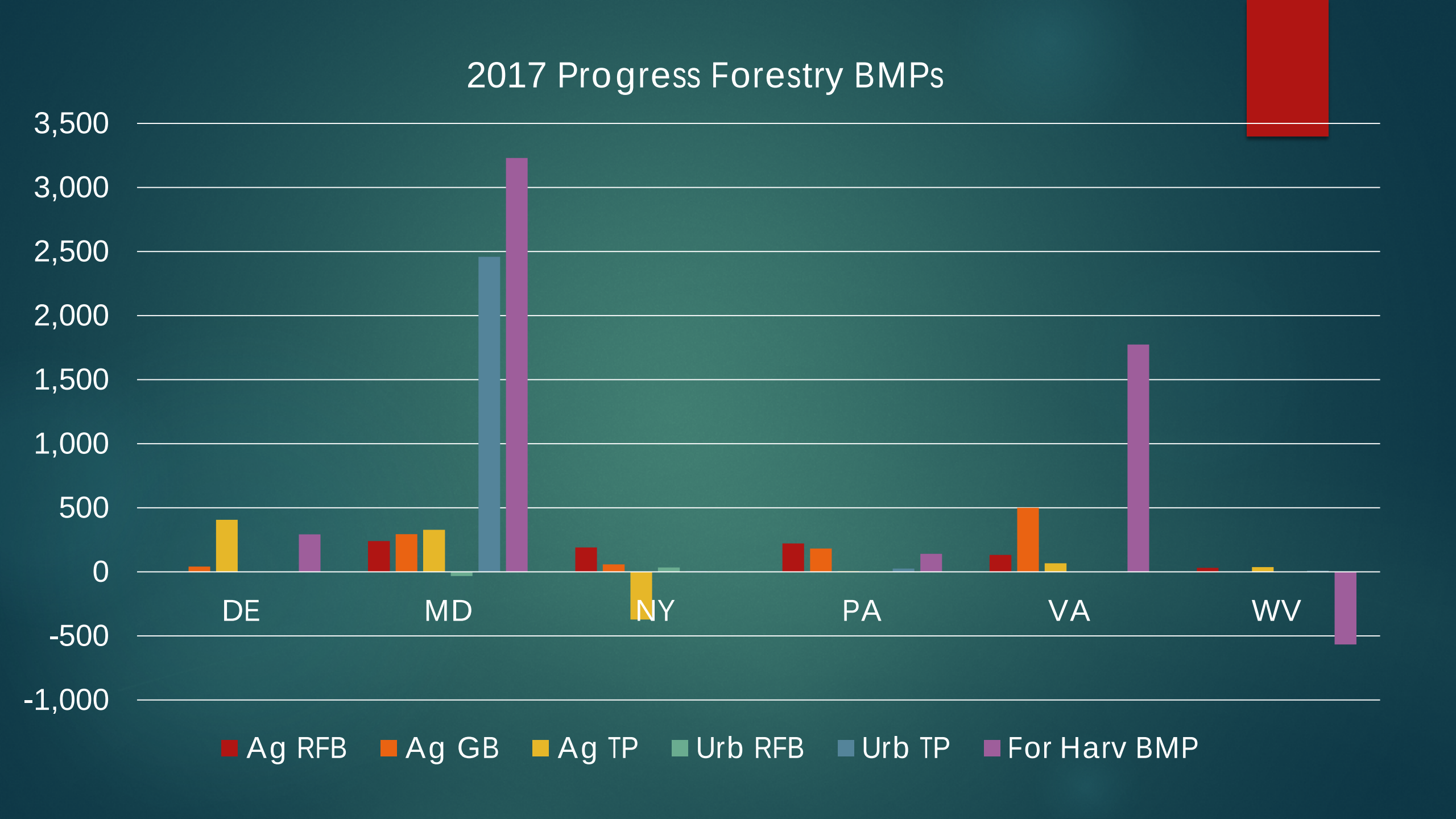
Bay Progress, 2025 Forecasting Scenarios, CAST, the Strategic Review System, and Verification

