

DEVELOPMENT OF PHASE 6 LAND USE EXPORT RATE TARGETS

Agricultural Workgroup

March 18, 2015

Olivia Devereux

TIMELINE

- December 31, 2014 - Sparrow and literature review results for draft land uses
- January 28, 2015 – Input from Modeling Workgroup on draft targets for draft land uses
- April 22, 2015 - final targets approved by Modeling Workgroup for draft land uses
- Oct 1, 2015 - Once the final land uses are approved, we will finalize targets using a Sparrow update, final sensitivities, and other information.

ROLE OF WORKGROUPS

Chesapeake Bay Program committees, goal implementation teams, workgroups or action teams	Meeting Date
Modeling Quarterly Review	9/30/2014, 1/29/2015, 4/22-23/2015
Modeling Team Meeting	9/15/2014, 1/20/2015, ongoing weekly
Land Use Workgroup	9/25/2014; 2/26/2015
Watershed Technical Workgroup	10/2/2014, 3/5/2015
Forestry Workgroup	10/1/2014, 3/4/2015
Wetlands Expert Panel	11/12/2014
Urban Stormwater workgroup	10/21/2014, 12/16/2014, 3/3/2015
Agricultural Workgroup	10/9/2014, 10/22/2014, 2/19/2015, 3/18-19/2015
Agricultural Modeling Subcommittee	9/16/2014, 12/16/2014, 2/12/2015, 2/18/2015

- Panel, workgroup documents and recommendations, and available literature are critical sources of data in addition to the full literature review
- Modeling workgroup approves the final Phase 6 model

REVIEWS OF SCIENTIFIC LITERATURE AND LOCAL TMDLS: DEVELOPED, NATURAL AND AGRICULTURAL LAND USES



MEMO

To: Gary Shenk, EPA; Peter Claggett, USGS
Cc: Tom Schueler, CSN
From: Mark Sievers, Tetra Tech Inc.
Date: March 31, 2014
Subject: Land Use Loading Literature Review Task Summary and Results

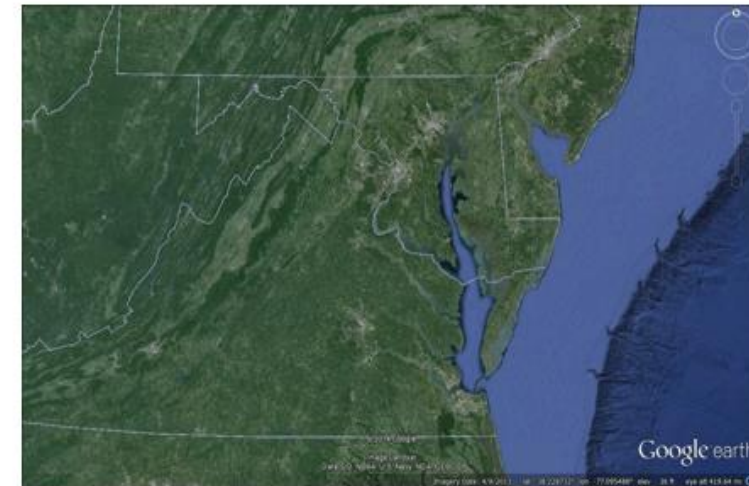
The memo is separated into the following sections (click for hyperlink):

• 1.0	Project Background and Purpose	2
• 2.0	Literature Search for Potentially Relevant Studies	2
• 3.0	Literature Review and Data Entry for Relevant Loading Rate and Concentration Data	4
• 4.0	Search, Review, and Data Entry of TMDL Model Reports	5
• 5.0	Quality Assurance/Quality Control	7
• 6.0	Data Standardization/Processing	8
• 7.0	Analysis and Results	9
• 7.1	Analysis – Box Plots	9
• 7.1.1	Concentration Data Analysis Summary (NSQD and literature)	10
• 7.1.2	Seasonal Variation Analysis Summary (NSQD and literature)	10
• 7.1.3	Loading Rate Data Analysis Summary (TMDL reports and literature)	10
• 7.2	Analysis – Histograms	11
• 7.3	Analysis – Impervious Regression	11
• 7.4	Analysis – Wilcoxon Rank-Sum Test	12
• 7.4.1	Hypothesis Testing	14
• 7.4.2	Wilcoxon Rank-Sum Statistic	14
• 8.0	Summary/Conclusion/Recommendations	18
• 8.1	Summary	18
• 8.2	Objective Conclusions	18
• 8.2.1	Do land use concentration/loading rates differ from overall concentration/loading rates?	18
• 8.2.2	If so, can the land use be accurately mapped and incorporated into the CBWM?	19
• 8.2.3	If so, would the land use respond in a unique manner to the application of a new or existing urban BMP?	19
• 8.3	Conclusion	20
• 8.3.1	Data Limitations and Precautions with Interpretation	20
• 8.3.2	Preliminary Recommendations	20
• 8.4	Potential Future Efforts	22
• 9.0	References	22
• Attachment A:	Parameter Standardization	24
• Attachment B:	Land Use Standardization	26
• Attachment C:	Box Plots	33
• Attachment C.1:	Concentration Statistics/Box Plots from NSQD and Literature Reviews	33

