

Securing a More Diverse Set of SAV Aerial Survey Funding Partners

Background

The annual survey of submerged aquatic vegetation (SAV) in Chesapeake Bay has served as a key indicator of Bay health and restoration progress for decades. The extent and diversity of these underwater bay grasses help inform whether our pollution reduction efforts are achieving their intended objectives. As important as this indicator is, over the 33-year history of the survey, we have witnessed a significant decline in the number and diversity of federal and state agency funding partners (from a high of seven to four current funding partners, including EPA, VA DEQ, VA CRM, and MD DNR). As the number of federal funding partners decreased and the funding levels contributed by Maryland declined, EPA incrementally increased its funding contribution to cover the ever growing funding shortfall. The current funding situation for the SAV aerial survey is not sustainable.

Defining Diversity in Funding Partners

Coming out of the March 2017 SAV Aerial and Ground Survey Design Workshop, it was established that the SAV Monitoring Program's SAV acreage and distribution data is used to meet a plethora of regulatory and management needs, as well as advocacy-related decision making and public communications needs and uses. In order to sustain the Chesapeake Bay SAV Aerial and Ground Survey Monitoring Program well into the future, the Chesapeake Bay Program partnership must increase the number and variety of survey funding partners.

In order to increase the number and diversity of funding partners, the recommendations to the Partnership based on outcomes of the March 2017 workshop are to:

- 1) increase the number of federal agency funding partners;
- 2) increase the number of and size of state agency funding levels for the survey;
- 3) open up the opportunity for non-governmental organizations to contribute funding for the survey; and
- 4) re-invest part of EPA's significantly expanded funding for the SAV aerial survey to sustain components of the Partnership's shared stream flow, water quality and living resources monitoring networks.

Federal Agency Funding Partners

National Oceanic and Atmospheric Administration

- NOAA uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its estuarine fisheries habitat restoration and protection as well as permit review responsibilities and missions.
- NOAA has directly contributed funding to the SAV aerial survey in the past, but only for three years—2006, 2013, and 2014.
- NOAA has stated that it contributes funding indirectly through Maryland's and Virginia's NOAA coastal zone management funds which have been and continue to be part of the source of the two states' SAV aerial survey funding contributions.
- **ACTION:** Work with Sean Corson, NOAA Chesapeake Bay Office Director (Acting), to secure NOAA's commitment to become a steady aerial survey funding partner.

National Park Service

- The NPS had funded the survey in the 1980s and again in 2006 and 2011 to help expanded the aerial survey to also survey and map SAV in the Assateague and Chincoteague bays on the Atlantic coasts of Maryland and Virginia.
- The NPS uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its resource protection and public education missions supporting national park resources and multiple state and local partners across the watershed.
- **ACTION:** Work with Marian Norris to secure NPS's commitment to becoming an aerial survey funding partner.

U.S. Army Corps of Engineers

- CoE Baltimore and Norfolk Districts routinely use the SAV aerial imagery as well as the SAV bed maps and acreages as part of its permit review, project design and construction responsibilities and missions.
- CoE has only contributed funding to the aerial survey twice (2004, 2012) over the past 32 years of the survey.
- **ACTION:** Work with both the Baltimore (Heather Cisar) and Norfolk (TBD) districts to secure the CoE's commitment to becoming a consistent SAV aerial funding partner.

U.S. Department of Defense

- DOD facilities border on about 10 percent of the total length of flight lines flown every year as part of the aerial survey program.
- DOD facilities use the SAV aerial imagery as well as the SAV bed maps and acreages as part of their Integrated Natural Resource Management Plans development, NEPA assessment, wetlands permitting, project design and construction responsibilities and missions.
- **ACTION:** Continue to work with Adam Wright on seeking DOD funding for the proposal provided by VIMS at DOD's request.

U.S. Environmental Protection Agency

- EPA, through the CBP partnership, uses the SAV bed acreages data to report annually back to the public on progress being made towards Chesapeake Bay ecosystem restoration.
- EPA have provided funding for the Chesapeake Bay SAV aerial survey starting back in the late 1970s and annually since 1984.
- Over time, EPA's funding contribution increased from \$130,000 in the mid-1980s up to \$360,000 by 2016 as a direct result of federal agency partners pulling out of their prior funding roles and decreasing funding share from Maryland state agencies.
- **ACTION:** Determine how much of the current aerial survey funding can EPA reinvest in ensuring the sustainability of the Chesapeake Bay Program partnership's other shared stream flow, water quality and living resources monitoring networks.

U.S. Fish and Wildlife Service

- USFWS routinely uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its permit review as well as fish and wildlife habitat protection and restoration responsibilities and missions.
- USFWS was a consistent funding partner during the early years of the SAV aerial survey up through 1998 at which point the funding stopped completely.
- **ACTION:** Work with Jennifer Greiner to once again secure USFWS's commitment to becoming a SAV aerial survey funding partner.

