SAV Monitoring Program

~Sustainability and funding challenges~

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STAR

5.26.16

Are there any fatal flaws regarding the SAV Management Strategy and Two-year work plan?

Chesapeake Bay Program
A Watershed Partnership

Submerged Aquatic Vegetation Outcome

Management Strategy

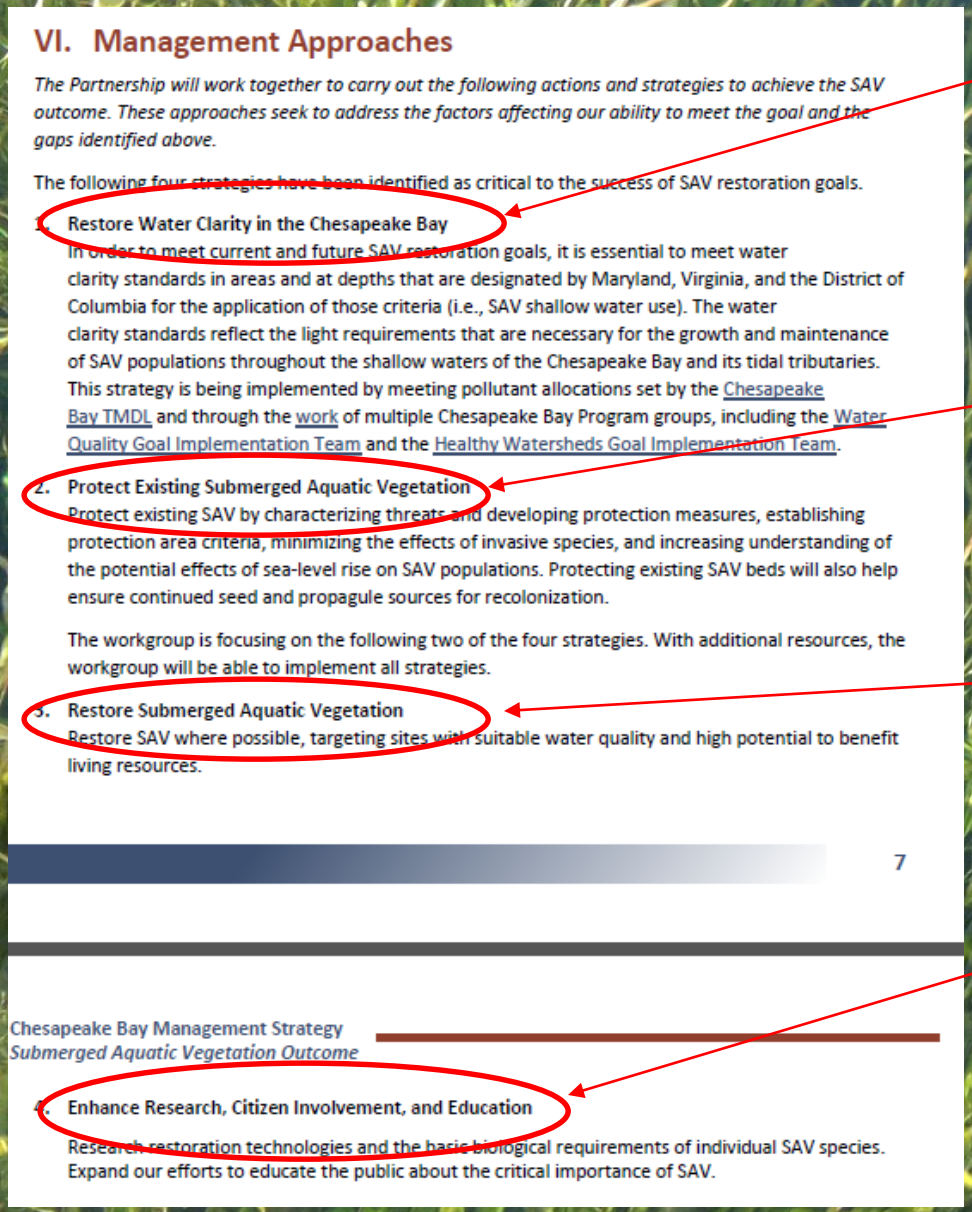
2015–2025, v.1

I. Introduction

Submerged aquatic vegetation (SAV), or underwater grasses, provide significant benefits to aquatic life and serve critical functions in the Chesapeake Bay ecosystem. Underwater grasses add oxygen to the water; improve water clarity by helping suspended sediment settle to the bottom; provide shelter for young striped bass, blue crabs and other species; and reduce shoreline erosion. Increasing the abundance of grasses in the Bay and its rivers will dramatically improve the entire Bay ecosystem.