update for FWG 3/7/2018


Local Government Engagement and Communication during the Chesapeake Bay Midpoint Assessment and Phase III WIP Development (April 2016 – June 2019)
Version 4, Update March 2018
2010
Chesapeake Bay TMDL established and Phase I WIPs submitted
2011-2012
Phase II WIPs submitted
April 2016
Phase III WIP development planning begins
December 2016
States report annual BMP progress; Launch BMP Verification Program
January 2017
EPA releases Interim Phase III WIP Expectations
Spring 2017
States finalize initial local engagement strategy; Milestone Evaluation complete
October 2017
States present local engagement Strategy to CBP leadership/LGAC
November 2017
Water quality monitoring trends released
December 2017
States report annual BMP progress; begin scenario runs using CAST
December 2017
Partnership finalizes modeling tools and releases draft Phase III WIP Planning Targets
January 2018
Two-year Milestone Commitments Due; solicit local input September – October 2017
January 2018
States begin developing local planning goals
Mid-March 2018
EPA finalizes Phase III WIP Expectations
Spring 2018
Midpoint Assessment complete
Mid-May 2018
Partnership finalizes Phase III WIP planning targets
December 2018
States report annual BMP progress; Verification programs in place
March 1, 2019
Draft Phase III WIPs due. WIP will be posted on states' websites for public review through April 26, 2019.
June 28, 2019
Final Phase III WIPs posted on states' websites
2025
100% of practices in place to meet Bay restoration
Key dates in Bay TMDL process
Key activities or information that needs to be communicated to local governments or others
Key activities requiring local government engagement
Guidance for Phase III WIP development released

2017 BMP Progress Data

- Now available in BayTAS (Phase 5.3.2)
- 2018 Progress will be shown in CAST (Phase 6)
- RFB "progress" in CAST will show negative numbers in most states
- Importance of Verification and reporting


2017 Progress Forestry BMPs
3,500
3,000
2,500
2,000
1,500
1,000
500
0
-500
-1,000
DE
MD
NY
PA
VA
WV
Ag RFB
Ag GB
Ag TP
Urb RFB
Urb TP
For Harv BMP

2025 Forecast Scenarios in CAST

Chesapeake Bay 2025 Scenario Production Schedule

January 2018 (in CAST March 31st)

- Current Zoning

February 2018 (in CAST March 31st):

- Historic Trends (revised)
- Forest Conservation (revised)
- Forest Conservation + Zoning
- Growth Management
- Growth Management + Zoning
- Scope out jurisdiction-specific scenarios

March 2018 (in CAST April 2018):

