MIDPOINT ASSESSMENT PRIORITY WORK PLAN:
SPATIAL, TEMPORAL AND CATEGORICAL REPRESENTATION OF LAND USES AND LOADING
RATES
LEAD: LAND USE WORKGROUP

Full Title of Priority: Improve spatial, temporal, and categorical representation of urban, agricultural, federal, and natural land uses and, to the extent possible, assign separate loading rates. Where local data unavailable, develop more accurate distribution of loads

High Priority, 21 votes

Short Description of Priority: Be sure to include recommendation to develop 2025 land use projections for use in Phase III WIPs in order to incentivize land use planning and conservation.

Supporting Partners: Forestry, Agriculture and Urban Stormwater Workgroups (lead for recommending land uses and loading rates); Watershed Technical Workgroup; BMP Panels; WQGIT to resolve any cross-workgroup issues.

Necessary Datasets, Analyses, or Decisions: Recommendations on what new land uses should be added in or removed. Loading rates associated with different land uses – LUWG might need to convene panels in conjunction with sector Workgroups to develop loading rates.

Start Date: November 2012

Interim Deliverables, Including Lead and Deadlines:
- November 2, 2012: Land Use Workgroup convenes meeting with supporting partners to develop work plan (Lead: Land Use Workgroup)
- December 3, 2012: Work plan due to WQGIT (Lead: Land Use Workgroup)
- December 10, 2012: Work plan discussed and approved by WQGIT (Lead: WQGIT)

Spatial resolution
- Deadline: Identify gaps in local LULC across the Bay watershed (lead, deadline)
  - Cost-out options for filling gaps with LULC data derive from remotely sensed imagery. (lead)
- Deadline: Explore issues with using local LULC at native resolution vs. resampling to convert local LULC to coarser resolution (lead)
  - Deadline: Identify optimal resolution for hybrid local/CBP LULC (lead)

Temporal resolution
- Deadline: Inventory availability of historic LULC from 1980 to present. (lead)
- Deadline: Explore backcasting options given available data. (lead)

Categorical resolution
- Deadline: Review and evaluate suggested changes to LULC classes (e.g., commercial, low-density residential, wetlands, riparian forest buffers, high-functioning forests) (Lead: Ag, Forestry, Urban Stormwater Workgroups, with Land Use Workgroup convening)

- Deadline: Establish criteria that data must meet in order to be incorporated into Chesapeake Bay Land Change Model (CBLCM) (Lead: Land Use Workgroup)
- Deadline: Gather data that meets criteria (lead). Consider:
    - NASS Cropland Data Layer
    - Longitudinal Employer-Household Dynamics database
    - Housing density by Census Block
    - Annual impervious surface change (Landsat 5 & 7)
- Deadline: Evaluate available data and feasibility of mapping new LULC classes (Lead: Land Use Workgroup)
- Deadline: Develop methods to synthesize, fill gaps (Lead: Land Use Workgroup)

Local LULC for ground-truthing CBP LULC
- Deadline: Evaluate the accuracy of impervious surface and tree canopy coefficients applied to the CBP LULC (lead).
- Deadline: Review results of applying new data and methods to CBLCM (Lead: Ag, Forestry, Urban Stormwater, Watershed Technical Workgroups)
- Deadline: Make any changes based on other Workgroups' review (Lead: Land Use Workgroup)

Loading Rates:
- Deadline: Review and evaluate loading rates for LULC classes (Lead: Ag, Forestry, Urban Stormwater Workgroups, with Land Use Workgroup convening)
- Deadline: Establish criteria that data must meet in order to be incorporated into CBLCM, Scenario Builder and/or Watershed Model (Lead: Watershed Technical Workgroup)
- Deadline: Gather data that meets criteria (lead)
- Deadline: Evaluate available data and feasibility of assigning differential loads to LULC classes (Lead: Land Use Workgroup)
- Deadline: Develop methods to synthesize, fill gaps (Lead: Land Use Workgroup)
- Deadline: Review results of applying new data and methods to CBLCM, Scenario Builder, Watershed Model (Lead: Ag, Forestry, Urban Stormwater, Watershed Technical Workgroups, CBPO Modeling Team)
- Deadline: Make any changes based on other Workgroups' review (Lead: Land Use Workgroup)

Deadline: To WQGIT for approval (Lead: WQGIT)
- Make any changes based on WQGIT review (Lead: Land Use Workgroup)

Deadline: Incorporate into CBLCM, Scenario Builder, and/or Watershed Model (Lead: CBPO Modeling Team)

Deadline: Review CBLCM, Scenario Builder, and/or Watershed Model (Lead: Land Use Workgroup)

Deadline: Make any changes based on Workgroup review (Lead: CBPO Modeling Team)

Deadline: Bring to WQGIT for final review, approval (Lead: Land Use Workgroup)
- CBPO Modeling Team would be responsible for any additional changes based on WQGIT review.

Completion Date: April 2015

Level of Effort for Lead and Supporting Partners, Including (as relevant) CBPO Modeling Team:
For the CBPO modeling team, improving the spatial, temporal and categorical representation of land uses would be a high level or effort. Developing 2025 projections for use in Phase III WIPs would be a low level of effort. Applying differential loading rates would be a medium level of effort.

Potential Conflicts with Other Priorities: *(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: Combines multiple priorities: land use categories, forecasts and backcasts, completing WIPs in 2025 land use, and loading rates for different land uses. Relates to Guiding Principle 2: Enhance decision support and assessment tools to enable successful engagement of local partners. WQGIT believes that land use is one of the most important data inputs in terms of gaining credibility with local governments.