II. Goal, Outcome and Baseline

SAV Monitoring Program = Achilles Heel



VI. Management Approaches

The Partnership will work together to carry out the following actions and strategies to achieve the SAV outcome. These approaches seek to address the factors affecting our ability to meet the goal and the gaps identified above.

The following four strategies have been identified as critical to the success of SAV restoration goals.

1. **Restore Water Clarity in the Chesapeake Bay**
   In order to meet current and future SAV restoration goals, it is essential to meet water clarity standards in areas and at depths that are designated by Maryland, Virginia, and the District of Columbia for the application of those criteria (i.e., SAV shallow water use). The water clarity standards reflect the light requirements that are necessary for the growth and maintenance of SAV populations throughout the shallow waters of the Chesapeake Bay and its tidal tributaries. This strategy is being implemented by meeting pollutant allocations set by the Chesapeake Bay TMDL and through the work of multiple Chesapeake Bay Program groups, including the Water Quality Goal Implementation Team and the Healthy Watersheds Goal Implementation Team.

2. **Protect Existing Submerged Aquatic Vegetation**
   Protect existing SAV by characterizing threats and developing protection measures, establishing protection area criteria, minimizing the effects of invasive species, and increasing understanding of the potential effects of sea-level rise on SAV populations. Protecting existing SAV beds will also help ensure continued seed and propagule sources for recolonization.

   The workgroup is focusing on the following two of the four strategies. With additional resources, the workgroup will be able to implement all strategies.

3. **Restore Submerged Aquatic Vegetation**
   Restore SAV where possible, targeting sites with suitable water quality and high potential to benefit living resources.

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Chesapeake Bay Management Strategy
Submerged Aquatic Vegetation Outcome

4. **Enhance Research, Citizen Involvement, and Education**
   Research restoration technologies and the basic biological requirements of individual SAV species. Expand our efforts to educate the public about the critical importance of SAV.

- **Water clarity assessment** = dependent on monitoring data
- **Protection of existing SAV** = dependent on monitoring data
- **Restoration** = dependent on monitoring data
- **Research, education and outreach** = dependent on monitoring data

We're not the only ones dependent on the data….

- The Chesapeake Bay Watershed Agreement dictates Vital Habitat Goals that include **measurable SAV outcomes** – measurements only possible because of the aerial monitoring program.

