

**MIDPOINT ASSESSMENT PRIORITY WORK PLAN:
IMPROVED MODELING ACCURACY OF HYDROLOGIC NETWORKS, LAND USE CHARACTERISTICS,
PHOSPHORUS AND SEDIMENT
LEAD: URBAN STORMWATER WORKGROUP**

Full Title of Priority: Improved modeling accuracy of hydrologic networks, land use characteristics, phosphorus and sediment

High Priority, 8 votes

Short Description of Priority:

- a) Improve characterization of urban land use with differentiating loading rates.
- b) Assess the Model's accuracy by running small scale simulations for headwater areas with relatively uniform land use (all urban or all agriculture) to verify loadings based on input parameters.
- c) Improve the Model's depiction of local hydrologic networks by distinguishing connected from non-connected areas, and incorporating proximity to watercourses. This would help improve regionalization factors that currently display large variability between segments.
- d) Improve the Model's depiction of explicit stream erosion; after a watershed reaches a certain impervious threshold, much of the sediment and phosphorus may be coming from stream erosion versus land surface wash off, especially in low density dominated areas.

Supporting Partners:

Watershed Technical Workgroup; Agricultural Workgroup, Modeling Workgroup, Land Use Workgroup

Necessary Datasets, Analyses, or Decisions:

- Monitoring data on smaller watersheds
- Data on differential loading rates associated with hydrologic networks
- Sensitivity analysis associated with running small scale simulations for headwater areas
- Coordination with the Land Use Workgroup on the land use categories and associated loading rates
- Decision: Should the USWG have a role in determining whether there is scientifically defensible loading information for any new urban land uses that are being considered for inclusion into the next version of the Watershed Model?
- Verification procedures and protocols of new BMPs associated with any of these (new) land use classifications

Start Date: December 2012

Interim Deliverables, Including Lead and Deadlines:

- November 27, 2012: Urban Stormwater Workgroup convenes meeting with supporting partners to develop work plan (Lead: Urban Stormwater Workgroup)
- December 3, 2012: Work plan due to WQGIT (Lead: Urban Stormwater Workgroup)

*Midpoint Assessment Priority Work Plan:
Improved modeling accuracy of hydrologic networks, land use characteristics, phosphorus & sediment
Last Updated November 26, 2012*

- December 10, 2012: Work plan discussed and approved by WQGIT (Lead: WQGIT)

Completion Date: April 2015

Level of Effort for Lead and Supporting Partners, Including (as relevant) CBPO Modeling Team:

Task a) Improve characterization of urban land use – Medium Level of Effort; differentiating loading rates: High Level of Effort for the Modeling Workgroup and Land Use Workgroup

Task b) Assess the Model's accuracy by running small scale simulations for headwater areas...: Medium Level of Effort – this is an issue that the Modeling Team will undertake regardless of priority status

Task c) Improve the Model's depiction of local hydrologic networks...: High Level of Effort for the CBPO GIS Team and/or USWG (dependent upon approach taken)

Task d) Improve the Model's depiction of explicit stream erosion...: Medium Level of Effort; CBPO Modeling Team already addressing this issue

Potential Conflicts with Other Priorities:

This priority could have potential conflicts with “Revisit watershed model calibration methods with goal of improving local watershed results, including revisiting regional factors”, as we would be adding more regional factors at a smaller scale.

This priority tracks very closely with the high priority, Spatial, Temporal and Categorical Representation of Land Uses and Loading Rates (lead: Land Use Workgroup)

(consult with entity's members (eg, Workgroup membership), supporting partners, and, if involves refinements to CBP modeling tools, CBPO modeling team to see if completing this priority interferes with completing other priorities and/or would lead to some outcomes that contradict other priorities, such as more detailed vs. coarser regional factors. Where a conflict exists, defer to higher priority if mutually agreed upon solution can't be found, or flag for WQGIT.

Issues Requiring Input from Full WQGIT: Will need to resolve any cross-workgroup issues.

Issues Requiring Input from Management Board and/or Principals' Staff Committee?

Other Notes: This high priority supports Guiding Principle 2: Enhance Decision Support and Assessment Tools to Enable Successful Engagement of Local Partners