State Agency Funding Partners

Delaware Department of Natural Resources and Environmental Control

- Determine if Delaware would like to expand the SAV aerial survey to include Delaware's coastal bays.
- **ACTION:** Work with Brittany Sturgis to explore this opportunity and seeking funding contribution to cover the aerial imagery acquisition and mapping.

District of Columbia Department of Energy and Environment

- DDOEE uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its permit review and water quality standard attainment assessment and impaired waterbody listing/delisting responsibilities and missions.
- DDOEE has not been a funding partner in the past.
- **ACTION:** Work with Hamid Karimi to explore with the opportunity to commit a portion of their annual Chesapeake Bay Regulatory and Accountability grant funds to support the SAV aerial survey.

Maryland Department of Natural Resources

- MD DNR uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its permit review as well as estuarine habitat restoration and protection, public reporting on Bay restoration, and coastal zone management responsibilities and missions.
- MD DNR has been a consistent funding partner during the entire 33-year history of the SAV aerial survey program, however, their funding levels through time have decreased.
- **ACTION:** Work with Dave Goshorn and Brooke Landry to ensure MD DNR remains committed to continuing as an aerial survey funding partner.

Maryland Department of the Environment

- MDE uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its permit review and water quality standard attainment assessment and impaired waterbody listing/delisting responsibilities and missions.
- MDE has not been a funding partners over the course of the SAV aerial survey history.
- **ACTION:** Work with Matt Stover to bring MDE on board as an aerial survey funding partner.

Virginia Department of Environmental Quality

- VA DEQ uses the SAV aerial imagery as well as the SAV bed maps and acreages as part of its permit review and water quality standard attainment assessment and impaired waterbody listing/delisting as well as coastal zone management responsibilities and missions.
- VA DEQ has been a consistent funding partner during the entire 33-year history of the SAV aerial survey program, increasing their funding levels through time.

Virginia Institute of Marine Science

- VIMS uses the SAV aerial survey imagery and acreage and density data in its research programs as well as its coastal zone management responsibilities and missions.
- Throughout the 32-year history of the SAV aerial survey, VIMS has provided a funding match to the state and federal agency funds.

Current and Proposed Target Funding Levels by Agency

<u>Agency</u>	<u>Current</u>	<u>Proposed</u>
DDOEE	0	3,000
MD DNR	45,000	45,000
MDE	0	40,000
VA DEQ	72,000	72,000
VA CRM	60,000	60,000
VIMS	<u>150,000</u>	<u>150,000</u>
States Subtotal:	\$327,000	\$370,000
COE	0	50,000
DOD	0	70,000
EPA	360,000	130,000
NOAA	0	30,000
NPS	0	30,000
USFWS	<u>0</u>	<u>30,000</u>
Feds Subtotal:	\$360,000	\$340,000
Total:	\$687,000*	\$710,000

*Reflects a current funding shortfall of \$23,000. Total cost of the aerial survey is currently \$710,000.

The underlying rationale for the proposed target funding levels between state and federal agencies partners and by individual agencies as expressed by the March 2018 workshop participants is as follows:

- The state agency partners need to increase their investment in the survey given the numerous and direct uses and benefits they derive from the survey, therefore, the total proposed combined state agency funds would be increased up to 52 percent of the total survey budget, up from the current 46 percent.

- The federal partners with clearly defined resource management, protection and regulatory oversight missions (CoE, NOAA, NPS, and USFWS) which directly depend on the use of SAV aerial survey products—e.g., aerial imagery, mapped SAV beds—need to take responsibility for the costs of these products which they have been receiving free of charge to their respective agencies for decades.
- Given just over 10 percent of the SAV aerial survey flight-lines intersect with DoD facilities along the Bay’s tidal shoreline, their proposed investment is 10 percent of the total cost of the survey.
- A significant portion of EPA’s greatly expanded funding contribution to the aerial survey needs to be re-invested in other components of the Partnership’s larger array of share monitoring networks to offset continued increasing costs of monitoring.

Signing of a Partnership SAV Aerial and Ground Survey MOU

The full array of local, state, and federal agencies, academic institutions and non-governmental organization represented at the March 2017 workshop all expressed strong needs to continue the SAV aerial survey program and enhance the existing ground survey program. To further institutionalize the survey within the Partnership’s suite of collaborative, coordinated monitoring networks, its recommended that the Partnership draft up, review, approve and sign a Chesapeake Bay SAV aerial and ground survey memorandum of understanding (MOU).

The MOU would spell out how the Partnership will continue to collaboratively fund, as well as support the continued evolution of the aerial and ground survey programs. It would also describe how the Partnership will continue to evolve the SAV aerial and ground survey designs over time to meet the ever-changing resource management, regulatory decision-making, and public communication roles and missions of the various partners.