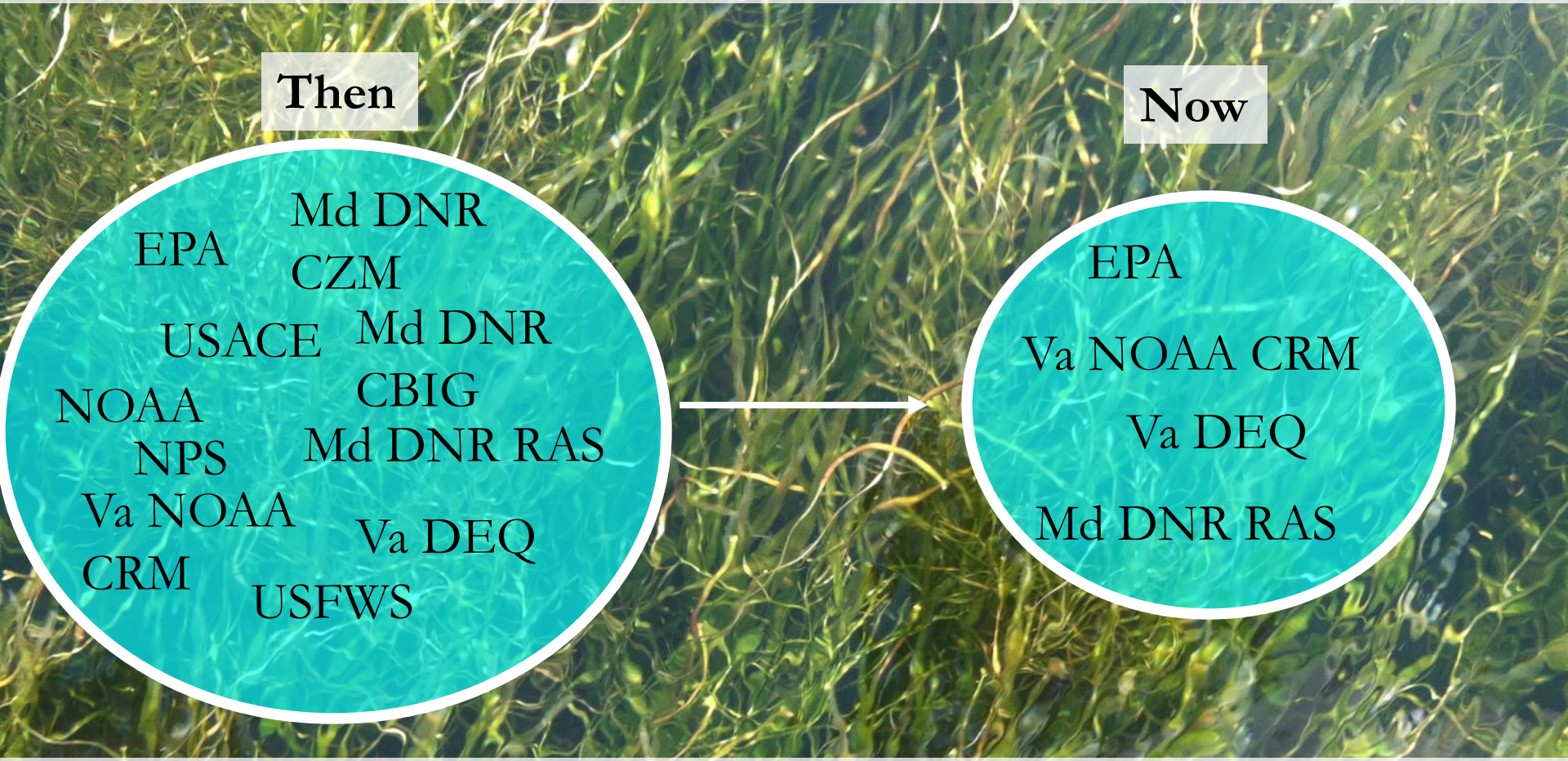
- SAV acreage is used as a **water clarity indicator** and measure towards achievement of the Bay Program's **water quality goals**. Those assessment results are used to list or delisted impaired water bodies as well as target the development of **TMDLs**.

- Multiple local, state, and federal agencies use SAV distribution data for **regulatory and permitting** purposes which include identifying:
  - potential conflicts with dredging and filling,
  - pier and shoreline construction conflicts, and
  - Potential conflicts with fishing practices, such as hydraulic clam dredging and shellfish aquaculture

- SAV distribution, abundance, and species data is used to **model and forecast** change in the Bay's resource and habitat in response to a variety of human induced stressors.

- SAV distribution, abundance and species data is used to identify sites where scientists collect data that will **advance our knowledge of SAV** biology and ecology and that will ultimately be used to **influence restoration and management efforts.**

Funding pool diversity….

