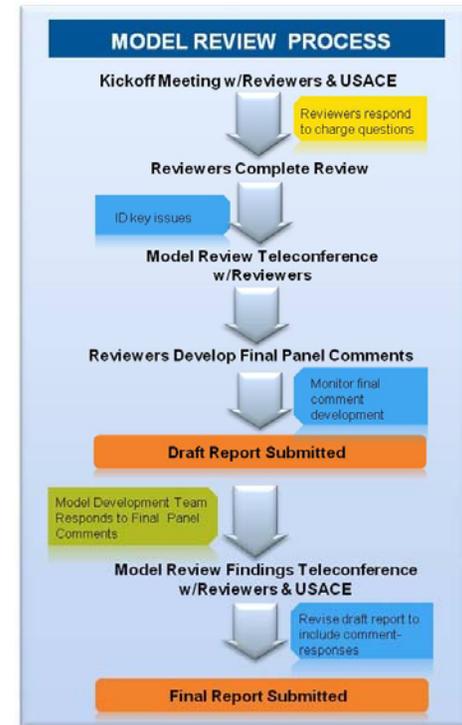


USACE Planning Model Quality Assurance Review Process Lessons Learned from the Contractor Perspective

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Key to Graphic Colors:

Reviewer Activity	Contractor Activity
USACE Activity	Deliverable

Overview

- Objective and Purpose
- External Review Process Overview
- Lessons Learned

Objective and Purpose

- The USACE Planning Models Improvement Program (PMIP) was established in 2003 to assess the state of planning models in the Corps and to make recommendations to assure that high-quality methods and tools are available to enable informed decisions on investments in the Nation's water resources infrastructure and natural environment.
- The main objective of the PMIP is to carry out a process to review, improve, and validate analytical tools and models for USACE Civil Works business programs.
- The purpose of a review is to evaluate the technical quality, system quality, and usability of planning models and methods in accordance with:
 - Engineer Circular (EC) 1105-2-412, *Assuring Quality of Planning Models* (31 March 2011)
 - *Protocols for Certification of Planning Models* (EC 1105-2-412 Attachment)

