

Proposal: A BMP Protocol appeal for science-based dissent from Expert Panel Report¹

¹Expert Panel annotated response to Delaware’s proposal and appeal, on behalf of Tim Sexton, Chair (responses in red italicized text). The Panel members have reviewed this annotated response and have no objections.

Background: The review and approval of the Expert Panel Reports following the *Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model*, approved by Chesapeake Bay Program Partnership on July 13, 2015. An Expert Panel Report was developed for Cropland Irrigation Management and entered the approval process on January 16, 2019². Irrigated cropland acres in Delaware and Maryland are a significant and growing sector of agriculture in coarse, drought prone soils. Pennsylvania and Delaware opposed the report through the approval process under the Water Quality Goal Implementation Team citing deviations from and discomfort with the Protocol process.

²The partnership review period began on January 16th and ended on March 12. During that time no feedback was provided to the Expert Panel. DE failed to register their intent to object to the report prior to the March 21 Agriculture Workgroup (AgWG) Face-to-Face meeting, as the BMP Protocol explicitly states on page 14:

“Commenters are requested to notify the Panel Chair, Panel Coordinator, and the Workgroup/GIT Chair prior to the approval meeting if they intend to register a major objection to an Expert Panel report, and request time on the meeting agenda to explain their perspectives.”

Nevertheless, at its March meeting the AgWG granted DE extended time for review and feedback, to be completed and submitted by April 18. DE submitted feedback to the panel on April 15. The panel subsequently reviewed the feedback, amended the original report to incorporate additional references provided by DE, and provided itemized responses to DE’s comments on May 8.

Delaware made efforts to achieve consensus in the Agriculture Workgroup approval process by commenting extensively on the Report and providing new lines of evidence supporting an efficiency estimate³. While edits to the report were made to reflect some comments, the Panel did not engage in a meaningful dialog with Delaware⁴ as outlined in the Protocol and did not adjust their recommendation of zero credit⁵ for Irrigation Management:

In the event that a comment does not result in a change to the Panel’s report, the Panel Chair and Panel Coordinator shall work with the specific commenter(s) to resolve the issue.⁶

³ The information provided by DE was not new information to the panel members. The additional references provided by DE each had authorship or support from one or more of the panel members, with one exception. Still, the additional references were described and cited in the amended report, in consideration of DE’s feedback.

⁴ The panel provided itemized responses to all of DE’s comments. They are public and available for review. The itemized responses provided to the AgWG are exactly what has been done for every other BMP panel report dating back to 2012. When there have been extensive offline dialogues, it has always been in cases when comments are provided based on the stated timeline and BMP

Protocol. Timelines and deadlines are established to maintain a fair and even process. The panel worked to its fullest extent to provide its responses and there was no way to do more than that.

⁵ Ultimately, the panel's conclusion was a recommendation for more research before considering the recommendation of a credit value. There is no language in the panel report recommending "zero credit" or "zero efficiency." The panel is clear that more research is needed. DE continues to mis-characterize the panel's written conclusions in this manner.

⁶ The panel could not recommend an efficiency, based on the evidence available, but had no issue with including the additional references provided by DE in the amended report. The quote from page 14 of the Protocol (see comment 2 above) is the next sentence after this selective excerpt from DE.

While DE was well represented⁷ in terms of expertise on this Expert Panel, the recommendation of the Report was based on inconclusive results⁸ from local experimentation for which the BMP Protocol outlines such findings as low quality (see [BMP Protocol Table 1](#)). The report did not investigate model or calculated nitrogen savings as an alternative method of derived model credit. The BMP Protocol allows for modeling exercises to determining effectiveness estimates⁹,

- *Nitrogen, phosphorus, and sediment loading or effectiveness estimates (practice performance recommendations)*
 - *Discussion may include alternative modeling approaches to accommodate a specific land use or practice, if appropriate*

In order to concurrently respect the Protocol process and Delaware's scientific objection to the report¹⁰, more work needs to be done before this report is voted on.

⁷ This is accurate, and the panel representation was approved by the AgWG.

⁸ The USGS study (Denver et al., 2018) cited in the panel report was not inconclusive and was conducted in Delaware. It showed increased groundwater nitrate levels associated with implementation of irrigation and it is the only study available that directly links water quality factors to cropland irrigation practices. Furthermore, DE's own perceptions appear to be based on inconclusive results, such as the Sims & Leathers (2012) report, which only compares theoretical scenarios between dry and average years, ignoring the possibility of wet years and real-world management factors.

⁹ Engaging in such exercises is at the purview of the panel's best professional judgement. The panel chose not to do this in the context of the information they had available to them regarding the impact of irrigation management on water quality.

¹⁰ The panel received DE's feedback following a review period that was extended at DE's belated request. The panel gave due diligence to DE, convening the full panel to discuss the feedback and providing itemized responses to all comments.

Suggested Path Forward

- An supplementary ad hoc Expert Panel is recommended in order to resolve issues with Expert Panel reports at the GIT level. Delaware proposes an investigation of average annualized nitrogen leaching

from dryland acreage would result in a reasonable conclusion of model credit, supported by some peer-reviewed reference and:

- At best supported by statistical analysis or;
- At worst inferences in the referenced data;
- Resulting medium to high quality conclusions (see [BMP Protocol Table 1](#)).
- Expert Panel report items for which the ad hoc Panelists have no disagreement will remain in the revised report.
- The interim efficiency of 4% total nitrogen, confirmed by consensus by the WQGIT on June 10, 2019, will continue to be effective¹¹ until such an Alternative Report can be approved.
- Delaware will refrain from objecting to consensus approval of the report provided a Management Board action is documented to allow Delaware to pilot this ad hoc supplement aiming to document an efficiency for the Irrigation Management BMP¹² for Progress reporting under the Water Quality Goal Implementation Team's approval.
 - WQGIT authority avoids some potential conflicts of interest.

¹¹The WQGIT approved the interim status of cropland irrigation management and it will remain as a tool for planning purposes. That has been decided. There is no available documentation to explain how the 4% interim efficiency value for nitrogen was determined during the earlier iterations of the watershed model.

¹² Adopting an efficiency value for cropland irrigation management contemporaneous to the report in question would be in direct contradiction to the panel's findings and its cumulative professional experience. Approving the current Expert Panel report means acknowledging the panel's recommendation that subsequent research on cropland irrigation is needed over the coming years before water quality impacts can be determined.