>Time</u>	<u>Topic</u>	<u>Speaker/Facilitator</u>
0800-0830	Welcome & Introductions	Orth
0830-0900	Purpose/Charge/Objective	Wagner/Orth/Kitch
0900-0915	What is a successful task force? Hire/Train/Retain (HTR) Task Force	Dunning
0915-0930	BREAK	
0930-1000	Director of Civil Works	MG Griffin
1000-1030	Assistant Secretary of the Army for CW Comments	Smyth
1030-1045	BREAK	
1045-1145	Brainstorming Session – Facilitated Issues/Problems/Opportunities/Ideas/Questions	Orth
1145-1300	LUNCH	
1300-1315	Model Maintenance	Nolton
1315-1400	National Academy of Sciences Sec. 216 Study Perspectives on Corps models	Jacobs
1400-1415	BREAK	
1415-1445	Navigation Economics Technologies (NETS) Development and Validation	Moser/Hofseth
1445-1515	Summary – The Way Ahead	Wagner/Orth/Kitch
1515-1530	BREAK	
1530-1630	Group Discussion # 1: What's A Planning Model	Nolton/All

NOTE: Each numbered group discussion will consist of:

- Opening presentation by facilitator (10 minutes)
- Group discussion and/or exercise (40 minutes)
- Summary of results (conclusions, decisions, etc. (10 minutes)

Wednesday 16 April 2003

<u>Time</u>	<u>Topic</u>	<u>Speaker/Facilitator</u>
0800-0815	Review of Yesterday	
0815-0915	Group Discussion # 2: “Criteria for a Good Model”	Hofseth/All
0915-1015	Group Discussion # 3: “Framework for Organizing Models”	Carlson/All
1015-1030	BREAK	
1030-1130	Group Discussion # 4: “Mandatory/Discretionary/Information for Models.”	Kitch/All
1130-1200	Group Discussion “ OPEN ”	ALL
1200-1300	LUNCH	
1300-1400	Group Discussion # 5: “Peer Review of Models”	Fristik/All
1400-1415	BREAK	
1415-1515	Group Discussion # 6: “Inventory (Survey of Models)”	Durden/All
1515-1530	BREAK	
1530-1630	Group Discussion # 7: “Prioritizing Modeling Needs”	Wagner/All
1630-1700	Group Discussion “ OPEN ”	ALL

Thursday 17 April 2003

<u>Time</u>	<u>Topic</u>	<u>Speaker/Facilitator</u>
0800-0900	Summarize Proceedings	Wagner/Orth/Kitch
0900-0915	BREAK	
0915-1530	Defining Products: w/Breaks Report Outline Tasks/Assignments/Schedules/Costs/ Future Meetings (E-mail, Phone Calls)/ How to measure success?	Carlson/Nolton
1530-1600	Conclusion	Wagner/Orth/Kitch