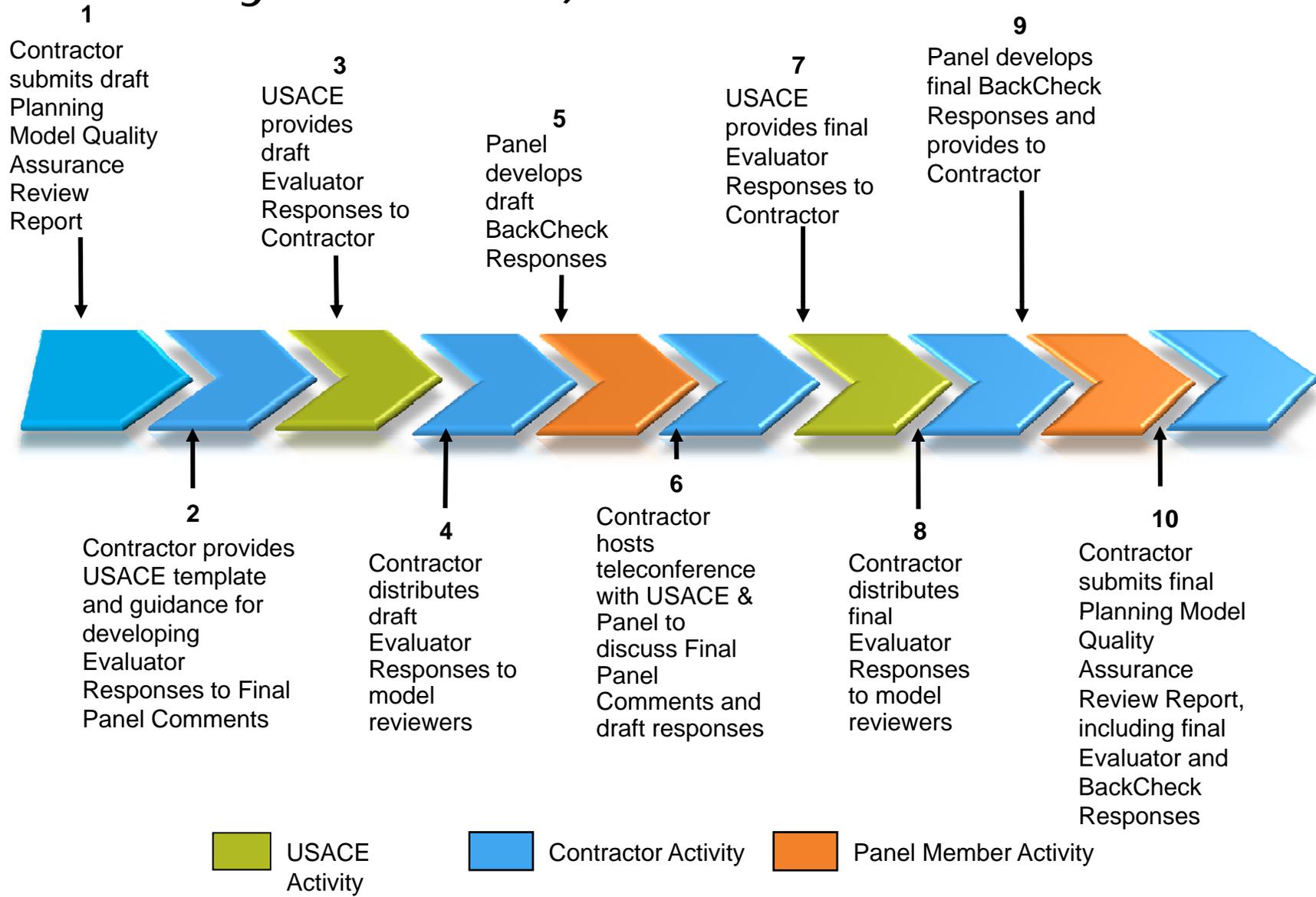
External Review Process

- Coordinated and managed by a Contractor to increase independence
- USACE Project Manager serves as the point of contact who ensures review quality by:
 - Providing all relevant information
 - Rapidly responding to questions and information requests for a high quality review
- Process consists of three phases:
 - Planning
 - Review Execution
 - Comment-Response

External Review Process (USACE SOW)

- Planning Phase
 - Task 1: Kick-off meeting to discuss the review goals, approach, and schedule
 - Task 2: Preparation of Work Plan and Charge
 - Task 3: Identification of Model Review Panel members
- Review Execution Phase
 - Task 4: Model Assessment
 - Task 5: Preparation of Draft Report with the Model Review Results
- Comment-Response Phase
 - Task 6: Meeting to Discuss Model Review Findings
 - Task 7: Preparation of Final Report including Evaluator and BackCheck Responses to Final Panel Comments

Comment-Response Phase (Recently Revised)



Lessons Learned – Planning USACE SOW

Lesson Learned	Benefit
<p>Clearly indicate:</p> <ul style="list-style-type: none"> • Whether the model is being certified/approved for national/regional use or approved for single use. • The intended user audience. 	<p>Helps guide assignment of significance levels to issues/concerns.</p>
<p>Be more specific about expertise requirements.</p>	<p>Ensures that the most qualified experts are selected to perform the review.</p>
<p>Provide model- or method-specific charge questions.</p> <ul style="list-style-type: none"> • Eliminate those that aren't applicable. • Add questions for spreadsheet or software assessment. 	<p>Charge preparation is more efficient.</p>
<p>Indicate whether there are any critical deadlines.</p>	<p>Contractor can determine if a compressed review schedule is necessary.</p>

