On-line tools for TMDL Action Plans

Facility Assessment Scenario Tool (FAST)

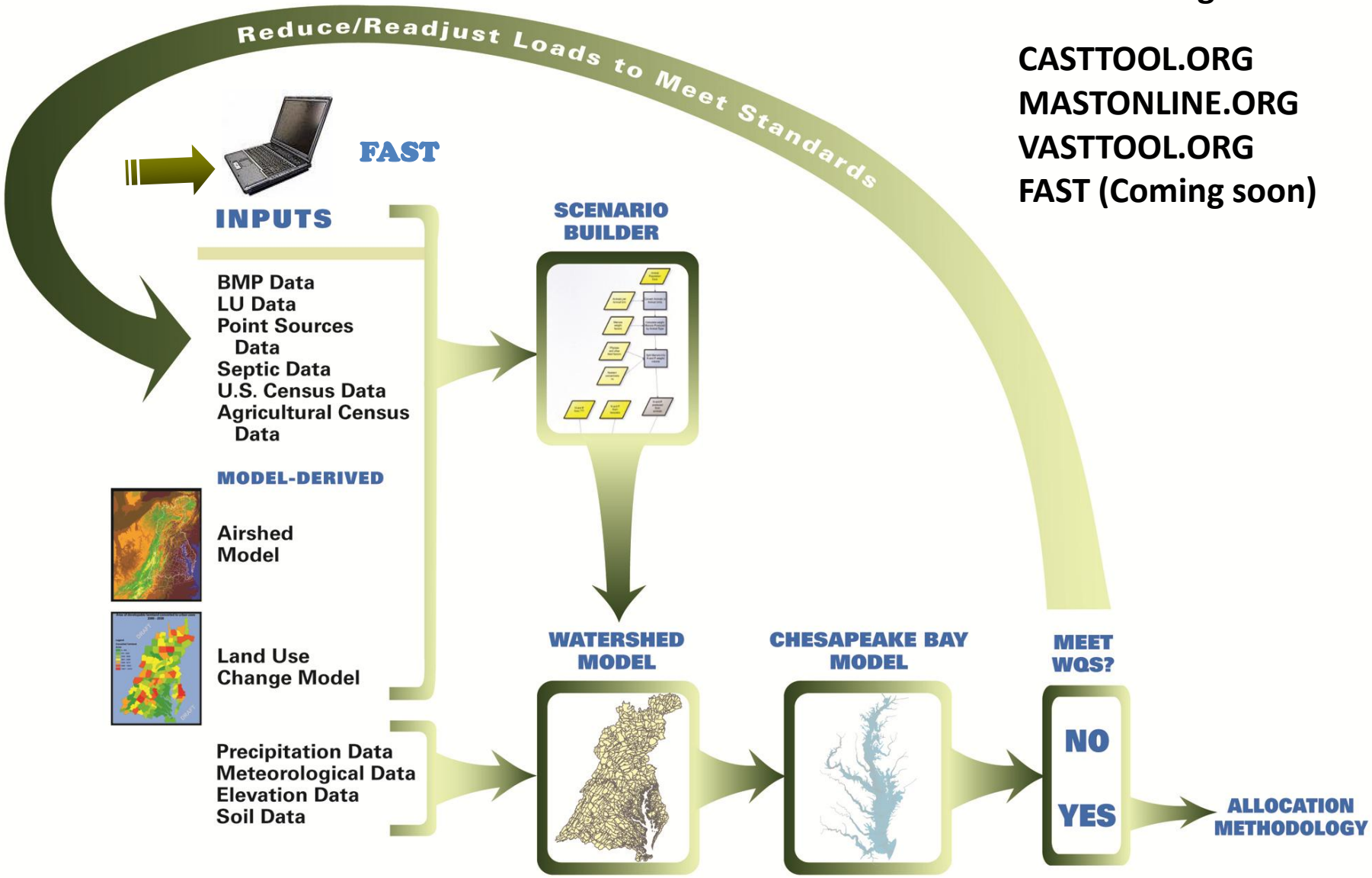
VASTTOOL.ORG
CASTTOOL.ORG
MASTONLINE.ORG

Outline

- TMDL Planning and Assessment
- FAST Features for TMDL Planning and Assessment
- FAST Elements
- Consistency with Bay TMDL
- Use of FAST in Planning and Assessment
- Future Refinements
- Why FAST?