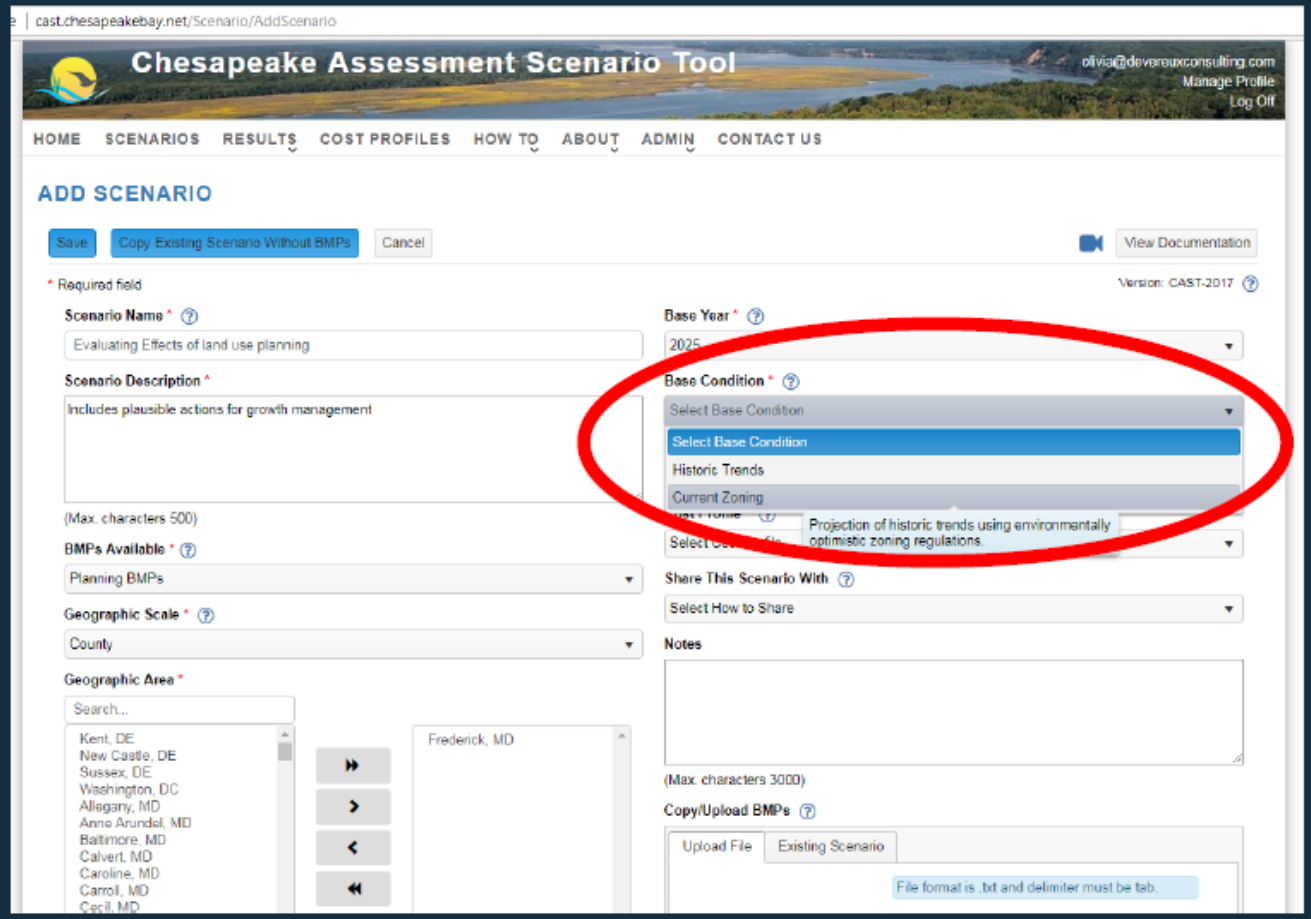
- Run jurisdiction-specific scenarios (one per jurisdiction: DC, DE, MD, NY, PA, VA, and WV)

April – December 2018 (in CAST on rolling basis as produced):

- Develop and run additional scenarios as requested by jurisdictions and other CBP Partners
- Streamline model and code for rapid production and evaluation of scenarios.

MULTIPLE BASE CONDITION OPTIONS

- Multiple projections of land use from 2013 becoming available (developed by the Land Data Team, led by Peter Claggett)
  - **Historic Trends**-continuation of land use patterns and rates of change
  - **Current Zoning**-projection of historic trends using environmentally-optimistic zoning regulations
  - **Conservation Plus**-represents a family of CBLCM scenarios. Implemented as Land Policy BMPs.



