Chesapeake Bay Program

410 Severn Avenue, Suite 112, Annapolis, Maryland 21403. 410-267-5700. FAX 410-267-5777. Toll free 800-968-7229

Dr. Christopher Pyke
Chair of the Chesapeake Bay Program's Science and Technical Advisory Committee
645 Contees Wharf Road
Edgwater, MD 21037

Mr. Nicholas DiPasquale
Director of the Chesapeake Bay Program
410 Severn Avenue
Annapolis, Maryland 21403

Tuesday, January 24, 2012

Dear Dr. Pyke, Mr. DiPasquale and the membership of STAC:

The Submerged Aquatic Vegetation Workgroup (SAVWG) wishes to express our gratitude to the Science and Technical Advisory Committee (STAC) and the assembled Review Committee (RC) for conducting the recently completed review entitled "Evaluation of the Effectiveness of SAV Restoration Approaches in the Chesapeake Bay." We understand the difficulty involved in such an endeavor and appreciate the substantial effort of the RC in its evaluation of Chesapeake Bay SAV restoration projects. We are also pleased to have the opportunity to respond to STAC's evaluation.

Overall, the SAVWG concurs with the conclusions and recommendations of the RC. The SAVWG agrees with all five of the RC's main recommendations and would like to emphasize a particular point for managers and decision makers to consider. We strongly support the suggestion to implement full adaptive management (section 4.1), specifically item #5 which states, "Executive leadership and institutional structures should support iterations of restoration, evaluation, and learning that include flexibility to adjust restoration targets and reallocate efforts and funds as knowledge is gained." This support was lacking in our original efforts. The SAVWG feels this is the most salient outcome of the STAC review, and it is relevant to all restoration efforts, not just SAV. We were on the cusp of having sufficient information (seed production, plant establishment, plant survival, habitat and water quality data) to complete the adaptive management cycle when funding was dramatically reduced after two years of restoration efforts.

The report's evaluation of SAV restoration success in terms of "operational, functional, and programmatic" elements enabled this complex issue to be efficiently addressed. We agree that operational success was achieved by building restoration capacity at a level commensurate with funding. Functional success, as defined, was not achieved as the majority of restoration areas did not persist longer than one year. We concur that only moderate programmatic success was achieved, in large part due to limitations in implementing full adaptive management. To sum up our experience: 1) we developed the capacity to perform restoration on the scale of 10's of hectares per year; 2) there was low persistence in planted areas (<10% of sites), although there was some long-term (>5 years) persistence and expansion in a few locations; 3) the program produced numerous technical notes and peer-reviewed articles that defined how to improve large-scale SAV restoration,

The Chesapeake Bay Program is a partnership among the U.S. Environmental Protection Agency representing the federal government, the State of Maryland, the Commonwealth of Pennsylvania, the Commonwealth of Virginia, the District of Columbia, the Chesapeake Bay Commission, and participating Citizen Advisory Groups.

Chesapeake Bay Program

410 Severn Avenue, Suite 112, Annapolis, Maryland 21403. 410-267-5700. FAX 410-267-5777. Toll free 800-968-7229

and identified key research needs; and 4) the SAVWG learned the difficulty in managing adaptively when it takes 3 to 5 years to assess success of restoration efforts whereas funding occurs on annual cycles. Lastly, we maintain that there may be locations in the Bay that can support large-scale restoration efforts as identified by small-scale test plots. For example, two locations in the James River were planted in the late 1990s and have persisted through the present.

Based on discussion of the RC report's recommendations, the SAVWG is developing a formal research agenda. Items in the forefront of this agenda include, among others: 1) identifying the synergistic and cumulative effects on SAV of multiple stressors (temperature, salinity, turbidity, dissolved oxygen, sediments, waves and currents); 2) quantifying SAV response to extreme events and habitat conditions; 3) determining SAV response to climate change; and 4) developing SAV habitat requirements specific to restoration, by species and planting unit type (seed, whole plant, other propagule). Additionally, these research efforts should examine the feedback effects of existing beds on physical and chemical SAV growth conditions.

The SAVWG recommends that advocates of other habitat types take advantage of independent reviews, such as those offered by STAC. The review of our program has clarified discussion of goals, measures of progress and success and how to better manage SAV restoration adaptively in the future. Other habitat restoration programs, specifically oyster, wetland, stream and fish passage restoration, would find similar re-focusing beneficial to maximizing success and return on investment.

For future program evaluations, the SAVWG recommends that reviewers keep in mind the timeframe of program activities and evaluate programs based on the state-of-the-science as it existed during the activity. More recent science should be included in the recommendations, rather than in the review section.

In summary, the SAVWG believes the review helped reinforce past findings and to focus its future efforts in SAV restoration in a more integrated, cost effective and successful manner for the benefit of the Bay and its living resources and the acquisition of scientific knowledge.

Best regards,

Lee Karrh

On behalf of the Submerged Aquatic Vegetation Workgroup of the Chesapeake Bay Program.