Scenario Planning Tools

CASTTOOL.ORG
MASTONLINE.ORG
VASTTOOL.ORG
FAST (Coming soon)



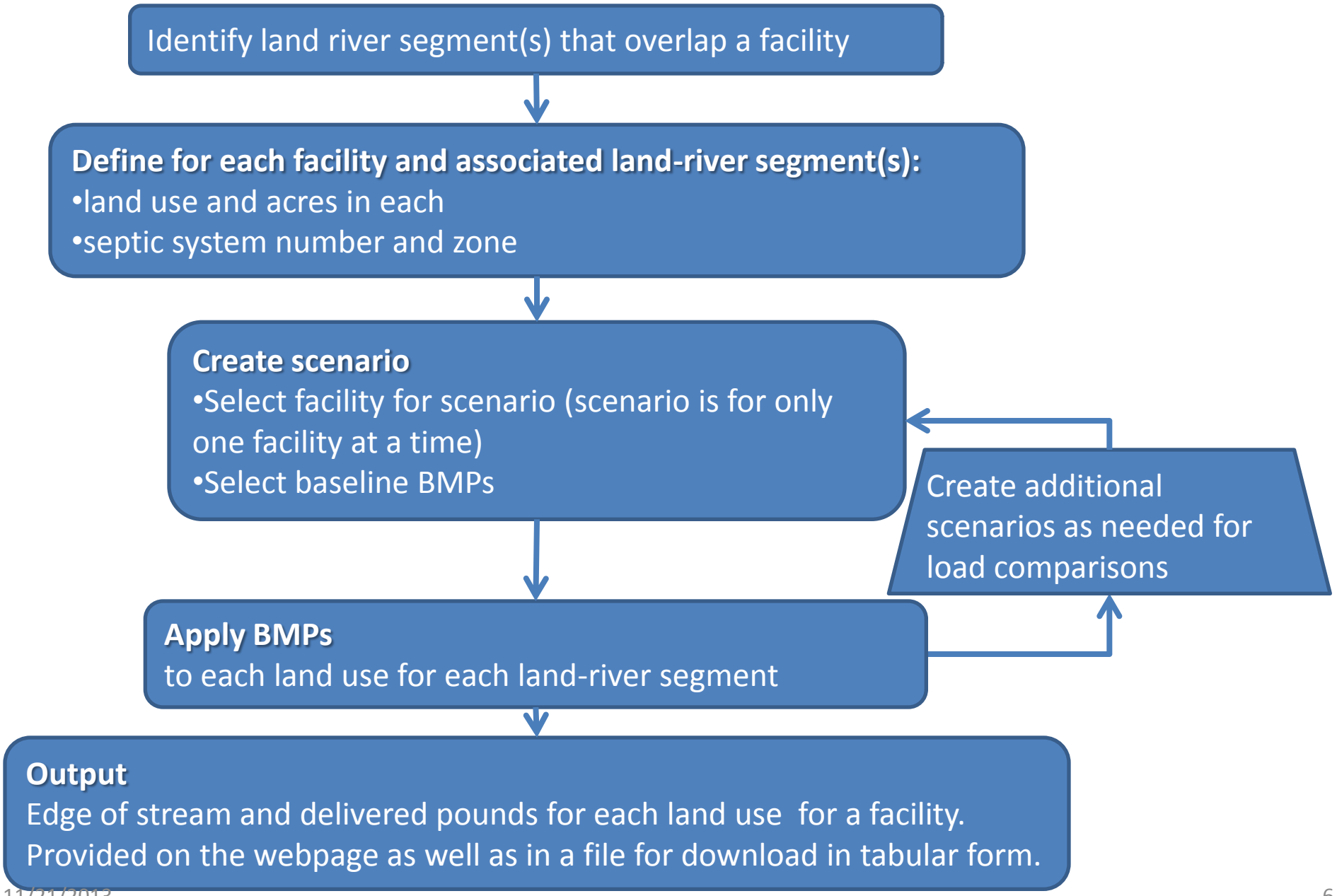
TMDL Planning and Assessment

- Establish a plan with measurable goals
  - Best management practices and land use
  - Quantify the load reduction
  - Cost effective and efficient
- Planning, tracking, and reporting for compliance
  - Provide the tools necessary to change plans
  - Interim benchmarks (milestones)
- Process
  - Adaptive and iterative
  - Facilitates a coordinated team

FAST Features for TMDL Planning and Assessment

- Is Replicable , Consistent, and Transparent
  - Consistent with the TMDL model
- Serves as a data management system
- Can accommodate many simultaneous users
  - Online with private log in
  - Private and public scenarios
  - Users can share scenarios with other specified users (access control)

User Process for FAST



06112012 Webinar

Urban Land BMP Worksheet

Select the BMP you would like to add:

Dry Extended Detention Ponds

Select the land use or land use group you would like to apply the BMP to:

Pervious urban-all

Land Group Components

Select the geographic scale you would like to use to determine the area for the BMP:

- Please Select a Geographic Scale -

Specify which geographic area you would like the BMP applied to:

Enter an amount and select a unit for the BMP:

12.6 acres treated percent

Notes:

Can indicate a justification for this BMP, implementation level, or a cross-reference to the engineering design plan.

