

Report on Evaluation Tools, Models, Work plan and Budgets 12-09-05

Comment Table

Comment	Name	Affiliation	Section	Page	Line	Comment	How is the Comment Resolved
Overall Comments							
1	Tom James	SFWMD		iii	9	The authors need to include here a statement that the models used are appropriate for the processes and questions that are to be answered	It is anticipated that the models have limitations and the best available tools are used by the modelers.
2	Tom James	SFWMD		iii	12	Integration and interactivity are not necessary at all levels or for all projects.	Agree
3	Tom James	SFWMD		iii	27	What scale is their an utmost necessity for a water quality model?	regional/subregional for system wide evaluation was added pg iii
4	Tom James	SFWMD		1	13	Replace "precisely" with "accurately"	replaced precisely with accurately
5	Tom James	SFWMD		1	30	Should species be replaced with classes (i.e. more general)?	species was replaced with classes of organisms
6	Tom James	SFWMD		1	35	Add "the" before "MODEFLOW"	added the
7	Tom James	SFWMD		1	36	Add "the" before "HEC-RAS:"	added the
8	Tom James	SFWMD		1	39	Revise "need to be" to "must be"	changed to must be
9	Tom James	SFWMD		1	43	Add 'the' before "last ten years"	added the
10	Tom James	SFWMD		3	1	Revise "use of Graphic User Interfaces (GUIs) have	Needs clarification
11	Tom James	SFWMD		3	16	Revise "...data/output cane easily be transferred among..."	changed cane to can
12	Tom James	SFWMD		3	31	Each model application (i.e. use of a general model for a given location) should be peer reviewed.	Agree
13	Tom James	SFWMD		6	10	Revise, "Among the models that are used for the various projects within CERP are...and EFDC (Appendix B). These modeling projects share..."	Revised
14	Tom James	SFWMD		6	14	Add a statement to include management of water resources and water quality	Added
15	Tom James	SFWMD		7	32	Revise "...need questionnaire (Table 2)."	Revised
16	Tom James	SFWMD		7	34	Change 'some tasks' to 'most tasks'	changed some to most
17	Tom James	SFWMD		9	20	Revise '...the LO subteam developed a SAS Bayesian Uncertainty Program...'	Revised
18	Tom James	SFWMD		13	37	Revise "Many hydrologic-hydraulic, hydrodynamic...application in southern Florida (Tables 1 and b-1)	(Tables 1 and b-1) were changed to (Table 1 and Appendix B-1)
19	Tom James	SFWMD		21	28	Revise, '...can be illustrated (Figure 5).'	Revised
20	Tom James	SFWMD		22		Figure fuzzy	Thanks
21	Tom James	SFWMD		23	16	Revise '...on the dynamics of ecosystem components (figure 6).'	sentence deleted
22	Tom James	SFWMD		24		Figure fuzzy	thanks
23	Tom James	SFWMD		25	6	Spatial scale must also reflect the questions to be asked of the model	Revised
24	Tom James	SFWMD		25		Uncertainty comes in three flavors in the modeling world –parameter uncertainty which is what we deal with primarily. Measurement uncertainty (i.e. the sampling and analytical error of field and lab estimates that we use to calibrate the model against) and algorithm uncertainty (i.e. how well the model accurately simulates reality).	flavors was changed to forms
25	Tom James	SFWMD		25	28-29	Change 'while also having' to 'along with'	changed to along with
26	Tom James	SFWMD		25	34-40	Revise sentences to refer to figures parenthetically at the end of the sentence	thanks
27	Tom James	SFWMD		28	1	See comment 26	thanks
28	Tom James	SFWMD		30	18-19	Delete "The funding ...in the Everglades."	deleted text
29	Tom James	SFWMD		30	33-34	Most EPA and COE models have already been through steps 1 and 2	included in text- thanks
30	Tom James	SFWMD		33	19-22	See comment 26	thanks
31	Tom James	SFWMD	Appendix			See additions (below)	added new template sheet for LOWQM appendix A

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32	Matt Harwell	USFWS				General: should there be a list of contributing individuals on this (and other) RECOVER report?	included subteam participants, contributing authors, and commenters