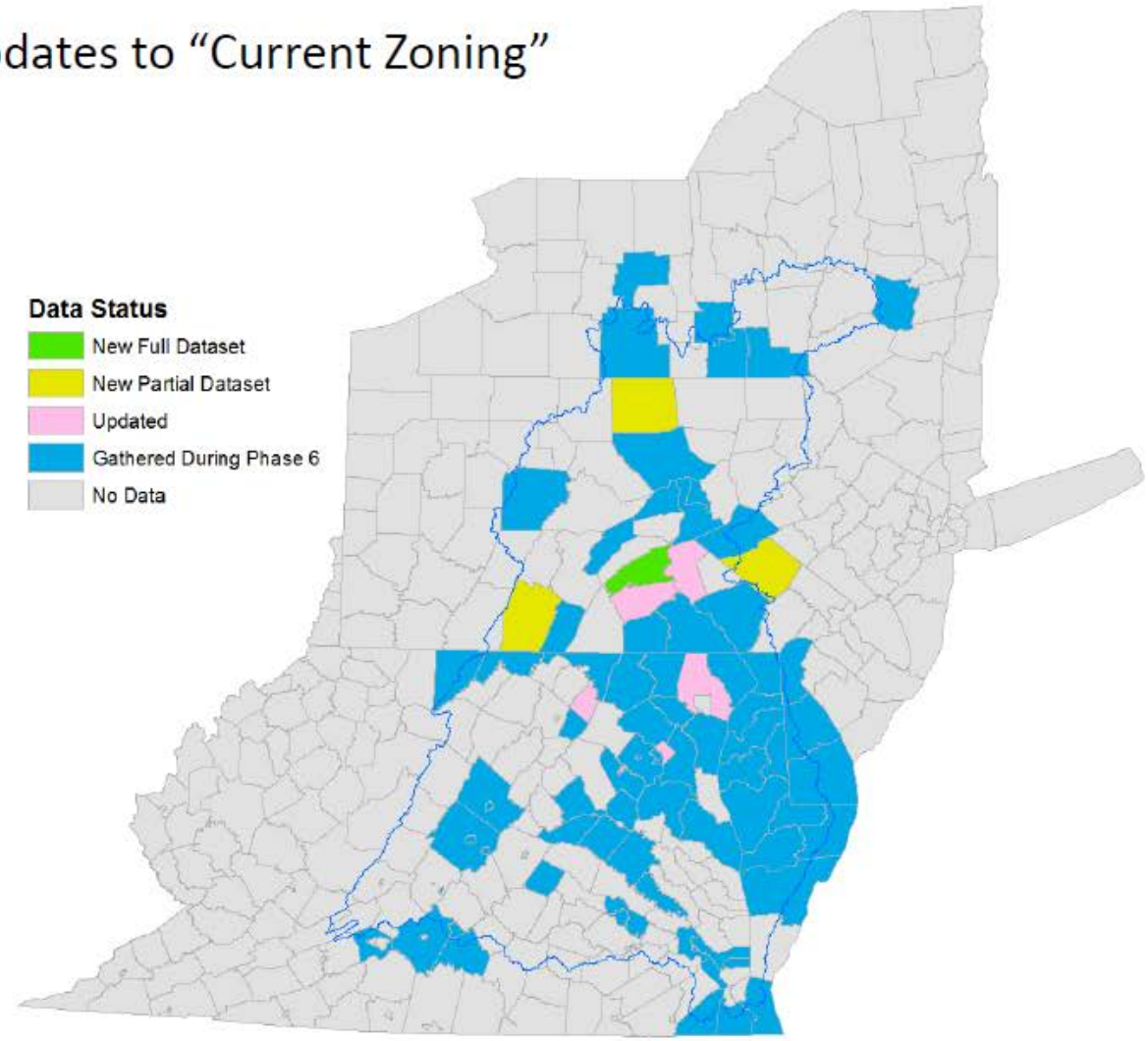
"Historic Trends" (revised) scenario represents "worst-case" and provides the greatest margin for safety.

Differences Between Current Zoning & Historic Trends (revised), units = acres.

States	Impervious	Turf Grass	Natural	Mixed Open	Cropland	Pasture
DC	-17	-6	23	0	0	0
DE	-656	-1,837	1,313	-8	1,070	119
MD	-8,528	-27,286	13,604	2,608	11,674	7,928
NY	-21	-148	-287	47	226	182
PA	-806	-3,464	-1,202	53	3,950	1,470
VA	-13,601	-20,702	17,368	3,261	5,468	8,207
WV	62	76	-39	5	-29	-75

Conclusion: The Historic Trends scenario has more development and therefore more conversion of natural and agricultural lands compared with Current Zoning. Development on septic is also higher in most states under the Historic Trends scenario compared to Current Zoning scenario (data TBD).