Add Cancel

Septic BMPs

Urban Land Pre-BMP Acres

Landuse	Non-Federal	Federal
CSS construction	4.1	0.0
CSS extractive	0.0	0.0
CSS impervious developed	733.6	0.3
CSS pervious developed	1,506.0	0.4
nonregulated extractive	415.1	0.0
nonregulated impervious developed	4,918.7	0.0
nonregulated pervious developed	21,649.7	0.0
regulated construction	1,539.3	0.0
regulated extractive	1,956.2	0.0
regulated impervious developed	30,578.9	2.4
regulated pervious developed	127,847.6	2.3
Total:	191,149.2	5.4

Download Landuse

BMPs Submitted

Delete SelectedItems | Multi Edit Mode | Download BMPs

BMP	Landuse Group	Geography	Unit	Amount	Notes		
Abandoned Mine Reclamation	CSS extractive	Lancaster, PA	percent	14.44		Edit	Delete
Abandoned Mine Reclamation	nonregulated extractive	Lancaster, PA	percent	14.44		Edit	Delete
Abandoned Mine Reclamation	regulated extractive	Lancaster, PA	percent	14.44		Edit	Delete
Bioswale	Pervious urban-all	Lancaster, PA	acres treated	1500	Establishing an incentive program	Edit	Delete
Dry Detention Ponds and Hydrodynamic	CSS impervious	Lancaster, PA	percent	24.83		Edit	Delete

How is FAST Different than CAST?

CAST, MAST and VAST	FAST
• Designed for planning at the scale of the Watershed Model segments, or larger.	• Users will be able to plan at the facility/parcel level.
• Watershed land use (more than 1,000 users!)	• Users can input a land use that is different than the WIP or Milestones land use.