33	Matt Harwell	USFWS		iii	14	"the present DRAFT report"	report is now "final" but this is a living document
34	Matt Harwell	USFWS		1	44	"approach can NEEDS TO be adopted" 41	Revised
35	Matt Harwell	USFWS		1	45	Add sentence "Challenges are more daunting because....."	
36	Matt Harwell	USFWS		3	19	Delete "Therefore"; make new paragraph	Revised
37	Matt Harwell	USFWS		3		general comment: Note that this is not linking models (p. 1, L.12)	
38	Matt Harwell	USFWS		3	28	What about identifying the shortcomings of this exercise so the reader can put into perspective:	added text page 3 to address below comments except for the put together in a short period of time (short is relative)
39	Matt Harwell	USFWS				limited number of people contributed	see above
40	Matt Harwell	USFWS				put together in short time frame	see above
41	Matt Harwell	USFWS				things change over time	see above
42	Matt Harwell	USFWS				document intended to be "living" and updated on regular basis	see above
43	Matt Harwell	USFWS		4		Table 1: What might be useful is a column identifying who and what scale these are being used in S. FL. (e.g. academic exercises, small scale CERP projects, etc.)	scale of application was added
44	Matt Harwell	USFWS		4		Table 1: What is the comprehensiveness of this list? AEAM models Bisc Bay models LOEM etc.	not an exhaustive, but major models applied- added LOEM to list, also note appendix A
45	Matt Harwell	USFWS		6	9	Is this the number of WQ evaluations being done by CERP teams or # independent WQ model tools being developed for S. FL.	both CERP and non-CERP activities
46	Matt Harwell	USFWS		6	24	"ACCEL8" should be "Acceler8"	thanks changed to ACCELER8
47	Matt Harwell	USFWS		6	41	"ELM is INTENDED TO BE the primary..."	changed text
48	Matt Harwell	USFWS		7	22	Should be "Future goals include integrating hydrodynamics..."	thanks
49	Matt Harwell	USFWS		7	30	"identify modeling needs FOR THE SUB-TEAM TO COMPLETE"	added for the sub-team
50	Matt Harwell	USFWS		7	34	"addressed immediately. AS THERE ARE NO SPECIFIC RECOVER \$ TO AID IN MODEL DEVELOPMENT THIS WORK CONTINUES TO BE PRIMARILY AN AGENCY- OR PI-SPECIFIC PROCESS." (correct?)	text was added to the introduction and conclusions to address this issue. This is a very important issue. The exec summary and the intro point out RECOVERs role to identify needed tools.
51	Matt Harwell	USFWS		7	40	"were not under WITHIN the"	Revised
52	Matt Harwell	USFWS		7	43	"These are important AND TIMELY issues THAT NEED TO BE but should likely be addressed PERHAPS by a combined..."	thanks, changed text accordingly
53	Matt Harwell	USFWS		8		Table 2 caption: "RECOVER ET chairs questionnaire FOR SUB-TEAM"	added to text not table caption
54	Matt Harwell	USFWS		8	Table 2	1st entry: should have Soon and Later boxes checked	Revised
55	Matt Harwell	USFWS		8	Table 2	2nd entry header: What about "Develop ways..." which implies action. We've been "considering ways" for many years....	changed to develop
56	Matt Harwell	USFWS		8		Category 2 heading: "NEEDS FOR Improving current tools"	changed to Needs for
57	Matt Harwell	USFWS		8		Category 2, entry 2- This is a need right? We're not actually doing this "now" are we?	Some of this is being done now but the work needs to be expanded/refined before application of HSIs
58	Matt Harwell	USFWS		8		Category 3, entry 1- "Develop WQ models or 'tweak' existing WQ models". Some serious thought and discussion is needed for this. Yes existing WQ models can be tweaked to fit new scenarios; however 1st entry the level of scientific confidence in that "fit" has yet to be identified. In other words how close to being a good enough tweak is good enough and if it isn't then new tools are needed. RECOVER needs to spend time making explicit decisions: "This isn't cutting it for us we need a new tool." Otherwise we spin our wheels for years waiting for tweaks of other tools that may or may not work while in the meantime we continue to use embarrassing WQ analysis approaches from structure data.	Agree we need a tool. That is what this exercise is about. Using proxies is the best we have currently. There are physical processes directly related to the proxies used. Proxies are based on known relationships (ie dry down and nutrient flux, or flows and loads). The report identifies the need for a model, notes short term, intermediate , and lon-term goals. We need to combine efforts when possible. As seen in the budget, modeling can be very time and money intensive.