Lessons Learned – Planning Review Materials

Lesson Learned	Benefit
<p>USACE should provide Contractor with a complete package of review materials organized by:</p> <ul style="list-style-type: none"> • Materials to be reviewed. • Background/reference materials. • USACE guidance documents. 	<p>Contractor is certain about what is being provided and what needs to be reviewed.</p>
<p>USACE should provide the Contractor with a brief demonstration or tutorial for any spreadsheets/software.</p>	<p>Familiarizes the Contractor with the tools being reviewed before they are provided to the Model Review Panel.</p>

Name	Date modified	Type	Size
Diagnostics	2/16/2012 9:04 AM	File folder	
Install Packages	2/24/2012 10:31 AM	File folder	
Publications	2/16/2012 9:52 AM	File folder	
User Guidance	2/16/2012 9:06 AM	File folder	
EC_1105-2-412_2011Mar.pdf	7/7/2011 1:46 PM	Adobe Acrobat D...	302 KB
HEC-EFM and HEC-GeoEFM Certification Report.pdf	7/20/2011 9:08 PM	Adobe Acrobat D...	2,726 KB

Lessons Learned – Planning Review Materials, continued

Lesson Learned	Benefit
<p>When available, USACE should provide:</p> <ul style="list-style-type: none"> • Complete packet identical to what a user would receive. • Source code. • All test materials. • All model/method documentation. • User documentation in MS Word. • Tutorials and files that would be generated. • Application files used to generate figures in the user documentation. 	<p>Allows a more thorough review by software and spreadsheet experts.</p>
<p><u>Reviewer feedback:</u> USACE might benefit from spreadsheet review preparation, code review, or tool review preparation prior to the model quality assurance review.</p>	

Lessons Learned – Planning Schedule

Lesson Learned	Benefit
USACE should provide contract award and review materials by desired start date.	Maintains project schedule and budget.
When developing the schedule, the Contractor should ensure that model reviewers and USACE model proponents are available for proposed teleconference dates and can meet review milestones.	Maintains project schedule and budget.

Lessons Learned – Planning Schedule, continued

Model Review Panel	Contractor	USACE	Business Days from Contract Award or Review Document Receipt
	Kick-off Meeting		5
	Contractor provides draft schedule to USACE		
	Contractor submits draft charge (including questions) to USACE		
	Contractor provides COI questionnaire to USACE for comment		
Contractor identifies and recruit reviewers and potential backup reviewers			15
Contractor submits list of potential reviewers and backups to USACE for comment			
Contractor completes subcontracts with selected model reviewers			24
Contractor convenes kick-off meeting with Model Review Panel to discuss review process			
Contractor convenes kick-off meeting with USACE and Model Review Panel to discuss model/method and address any initial questions about the model/method			27
Model reviewers complete their individual reviews and submit comments			48

Model Review Panel	Contractor	USACE	Business Days from Contract Award or Review Document Receipt
	Contractor collates individual comments and identifies key issues as talking points for the model review teleconference meeting		50
	Contractor convenes model review teleconference with Model Review Panel to discuss key issues/concerns identified during the review		51
	Contractor provides directive to the Model Review Panel to develop Final Panel Comments for the model review report		52
	Model reviewers submit draft Final Panel Comments for review		58
	Final Panel Comments are finalized		63
	Contractor submits draft Model Review Report to USACE		70
	USACE provides draft Evaluator Responses to Final Panel Comments and comments on draft Model Review Report		80
	Model Review Panel provides draft BackCheck Responses to USACE draft Evaluator Responses		86
	Contractor convenes findings meeting for discussion of Model Review Panel review findings and USACE responses		88
	USACE provides final Evaluator Responses to Final Panel Comments		93
	Model Review Panel provides final BackCheck Responses to USACE final Evaluator Responses		99
	Contractor submits final Model Review Report based on comments received from USACE and including final Evaluator and BackCheck Responses		107

Lessons Learned – Planning Recruiting Review Experts

Lesson Learned	Benefit
USACE should ensure conflict of interest (COI) screening criteria developed by the Contractor are comprehensive.	Minimizes potential for undisclosed COI.
Contractor should try to have at least one “repeat” Model Review Panel member.	Repeat panel members can mentor new panel members for a smoother, easier review process.