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PRELIMINARY DRAFT

Agricultural and Forest Land Use Loading Rate Literature Review—Summary and Results



January 13, 2015

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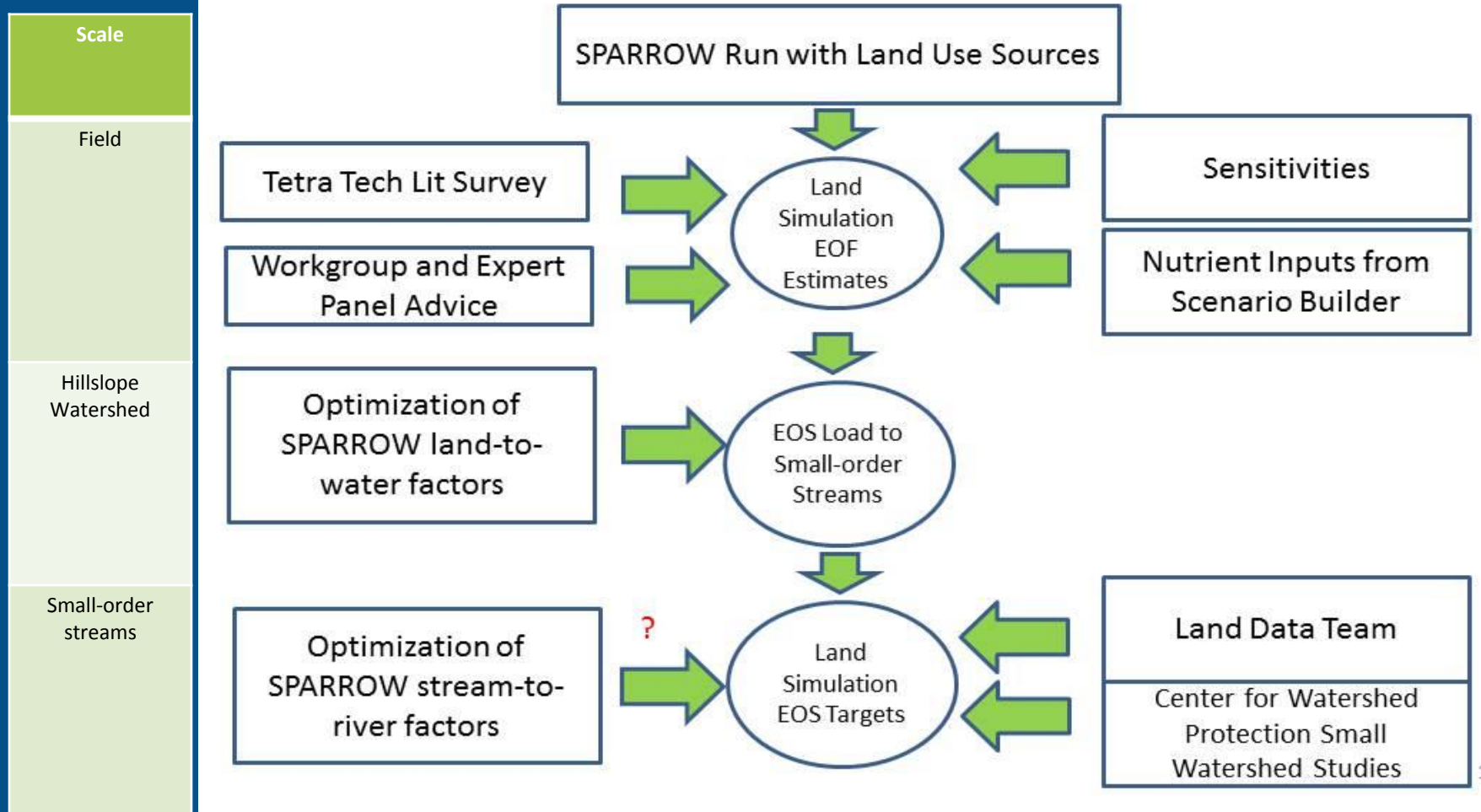


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ADDITIONAL INFORMATION GATHERING

- Agriculture “Grey” Literature (collected by Virginia Tech/CBW-ROC)
 - Unpublished, not peer reviewed
 - May include negative results
 - Negative results are generally considered to be systematically censored in peer-reviewed publications; meta-analysis from peer-reviewed sources may be systematically biased
- Agricultural Expert Relative Export Rate Panel

LAND SIMULATION DEVELOPMENT



NEXT STEPS

- Crosswalk literature review land uses to Phase 6 land uses
- Address scale issues of Edge of Field, Edge of Small Stream and Edge of Stream in literature review data.
- Finalize weighting of literature review data by location (e.g.: in vs. out of watershed)
- Work on land uses where there was little/no information in the lit reviews
- Incorporate additional literature reviews and data from agricultural grey literature and new panel
- Determine differences between manure-eligible and nonmanured land uses
- Complete the refinements based on sensitivities to nutrient inputs
- Set literature review loads as relational within Sparrow land uses loading rates
- Determine differences in loads by depth (surface, interflow, groundwater)
- Determine differences in loads by nutrient species
- QA/QC checks including verifying data outliers