59	Matt Harwell	USFWS		9		1st para: There seems to be a mixing of terminology between regional evaluation sub-teams assessment module teams etc. Either this is the case (and it needs to be explicitly identified that all were intentionally involved) or it needs to be clarified.	all were involved - noted in text
60	Matt Harwell	USFWS		11		Table 3: What are the "*" and "***" referring to?	noted at bottom of table
61	Matt Harwell	USFWS		11		Table 3: "Proposed Priority" is from the sub-team's work the MAP Module team or the regional evaluation sub-teams?	proposed priority was by the module and regional subteams, not all provided input as noted at bottom of table 3

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62	Matt Harwell	USFWS		11		Table 3: For the proposed priority cells that are blank suggest something like "to be determined". That way the reader knows that it's not missing data just an un-identified conclusion.	thanks, we added a note
63	Matt Harwell	USFWS		12	4	Regional versus sub-regional: In this document (and in RECOVER in general) there is still a conflicting problem with terminology on "regional" etc. This document is intended to be RECOVER-wide even though it focuses more on the Evaluation Team perspective. The evaluation team's definition of "regional" doesn't match that of the Assessment Team. This needs to be resolved (and defined appropriately everywhere).	We agree and have made an effort to clarify scaling terms. This document does not replace the need for a clearer/ more refined set of terms to be applied RECOVER wide.
64	Matt Harwell	USFWS		15	24	"Discretization"?	Partitioning of the time and/or space; revised
65	Matt Harwell	USFWS		17	2	"models are generally linked." and rest of para: What does this mean in reference to #s 1-4 on p. 16? This section needs some focus.	This was clarified to a focus in on 1-4
66	Matt Harwell	USFWS		17	36&38	and elsewhere: "Due to" refers to paying a bill! "Because of" is the correct terminology.	can mean but does not have to. We changed to because
67	Matt Harwell	USFWS		18		Fig. 2 caption. Where is this from?	reference provided
68	Matt Harwell	USFWS		19	9	"is termed hydroecology AND is an emerging"	and was added
69	Matt Harwell	USFWS		19	17	I think you are referring to predictive not assessment models here?	thanks
70	Matt Harwell	USFWS		19	22	"Attempts ARE generally made"	are was added- thanks
71	Matt Harwell	USFWS		19	27	"modeling tools WILL encourage"	will was added
72	Matt Harwell	USFWS				Figure 3 and 4: Ouch! Not helpful; caption not work. Poor form.	captions updated to be more descriptive
73	Matt Harwell	USFWS		20	7	para starting on L. 7: Note that the SFWMD HSIs are not the same thing as the HSIs used by USFWS. SFMMD HSIs are generated based on one environmental parameter (some combination of metrics about water) while true HSIs utilize multiple environmental parameters....	the description of efforts was clarified by separating into agency specific efforts
74	Matt Harwell	USFWS		22		Fig. 5: from ___?	figure caption updated
75	Matt Harwell	USFWS		23		general: Is your sub-team aware of an academic effort done by RSMAS and others (including USGS SFMWD) to physically couple hydro and ecological models across systems? This was presented at the GEER conference a few years ago. Was also presented at a half-day Adaptive Assessment Team meeting; but RECOVER took only a mild academic interest in it at the time (perhaps this is the kind of thing that should be considered to be folded into this product). This group developed the physical linkages and the GUI stuffs to look at Greater Everglades and Biscayne Bay ecosystems...	The subteam will investigate and follow up during updates. If possible participants in this effort should provide input for the next status update. As noted in the report, efforts should be pooled when possible to minimize costs and expedite tools development.
