Overview of Chesapeake Bay Agreement SAV Management Strategy

Becky Golden (MD DNR)

Climate Resiliency Workgroup &
STAC Workshop

April 25, 2017

Submerged Aquatic Vegetation Outcome

- Sustain and increase the habitat benefits of SAV in the Chesapeake Bay
- Achieve and sustain the ultimate outcome of 185,000 acres of SAV bay-wide necessary for a restored Bay
- Progress toward this ultimate outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025

Participating Partners

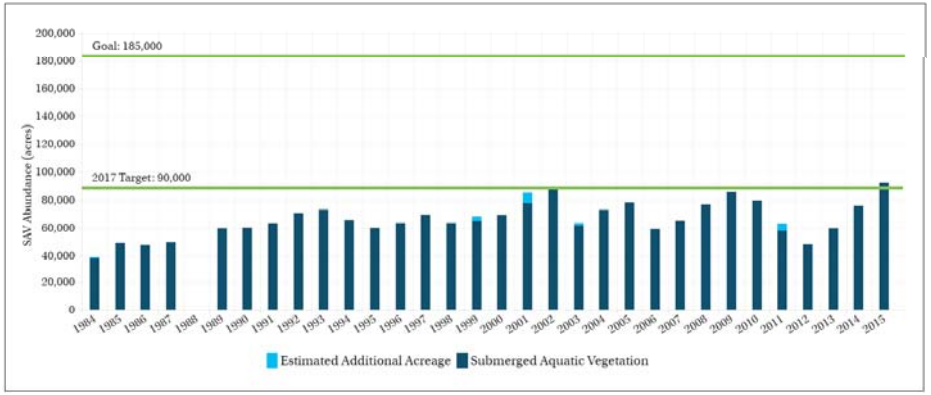
- Management Jurisdictions
  - Maryland, Virginia, Washington, D.C.
- Federal Agencies
  - Environmental Protection Agency, Fish and Wildlife Service, National Oceanic and Atmospheric Administration, U.S. Geological Survey, Army Corps of Engineers
- Academic/Research Partners
  - VIMS, U of MD, UMCES, ODU, GMU, AACC, SERC, Dickinson, just to name a few
- Non-profits and interested public

Factors Influencing Success

- Habitat Conditions
  - Good quality = shallow water with sufficient water quality and salinity for the species being targeted for restoration
- Human Impacts
  - Dredging, prop scarring, fishing practices
  - Invasive species
  - Shoreline alteration, sedimentation
- Restoration Science
  - Seed and propagule source and survival
  - Influence of physical habitat stressors

Current Effort and Gaps

- Water clarity improvements
  - TMDLs
  - Water Quality and Maintain Healthy Watersheds GITs
- SAV Monitoring
  - Annual survey to determine health and recovery
  - Track progress of nutrient management decisions
- Funding Gaps
  - Monitoring
  - Direct restoration
  - Research



SAV Management Approaches (2016-2017 Workplan)

- Restore Water Clarity
- Protect Existing SAV
- Restore SAV
- Enhance Research, Citizen Involvement and Education

Outcome: Submerged Aquatic Vegetation
Goal: Sustain and increase the habitat benefits of SAV (underwater grasses) in the Chesapeake Bay.
Outcome: 130,000 acres of SAV by 2025
Long term Target: 185,000 acres of SAV Bay-wide
2 year Target: 90,000 acres of SAV by 2017

Management Approach 1: Restore Water Clarity in the Chesapeake Bay					
Key Action** *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.*	**Performance Target(s)** *Identify incremental steps to achieve Key Action.*	**Participating Entity** *Identify responsible partner for each step.*	**Geographic Location**	**Timeline** *Identify completion date (month & year) for each step)*	**Factors Influencing and/or Gap** *Identify related factor or gap in Management Strategy*
1.Continue work to achieve water clarity/SAV standards in areas designated for SAV use - see Water Quality GIT Workplan	Water Quality Management Action 2 (Enhance Monitoring) Key Action 1 : Continue work to improve temporal and regional patterns in water quality criteria attainment in tidal and non-tidal waters.	Bay States (DC, DE, MD, NY, PA, VA, WV); Water Quality GIT	Chesapeake Bay Watershed	2016	
	Water Quality Management Action 3 (Bay TMDL Midpoint Assessment) Key Action 2: Explain the drivers of water-quality trends in the watershed.	Bay States (DC, DE, MD, NY, PA, VA, WV); Water Quality GIT	Chesapeake Bay Watershed	2016-2017	
2. Continue to improve the SAV component of shallow water model	Model the impacts of water quality on SAV and other living resources in the tidal Chesapeake Bay.	ODU (Zimmerman)	Tidal Chesapeake Bay	Dec-16	

Management Approach 2: Protect existing Submerged Aquatic Vegetation in the Chesapeake Bay

SAV Management Approaches

- Restore Water Clarity
  - Work to achieve water clarity/SAV standards
  - Continue to improve SAV component of shallow water model
- Protect Existing SAV
  - Evaluate and enhance current statutes and regulations that protect SAV
  - Monitor SAV
  - Manage invasive species (mute swans, water chestnut)
  - Determine economic value of SAV ecosystem services

SAV Management Approaches

- Restore SAV
  - Plant 20 acres of SAV seeds or propagules in appropriate areas each year
  - Investigate opportunities to optimize SAV habitat conditions for non-SAV projects

- Enhance Research, Citizen Involvement and Education
  - Advance knowledge of
    - SAV biology, ecology and genetics
    - Human induced stressors, including climate change
    - SAV restoration techniques
  - Complete and publish 3rd SAV Technical Synthesis
  - Develop SAV communication strategy

Monitoring and Assessing Progress & Adaptive Management

- Continued annual SAV monitoring is critical
  - Track annual progress toward ultimate 185,000 acre goal
  - Assess individual Bay segments and total SAV acreages against restoration targets
- SAV Workgroup actively:
  - shares progress, reviews performance assessments & adjusts management strategies if appropriate
  - Develops strategies to overcome barriers & identify trends, priority areas and research needs

Questions?

SAV Management Strategy:

http://www.chesapeakebay.net/documents/22042/2f_sav_6-24-15_ff_formatted.pdf

SAV Workgroup:

http://www.chesapeakebay.net/groups/group/submerged_aquatic_vegetation_workgroup

Contact:

Brooke.Landry@maryland.gov, Rebecca.Golden@maryland.gov