

## Ecosystem Output Application Agency Technical Review Guide



### Qualifications for ATR member for Ecological Outputs:

- Experience with 2 or more methods of conducting ecological output evaluation
- Had some sort of HEP or Eco Output training/expertise
- Senior-level experience in ER projects
- Familiarity with spreadsheets (familiar with standard best programming practices is the optimal but not required)

### Things to provide to ATR Reviewer for model application review:

- full decision document draft
- model appendices
- model documentation (e.g. bluebook regional guidebook) link or PDF
- Table 2
- Model Review Report (if available)
- Program files (spreadsheets/input data)

### Application of the Model Generic Charge for ATR

- Is it an appropriate model – is the model being used within its design objectives and intended uses?
- Is the rationale for model selection provided? Do you concur that this is the correct model for this project based on the rationale? **KEY FSM QUESTION**
- Do the inputs and outputs comply with model design assumptions? Are the inputs within acceptable ranges for the model?
- Is the model used off the shelf or was it calibrated to some modified application within the study area. If so, how is the model calibrated (reference data, BPJ, etc.)?
- Were modifications required to the model for this project? Is there documentation that supports these modifications?
- Is preference given to one cover type or variable due to the number of performance measures (number of models per cover type/variable)? Is it appropriate and supportable?
- Did the PDT apply any weights to specific performance measures based on value judgment? Is it clear how the weighting effects the decision? Is it supported by the documentation and a sensitivity analysis?
- Is the spreadsheet computing the numbers correctly?
- Spot-check the math in the spreadsheet and document what you spot-checked. What, if any, computational errors did you identify? Does this error have a significant influence on the outputs?

- Are target years selected based on anticipated rates of change in inputs? Is rationale described and acceptable?
- Is there consistent annualization across all alternatives and the without project condition? Is there implicit or explicit discounting? Note that discounting on ER projects is inconsistent with Corps policy. Was IWR Planning Suite Annualizer Used? Or was the USFWS annualization formula used (USFWS Ecological Services Manual 102 Section 5.2.E (<http://www.fws.gov/policy/ESM102.pdf>)).
- Are graphs of the habitat units over time for the alternatives and the without project condition included in the report?
- Does the model include recreation or other social effects built into it? If so, can it be pulled out of the model and have CE/ICA run on that alone?
- Are there different runs for the different Sea Level Rise scenarios (if applicable)? Does the model consider lateral shift of benefits with respect to the project boundary?
- Are the ecosystem outputs acres-based? If not, what is the rationale for outputs used and is it supportable?
- If Habitat Units are used, are the Habitat Units consistent with area of impacts (i.e. 10,000 HU's for 100 acres is not consistent)?