

	STANDARDS.6. UNCERTAINTY QUANTIFICATION:	Auth	2nd	Note
Group 1: Identification of UQ in data, model, computation, parameters				
	Model Name and No:			
	Code verified, runs correctly. See STANDARDS.4VERIF			
	Diagrams for UQ evaluation?			
	Reference to UQ approaches and methods			
	Methods chosen here			
Group 2. DATA UNCERTAINTY: UQ dependence on data				
	Experimental data reproducible?			
	Correlation structure in data sets			
	Description of data, noise, shapes of pdfs			
	Critical missing data that would constrain solutions			
	Constraints from literature. Relevance (species, age, sex, etc)			
Group 3. INPUT and ENVIRONMENT UNCERTAINTY				
	Variability in ICs, Input functions and in assumptions about exper. conditions			
Group 4. PARAMETER UNCERTAINTY:				
	Sensitivity functions. How to plot. Why useful. Notes. Use same colors.			
	Joint sensitivities for partially correlated parameters			
	Loops: stepped setting to illustrate behavior			
	Optimization re data: Confidence, descrip, Correl in covariance matrix			
	Parameters sets: Description and rationale for each param set, Notes			
	Parameters chosen for MonteCarlo. Sensitivities, lit data, constraints			
	Magnitudes of effects on systems behaviors (function space)			
	Ranges and shapes of param pdfs to use in MonteCarlo;			
	Ranges and shapes of cross section through output trajectories			
	Selection of region of predicted responses to characterize			
Group 5. MODEL STRUCTURAL UNCERTAINTY:				
	Modules most subject to uncertainty			
	Modules insensitive for the particular data sets			
	Modules most critical to the need to predict a chosen outcome			
	Notes defining contents of each situation, figure or par set			
	Relation between parameter and model uncertainties			
	Alternative models: Testing by module substitution. Randomized?			
Group 6. Assessing Uncertainty Quantification:				
	Identify major sources of Uncertainty (data, noise, model, params)			
	Meaningfulness and implications of uncertainty			
	Potential means of Reducing Uncertainty			
Group 7: Scientific Publication: See STANDARDS.7.PUB for detail				
	UQ as a major goal of the scientific evaluation			
	Meaning of observed UQs			
	Recommendations re data, models, improving prediction			

Updated 16.08.11