



Final BMP Report and Use of Effectiveness Estimates

Tom Simpson and
Sarah Weammert, UMD/MAWP

sweammer@umd.edu

301-405-1215



Project Objectives

- Provide thorough documentation of all literature and decisions used in definition and effectiveness development
- Estimate the effectiveness of practices representative of average operational watershed-wide pollution reduction benefits
- To implement an adaptive management approach

Year One BMPs

Agricultural Practices

- Field and pasture erosion control practices
- Conservation tillage
- Off-stream watering practices
- Buffers
- Cover crops

Other Practices

- Forest harvesting practices
- Wetland restoration and creation

Urban Stormwater Practices

- Urban wet ponds and wetlands
- Urban erosion and sediment control
- Dry detention ponds and hydrodynamic structures
- Dry extended detention basins

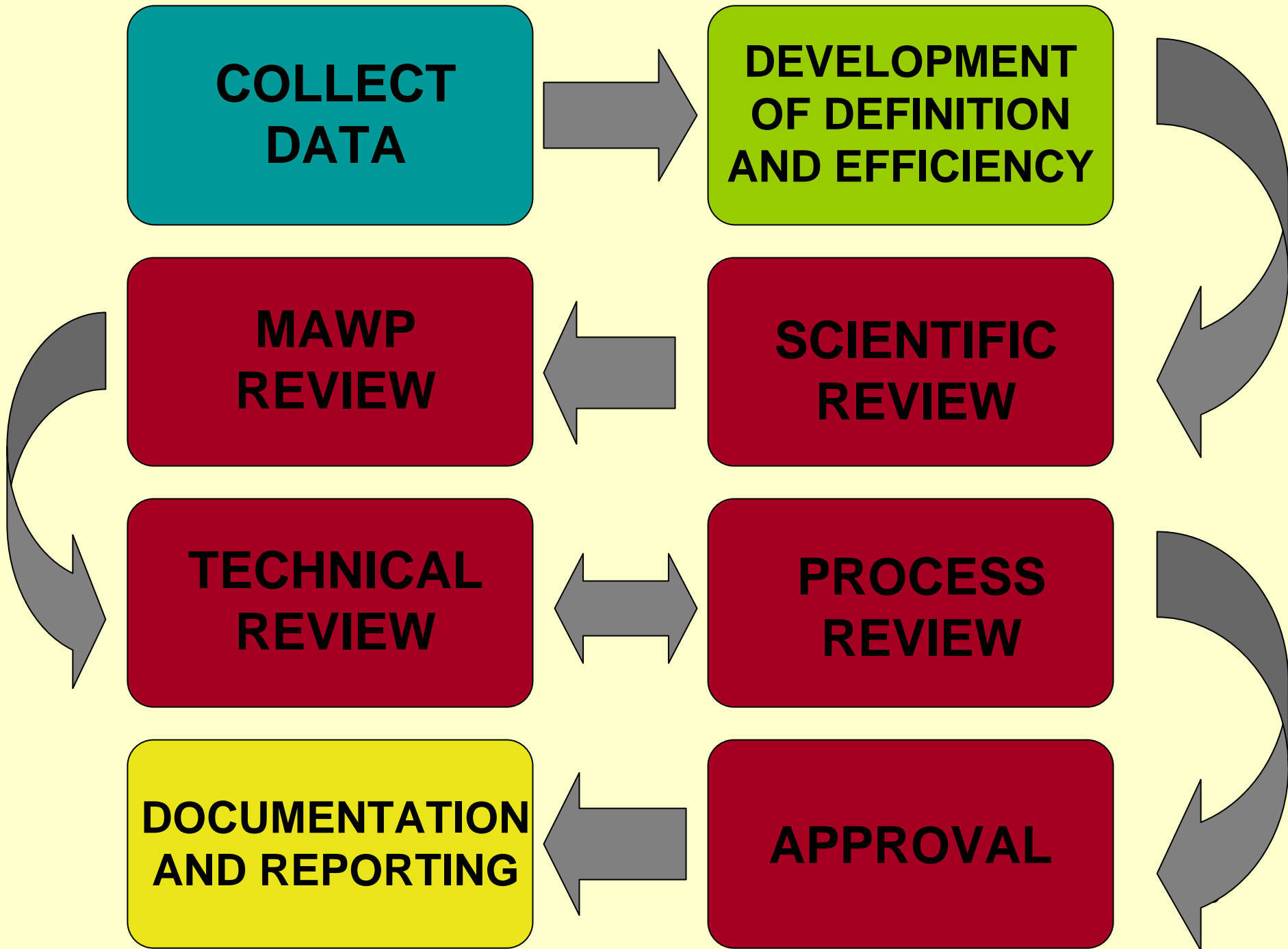
Year Two Practices

Agricultural BMPs

- Enhanced nutrient Management/Precision Agriculture
- Dairy precision feeding and/or forage management
- Ammonia emissions reduction
- Precision or intensive rotation grazing
- Horse pasture management
- Mortality composters

Urban and Mixed Open BMPs

- Dirt & gravel road erosion & sediment control
- Infiltration and filtration Practices





Effectiveness Estimates

Discussion of Handout

Approved effectiveness estimates will be presented, along with developers & MAWP initial recommendation, & the statistical evaluation of the practices.

http://www.mawaterquality.org/bmp_reports.htm

Opportunities for Changes to Effectiveness Estimates

- Estimates are locked in during Phase 5 management scenarios.
- However, as sufficient, additional, scientifically defensible data becomes available the CBP will review and determine if revisions are warranted.
- Utilize an adaptive management approach where *all* estimates are reviewed and refined if necessary every 3 to 5 years.

Effectiveness Estimates will be Used in Phase 5.1 of WSM For:

- Scoping Scenarios for Model Sensitivity and Changes from 4.3
- Management Scenarios
- Load Allocations by Basin and Jurisdiction
- Evaluation of Current Tributary Strategies
- Development of New Tributary Strategies
- TMDL allocations?

Development of VORTEX/COAST - Timeline

- <http://chesapeake.usgs.gov/coast.html>
- On-line decision tool that will closely approximate WSM results
- Target Audiences (States, Tributary Teams, Counties, Municipalities, Consultants, Enviro)
- When available?
 - About one year for a full version release (May/June 2009)
 - December 2008 for a limited version

Development of COAST/VORTEX - Uses

- On-line decision support tool to estimate implementation strategy impact on pollutant loadings
- User friendly tool accessible from PC
- Compare changes in nitrogen, phosphorus, and sediment loading under different management scenarios
- Test alternative scenarios
- Increase effectiveness
 - Minimize cost
 - Accelerate implementation
- Information transfer between regions
 - Examine how land use changes affect water quality
 - Compare BMP effectiveness

Observations

- Adaptive management approach critical
- Reflect operational conditions
- Implementation degree and level must be evaluated and understood
- Recognize vested interests by both scientists and technical experts when developing Effectiveness Estimates