Zoning Updates to “Current Zoning”



"Conservation Plus" Scenario Narratives

Forest Conservation:
Organizations and governments will proactively pursue a variety of actions to conserve forests and wetlands which provide the greatest benefits to society including nutrient uptake, bank stabilization, stream temperature moderation, flood hazard avoidance and minimization, and wildlife habitat. Examples priority areas include high-priority conservation areas, riparian zones, shorelines, large contiguous forest tracts, and lands adjacent to protected areas.

Growth Management:
Organizations and governments will proactively pursue a variety of actions to encourage growth in areas with supporting infrastructure. Example priority areas include undeveloped or under-developed areas with adequate existing roads, sewer, water, and internet.

Agriculture and Soil Conservation:
Organizations and governments will proactively pursue a variety of actions to conserve farmland and productive soils. Example priority areas include agricultural districts, prime farmland, farmland of state importance, and floodplains.

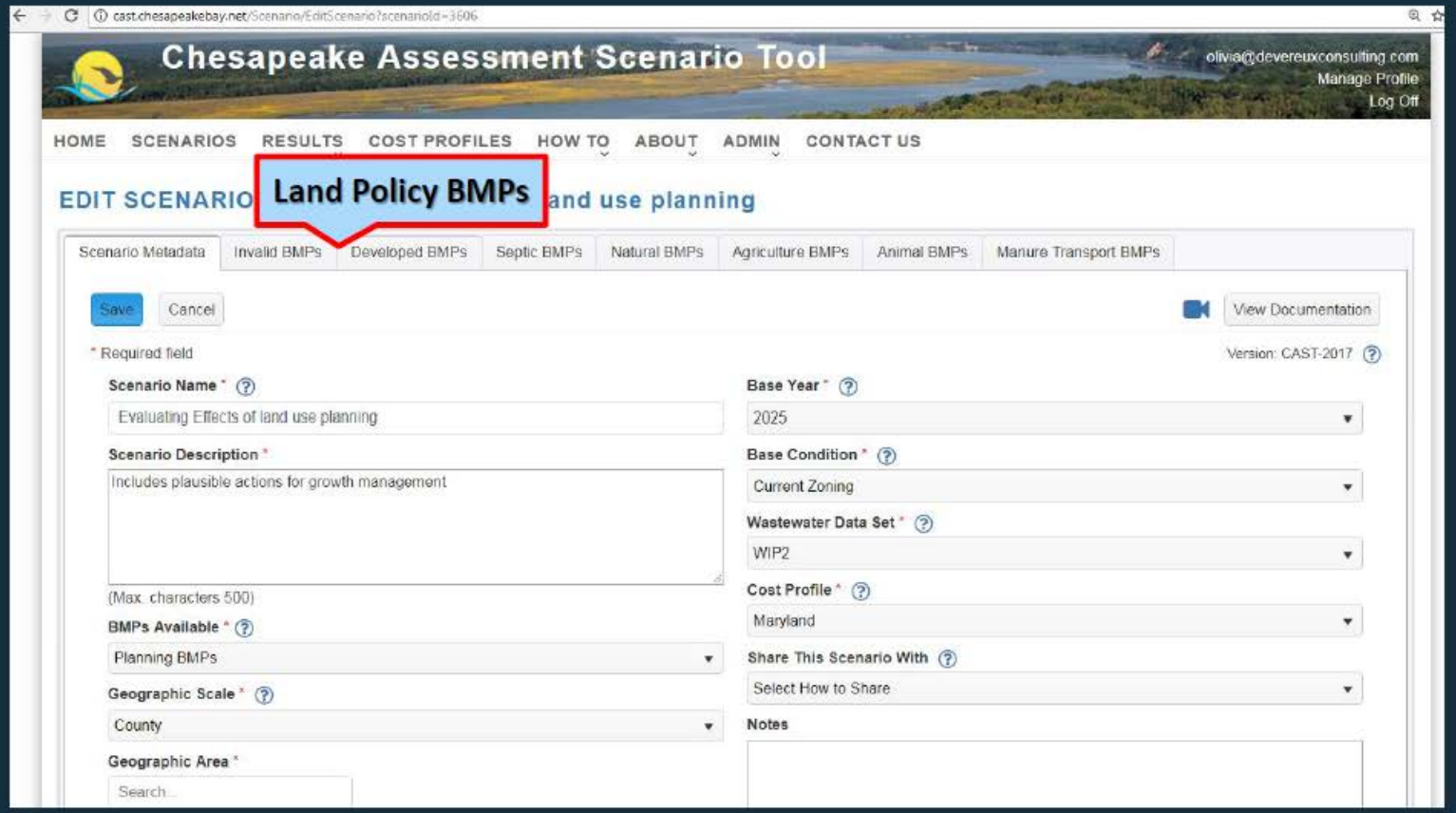
Scenario Specifications

1. **Forest Conservation (FC) scenario (1st Priority)**
   - Conserve riparian zones (100-ft)
   - Conserve wetlands (NWI, State Designated Wetlands, and Potential Conservable Wetlands(PA only))
   - Conserve areas subject to a 1m-rise in sea levels by 2100 and within 1-mile of National Wildlife Refuges
   - Conserve large forest tracts (250+ acres)
   - Conserve shoreline forests (all contiguous tracts within 1000-ft of the shoreline)
   - Conserve all high-priority conservation areas identified by the Chesapeake Conservation Partnership

2. **Growth Management (GM) scenario (2nd Priority)**
   - Increase percent of infill/redevelopment by 10% per decade
   - Increase urban densities by 10% per decade
   - Increase proportion of urban vs rural growth by 10% per decade
   - Expand sewer service areas by 1-mile per decade
   - Avoid growth on soils unsuitable for septic systems

3. **Agriculture and Soil Conservation (ASC) scenario (3rd Priority)**
   - Conserve all designated Agricultural Districts and areas zoned rural agricultural
   - Conserve 100-year floodplain and frequently-flooded soils
   - Conserve prime farmlands and farmland of state importance
   - Conserve potential restorable wetlands (PA only)

