

Fatal Flaw Review

Modeling Workgroup

February 14, 2017

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What's happened so far...

- Initial proposal drafted by MWG Leadership/Modeling Team
- PPT and briefing document presented to WQGIT and MWG membership 1/23/17
- Verbal comments received from WQGIT membership during meeting
- Additional comments requested by 2/3/17 but none received

Where we are heading....

- Evaluation of comments received and revision of briefing paper as necessary
- This will be MWG recommendation for process, finalize in February
- WQGIT concurrence in March

Slides from 1/23/17

P6 WSM Timeline *(prior to LU delay)*

- December 31st, 2016 – All partnership data to CBPO
 - Late-arriving data or decisions may change the time line
- Feb 14-15, 2017 – Modeling Workgroup Quarterly
 - Minimal watershed model discussion
- March 2017 Modeling Workgroup
 - Decision on calibration method
 - Response to STAC review
- April 4-5, 2017 – Modeling Workgroup Quarterly
- April-May 2017 Review ongoing
- June 2017 final Phase 6 with draft planning targets

Draft P6 WSM – *April 4, 2017*

- Documentation
- CAST
- Tableau inputs
- Model output spreadsheets (calibration scenario)
- Model calibration results
- Visualization outputs

- Scenarios by *mid-April*

Ongoing Review (Decisions and Beta Versions)

- The CBP partnership has built the 2017 modeling tools over the past half-decade through a multitude of decisions made by the PSC, the WQGIT and its sub-groups, and the Modeling Workgroup of STAR. The draft Phase 6 model represents the work of hundreds of partners on these groups, in expert panels, and through other modes of participation.
- The review of many components has been ongoing since 2012, with detailed, intensive effort during 2016
- STAC has reviewed the Beta versions of the Phase 6 watershed model, waiting for Conowingo and Climate Change for the final review

Fatal Flaw Review

- A fatal flaw, as defined on next slide, may be the basis for the implementation of changes to the draft Phase 6 model.
- February 2017 MWG
 - Recommendation for fatal flaw review method
- March 2017 WQGIT
 - Agreement on fatal flaw review method

A Fatal Flaw is:

- A ***significant*** impediment in the ability of the partnership to establish reasonable planning targets or evaluate progress toward achieving the planning targets due to:
 - A calculation or method that does not follow the documented final decisions of the CBP partnership
 - A calculation or method, or combinations thereof, that produce illogical results that result in significant impediment
 - The omission of data submitted by the CBP partnership subject to established deadlines
 - The overall failure of the model to match observed flows and loads when compared to the level of performance in previous models

A Fatal Flaw is not:

- An objection to a final decision that has been made by the partnership
- A disagreement with a scientific or technical method or product in favor of another method or product.
- A failure to match loads for particular monitoring station(s) or constituent(s) *unless this creates a significant impediment to planning target development or implementation tracking.*

Process

- Comment submitted
- Evaluated by CBPO modeling team
- Comments discussed in the Modeling Workgroup and/or WQGIT as appropriate.
- Potential outcomes
 - Decision to make a change
 - Decision to not change
 - Non-consensus bumped to management board

P6 WSM Approval Schedule

- *April 3 through end of May – ongoing review, potential for changes to be made*
- *June – MWG, WQGIT, MB, and PSC meet to approve final suite of models*
- Issues that take longer to resolve may require schedule extension (PSC decision)

What we heard during meeting...

- Review is daunting task, need plan to divide and conquer
- Request for additional detail regarding calibration performance at non-RIM stations
 - ability to establish planning targets/track performance
 - implementation scale for WIPs
- Question regarding location of reviewable materials
- Question about availability of time in schedule for fatal flaw that requires recalibration

What has happened since...

- Review Plan proposal addressing:
 - Roles of MWG, WQGIT Workgroups, Jurisdictions
 - WSM, WQSTM, Airshed
 - Review tool enhancements
 - Process for Cataloging/Resolving Issues
- Draft Proposal - comments requested by 2/23/17
- Consolidated MWG comments? If yes, need input in one week, i.e., by 2/21/17.

Suggested path forward....

- Enhance briefing paper by adding short discussion/examples about calibration performance at Non-RIM stations
- Include links for all review materials in briefing paper
- Consider Review Plan separately. When final, add as appendix to briefing paper

Discussion.....