Lessons Learned – Review Execution Participation and Availability

Lesson Learned	Benefit
Individuals most experienced with the model/method development and/or application should participate in all meetings involving USACE.	Any questions the model reviewers have can be answered quickly and thoroughly.
100% attendance for all teleconferences needs to be mandatory for the model reviewers and USACE.	<ul style="list-style-type: none"> • Everyone receives the same information and has the same understanding of the model/method and model review process. • Deliverable dates can be met and milestones accomplished.
Contractor needs to make sure model reviewers are continuously available during Final Panel Comment development.	<ul style="list-style-type: none"> • High quality documentation is produced. • Review schedule is maintained.

Lessons Learned – Review Execution Project Management

Lesson Learned	Benefit
Constant reminders about the schedule and next steps need to be provided by Contractor (Model Review Panel) and USACE (model proponents).	Allows schedule to be maintained.
Rapid response by the model proponents to information requests is essential.	Reviewers provide a more thorough, higher-quality review.

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"Your computer has every alert, alarm and reminder possible...enough with the sticky notes!!!"

Lessons Learned – Review Execution Project Management, continued

Lesson Learned	Benefit
<p>USACE should conduct model quality assurance reviews prior to any Independent External Peer Review (IEPR) of a project for which the model has been used. Otherwise, Contractor should conduct each review completely independently.</p>	<p>Minimizes confusion regarding the review charge for each review panel.</p>
<p>For reviews involving multiple models:</p> <ul style="list-style-type: none"> • Stagger review schedules. • Use same subject matter experts across reviews. • Appoint separate Project Managers for each review (Contractor). 	<ul style="list-style-type: none"> • Review is more manageable. • Costs are reduced. • More consistent, higher quality results are achieved.

Lessons Learned – Comment-Response Documentation

Lesson Learned	Benefit
<p>Contractor should provide an MS Word template for comment responses. USACE should provide Evaluator responses in MS Word.</p>	<ul style="list-style-type: none"> • Providing Evaluator Responses and BackCheck Responses is easier. • Ensures that the responses are complete and provided in consistent format.
<p>Responses to comment statements should start with “concur” or “non-concur”; responses to recommendations should start with “adopt” or “not adopt.”</p>	<ul style="list-style-type: none"> • USACE model proponents’ position regarding the issue is clearly understood. • Panel comes to concensus more quickly.

Lessons Learned – Comment-Response Documentation

Lesson Learned	Benefit
Contractor should convene a teleconference for model proponents and model developers to discuss each of the Final Panel Comments.	More effective and efficient than e-mail.
Contractor should include final USACE Evaluator Responses and final Panel BackCheck Responses in final review report.	Creates a formal record of comments and responses.

Lessons Learned - Communication

Lesson Learned	Benefit
Maintain constant, open communication between all review participants.	<ul style="list-style-type: none"> • Prevents missed deadlines. • Maintains review quality.
Use a standard/constant subject heading for all e-mail communication.	<ul style="list-style-type: none"> • Minimizes potential that critical e-mails are lost. • Information can be tracked and organized easily.



Positive Team Culture – Key to a Successful Review

Lesson Learned	Benefit
<p>Foster a positive team culture:</p> <ul style="list-style-type: none"> • Contractor should invite model reviewers and model proponents to introduce themselves. • Contractor and USACE PMs should provide regular reminders that we are part of the same team with a common goal. • Contractor and USACE PMs should discourage language that could be perceived as unnecessarily critical. • Contractor needs to remind reviewers that USACE is not obligated to adopt recommendations. 	<p>More effective and productive discussions.</p>





QUESTIONS