CONSERVATION PLUS LAND USES IMPLEMENTED AS *LAND POLICY BMPS*



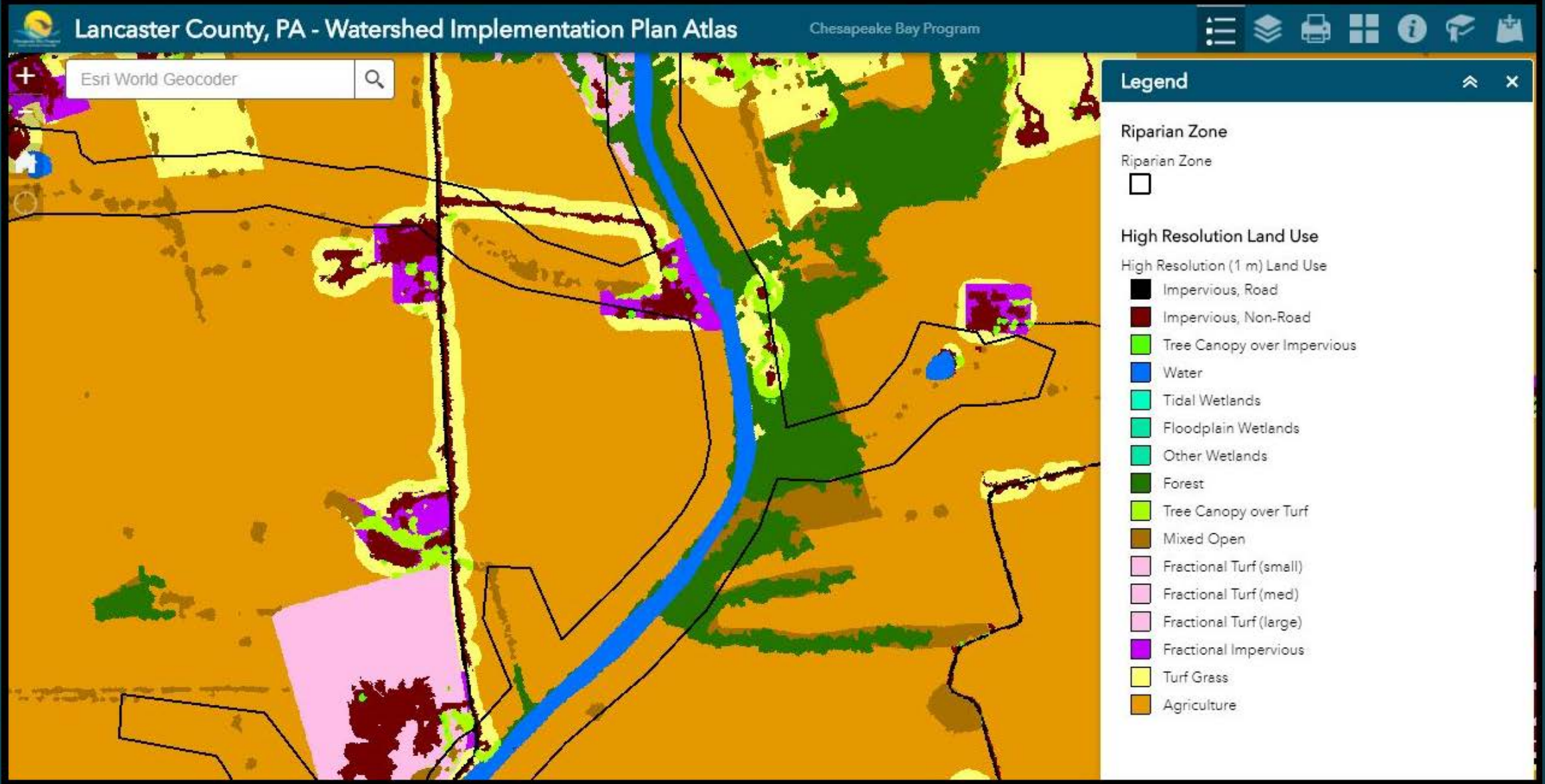
IMPACTS AND TIMING

- Impacts
  - Land use acres change
  - Animal numbers and feeding space acres are the same for a county, but may change within a modeling segment
  - Septic systems change
  - Loads may increase or decrease.

- March 31, 2018
  - Land Policy BMP functionality available
  - New Historic Trends for all years
  - Current Conservation Zoning with updated Construction and Harvested Forest acres for 2014 forward

Strategic Review by Management Board

- RFB Review in May, Tree Canopy in October
- Review Workplan Actions
- Answer questions In Guide (e.g., are your actions having the expected impact? how should we adapt?)
- Identify key issues for Management Board discussion and action
- Tell the story of your findings (PPT template, logic table, Guide)
- SRS Mentors for RFB (Laurel and Emily)
- April FWG - discuss RFB Logic Table, Guide and PPT
- New 2-year workplan due 90 days after Review


Lancaster County, PA - Watershed Implementation Plan Atlas
Chesapeake Bay Program
Esri World Geocoder
Legend
Riparian Zone
Riparian Zone
Riparian Zone
High Resolution Land Use
High Resolution (1 m) Land Use
Impervious, Road
Impervious, Non-Road
Tree Canopy over Impervious
Water
Tidal Wetlands
Floodplain Wetlands
Other Wetlands
Forest
Tree Canopy over Turf
Mixed Open
Fractional Turf (small)
Fractional Turf (med)
Fractional Turf (large)
Fractional Impervious
Turf Grass
Agriculture