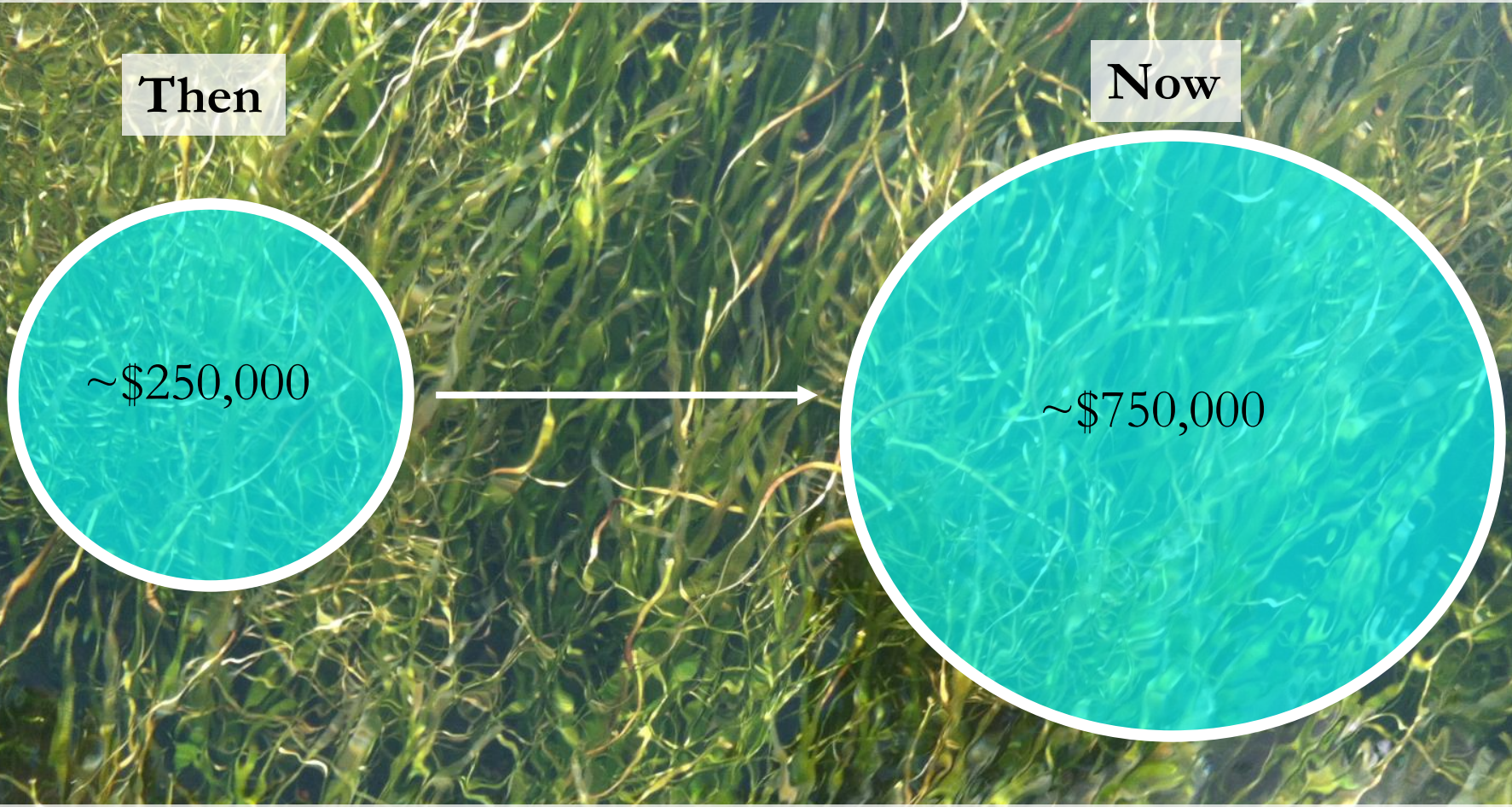


SAV bed resilience is to species diversity

as

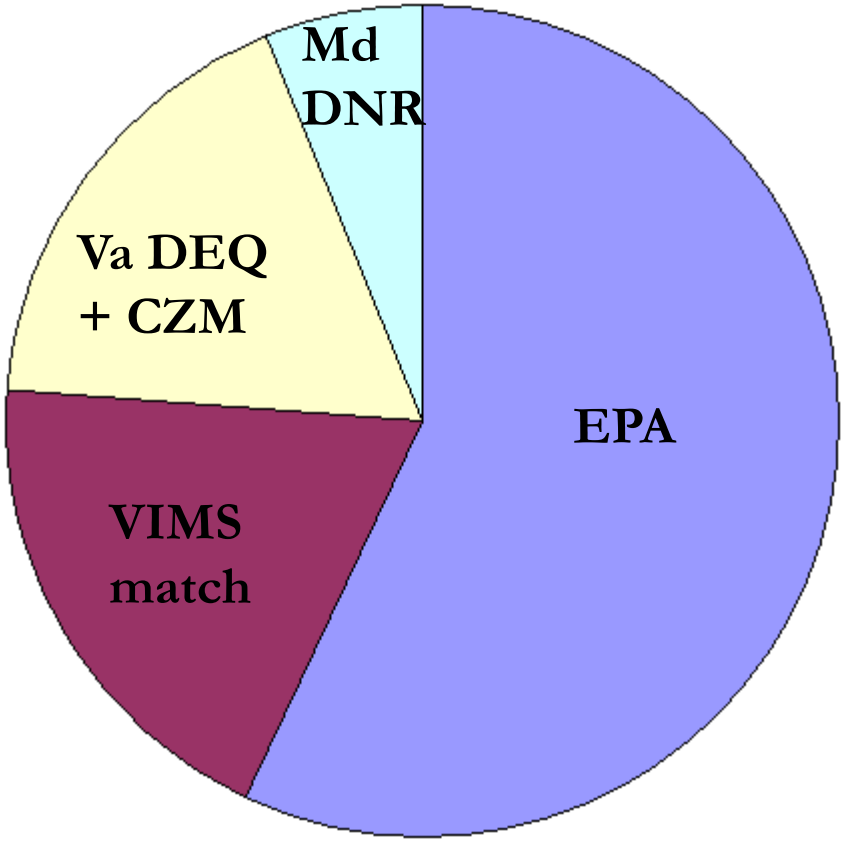
SAV Monitoring Program is to funding partner diversity