FAST Consistency with the Bay TMDL

- Based on the same model that was used to determine the TMDL and the allocations. FAST has internal consistency for loads, geographical scale and sectors
- Other available tools have assumptions that may be different from those used in developing the current TMDL

Use of FAST in TMDL Planning and Assessment

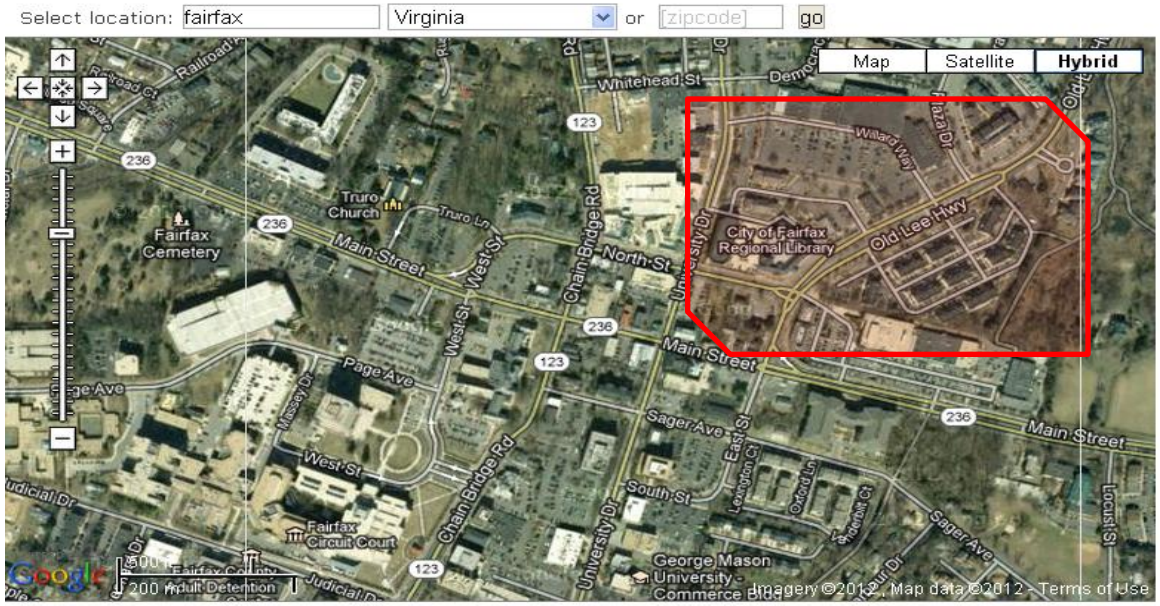
- Chesapeake Bay TMDL WIPs and Milestones
  - Identify BMPs that are most effective
    - Practices that convert land uses to a lower loading land use (buffers)
    - Urban infiltration practices-reduction of 85%-N and P, 95%-Sediment
    - Bioswale-reduction of 70%-N, 75%-P, and 80%-Sediment
    - Bioretention-reduction of 75%-N, 70%-P and, 80%-Sediment
    - Stream restoration (new)-reduction of 0.2 lbs/ft-N, 0.068 lbs/ft-P and, 310 lbs/ft-Sediment
  - Quantify the impacts of various management actions
  - Improve local management decisions
  - Allow involvement of a broad team

Summary - Why FAST?

- Replicable, consistent, transparent
- Consistent with EPA Watershed Model Phase 5.3.2 and WIP Phase II
  - Calculates all BMPs identically to CBP
  - No average delivery factor—the delivery factor is for each segment, like the Watershed Model
  - Compares among scenarios and with TMDL allocations (where state provides)
  - Facilitates an iterative process to determine if TMDL allocations are met
- Allows involvement of all departments and local planners in planning—not just at a federal agency or state level
- Quantifies the impacts of various management actions
- Builds load reduction strategies (by local area), improves local management decisions

Possible Future Enhancements

- BMP costs—CBP costs and user-defined
- BMP tracking in an output format required for CBP Progress reports
- Mapping capacity
- Ecosystem services



FAST Development Schedule

- Presentation to Federal Facility Team and request for additional considerations Nov 2013
- Development work and alpha version Winter 2014
- Testing and feedback
- Beta version Spring 2014
- Roll-out and training webinars through Summer 2014

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QUESTIONS?

We encourage you to test the existing tool at:

www.casttool.org

www.vasttool.org

www.mastonline.org