76	Matt Harwell	USFWS		24		Fig 6 caption: "CONNECTIONS BETWEEN Linking H&H..." Unfortunately this figure doesn't tell you much as a stand alone figure.	Revised
77	Matt Harwell	USFWS		30	17	"funding COULD BE IDENTIFIED to link..." (correct?)	Revised
78	Matt Harwell	USFWS		30	32	:"in other systems and HAVE BEEN reviewed during THOSE applications."	have been was added
79	Matt Harwell	USFWS		30	23	None of these forums are really code-level review. Journals don't usually publish code but just a few algorithms at best. Not the same thing.	Agree
80	Matt Harwell	USFWS		30	23	Sensitivity and error analysis?	Need clarification
81	Matt Harwell	USFWS		30		Application-level review: Sensitivity analyses for models have several aspects to them of interest and it is important to note that they may not overlap. Two are highlighted here: (1) multi-parameter sensitivity analysis gives a "multi-dimensional" perspective on how a model performs; (2) sensitivity of the actual parameters/output being used by the scientists.	added text
82	Matt Harwell	USFWS		32		Recommendations: Suggest after each recommendation you include a couple of sentences in italics that captures:	added text
83	Matt Harwell	USFWS				priority	added text
84	Matt Harwell	USFWS				funding/resource needs	added
85	Matt Harwell	USFWS				importance of application (what it gives us that we don't already have now)	added

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86	Matt Harwell	USFWS		32		#2: Are y'all aware of the effort USGS is doing on WQ module for the RSM model?	this was not included in the report. Please provide input for the next review or contact information (We are aware that the District contracted a WQ module with UF. Is this the same effort?)
87	Matt Harwell	USFWS		32		#3: This is somewhat missing the point. We are interested specifically in linking PMs (AT/ET) working MAP hypothesis IGIT, etc,	
88	Matt Harwell	USFWS		34		: Need arrow showing time scale at top	
89	Matt Harwell	USFWS		35		Where is the budget if it's in the caption?	budget is based on time. Text notes that we would have to submit RFPs to actual costs. Time estimates are based on previous modeling efforts- please note appendix A
90	Matt Harwell	USFWS		35		Some more detail is needed on how hours (resources) were identified. For example the time to apply WQ models to PMs is double that for developing the appropriate WQ tools? Note: A new analysis should not wait 2-3 years. A total of 2 years tops between completed analyses (in NRC cycle) is probably as far as can push.	see comment above
91	Matt Harwell	USFWS		35		II IIIA are not sequential but concurrent efforts	this was updated to note reviewed annually and new analysis every two years- Thanks
92	Matt Harwell	USFWS	Task 1	37	4	"reviewed refined and validated"	note text- Revised
93	Matt Harwell	USFWS		38		Need to keep in mind that application of models for RECOVER are for more than just PMs - assessment efforts will focus on hypotheses.	likely address in next update which will try to balance AT views and develop AT_ET linkages further
94	Matt Harwell	USFWS		38	10	general comment para starting L. 13: What is sorely needed is a mechanism to interpret suitability output or at least a systematic and repeatable way to consistently interpret suitability index outputs.	
95	Matt Harwell	USFWS		38			
96	Matt Harwell	USFWS		39	28	note that there are no cost estimates provided for the other stages either!	No cost estimate given for all the tasks
97	Matt Harwell	USFWS	A-3			Note that DMSTA is now up to version 2.0 (I think I have no internet...)	thanks