Monitoring program cost…

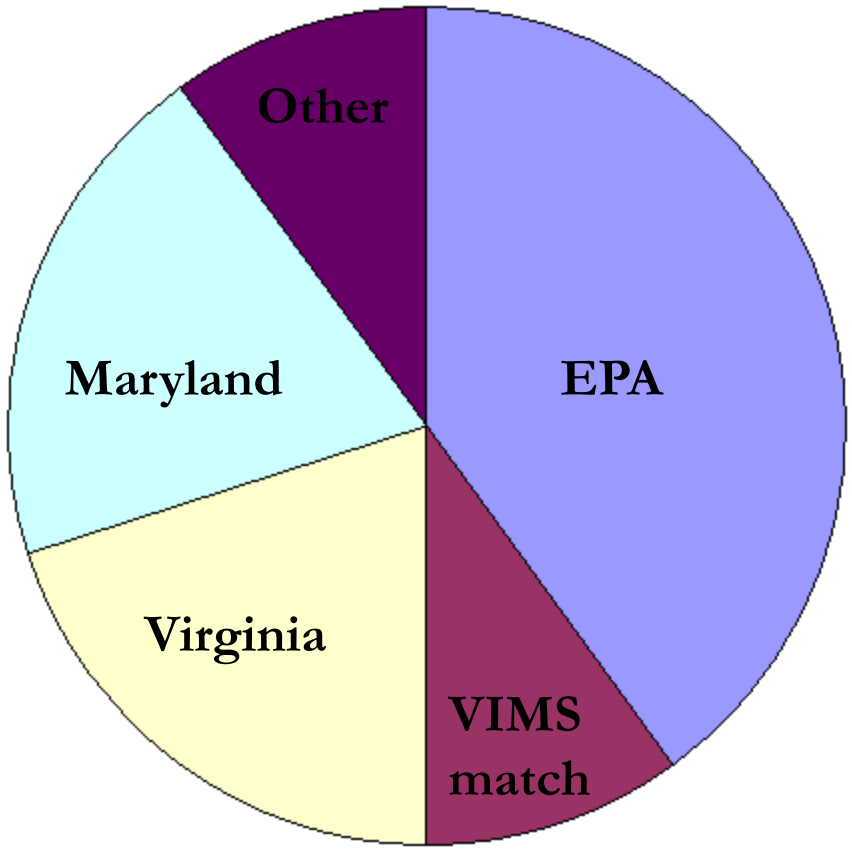


The SAV Monitoring program has become more expensive over the years as the quantity of data and level of detail, accuracy, and staff expertise have increased, with some of the increased price tag due to **inflation**.

Current % Contribution



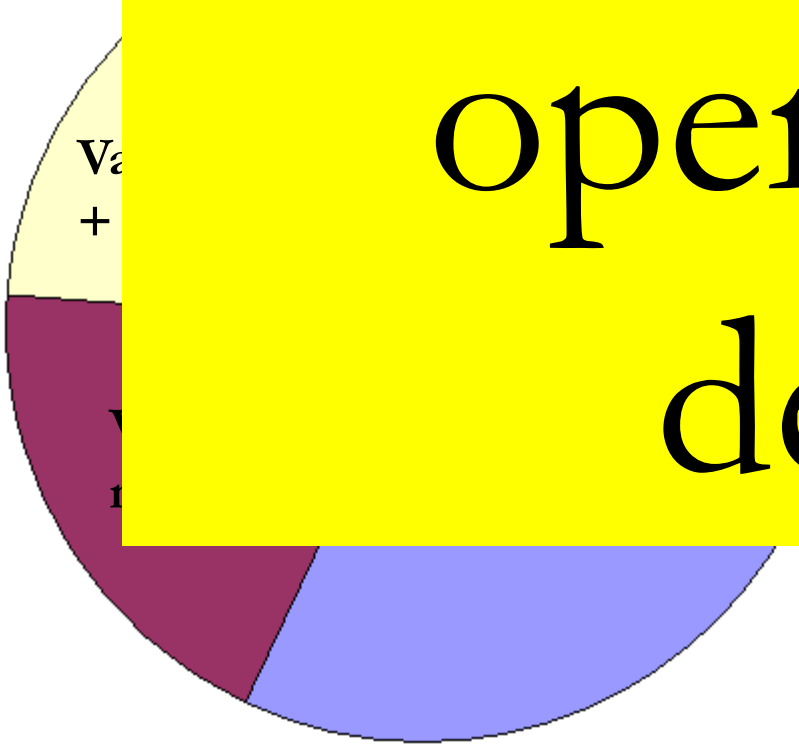
Future Ideal % Contribution

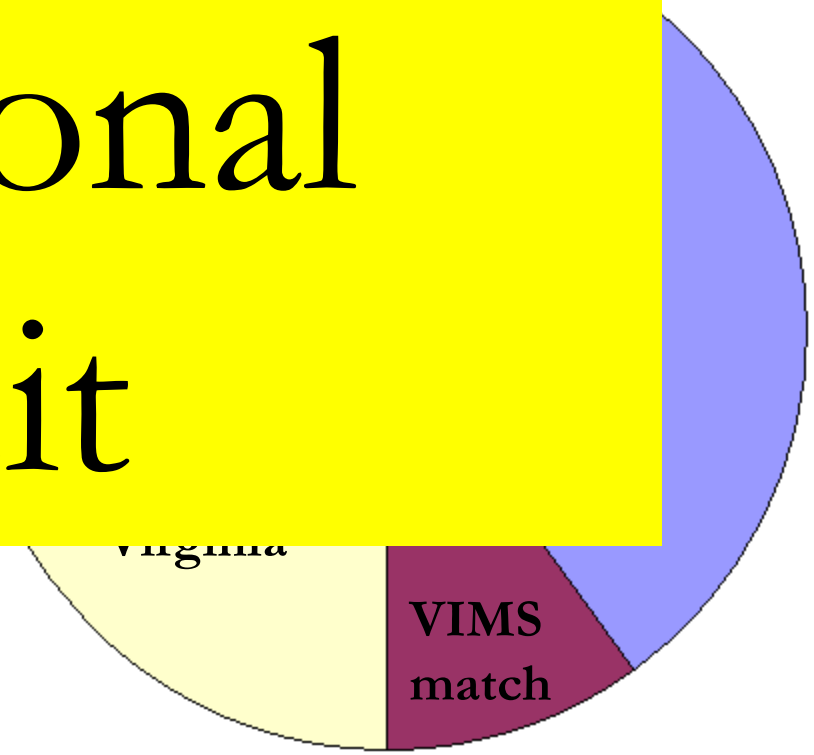


Current %

Future Ideal %

~$100,000 operational deficit





What are we doing to remedy the situation?

1. Data user Workshop

Description of the Workshop
The SAV Workgroup proposes a workshop to evaluate the current SAV aerial survey/ground survey program design to ensure the full array of diverse user needs will be met well into the future, but through a streamlined survey design costing less per year than the current survey design.

Workshop objective is to reach agreement on:

1. The full range of existing, intended and potential management, regulatory and research uses of the combined aerial and ground surveys' data and products;

2. What are the exact survey design requirements of each of those management, regulatory and research uses; and

3. Re-designed, integrated SAV aerial and ground surveys which best address all or the majority of the higher priority management, regulatory and research uses and fully factor in realistic operational considerations.

Date, Time and Place TBD….

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2. Repeatedly requesting financial partnerships with anyone who will listen…..

I have asked:

1. The Department of Defense
2. The Army Corps of Engineers
3. The State of Maryland

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Positive feedback from new leadership, but no guarantees….

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- CBP Habitat Goal Implementation Team
2. STAC
3. DNR Leadership and Bay Policy

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Positive feedback here as well….

How can STAR help?

1. **Provide input for/during/after the Data user Workshop?**

2. **Figure out who to talk to with the DoD and USACE that might be of more help/have the authority to actually grant our request?**

3. **Use your collective influence and panache to convince potential funding partners to contribute?**

4. **???**