Marshes for Tomorrow – a strategic plan for the restoration and resilience of Maryland's tidal marshes - David Curson

Maryland supports some of the most extensive tidal marshes on the Atlantic coast, yet this ecosystem is threatened by climate-driven sea level rise. Significant marsh loss is already well underway. Marshes for Tomorrow is an initiative of the Delmarva Restoration and Conservation Network, and led by Audubon, to create and implement a tidal marsh restoration plan across the largest marsh landscapes on Maryland's eastern shore. It has three goals:
1.Identify 25,000 acres in the high marsh zone to be maintained as breeding habitat for Saltmarsh Sparrow (Ammodramus caudacutus) in Maryland over the long term.
2.Determine a schedule of spatially explicit restoration actions for these 25,000 acres of marsh.
3.Create conceptual conservation strategies at the local/county level, which incorporate the marsh restoration schedules and which have broad approval of local communities.
Audubon is engaging many partners in this effort. A Core Analysis Team of wetland researchers and restoration practitioners is developing spatial models to determine 1) The current and future condition of marshes, and 2) Appropriate restoration practices to implement over coming decades. Working groups of federal, state and local government agencies, NGOs and local communities, will use these models to prioritize 25,000 acres for long-term conservation. A Community Engagement Team of conservation professional based in the project's region of Dorchester, Somerset and Worcester Counties is soliciting local community input on the plan. We will integrate the Marshes for Tomorrow Plan with parallel planning initiatives underway for Chesapeake Bay and the State of Maryland.

From Discussion to Action: increasing diversity, access and inclusion on beaches from Maine to Virginia - Nancy Pau

The piping plover working group is a coalition of beach managers from Maine to Virginia, consisting of federal and state agencies, non-profit organizations, municipalities, academics, and community groups. Collectively, the group hires hundreds of seasonal staff annually, including many who are new to conservation careers. In recognition of this opportunity, the group dedicated significant time during our 2022 workshop to explore how we can advance issues related to Diversity, Equity, Justice, Inclusion and Accessibility (JEDIA). Leveraging collective expertise and experience over a 2 year period, the group developed and tested concrete, step-wise strategies and tools for supervisors to implement from the hiring process through the field season. This presentation will provide an overview of strategies aimed at increasing supervisor capacity to: (1) recruit a more diverse applicant pool, (2) make seasonals feel welcome and included, and (3) create career ladders for early career professionals. We will highlight how our work fits into the Sphere of System Change model and identify some institutional barriers that require leadership support to address.

One Water and Integrated Management Case Study: Chesapeake Bay TMDL Compliance in Anne Arundel County, MD - Ziwei He

Anne Arundel County, Maryland is navigating a challenging set of both regulatory and non-regulatory requirements to comply with the Clean Water Act and Maryland Chesapeake Bay TMDL goals. By developing and beginning to implement a voluntary Integrated Management Plan (IMP), the County determined that it could achieve nutrient reductions through a combination of strategies. The resulting integrated plan provides a flexible, "One Water" approach to achieve successful, cost effective and sustainable long-term compliance.
The County identified sector-by-sector strategies for compliance with County-level load reductions by 2025 and beyond to support the County's long term plans, balance growth, and enhance cost effectiveness. By taking an integrated planning approach, the County's Department of Public Works (DPW) demonstrated that it could achieve nutrient reductions through a combination of strategies that offer additional benefits in water supply resiliency. This approach is projected to result in over $700M of savings. The adaptive framework will allow for adjustments as warranted due to new or changing regulations. Development of the IMP has followed EPA's Integrated Municipal Stormwater and Wastewater Planning Approach Framework.
Continuous collaboration among DPW bureaus has resulted in a greater awareness of cross-sector regulatory and performance drivers. One example is illustrated by the shared outcomes of the MS4 program. Excellent performance from treatments facilities managed by the Bureau of Utility Operations has allowed the Watershed Protection and Restoration Program (WPRP) to close the gap in meeting annual permit requirements during the early years of the program, while building capacity to implement impervious area restoration.

Assessing the Resiliency of Port Isobel Island Environmental Education Center - Evan Mazur

The Chesapeake Bay Foundation (CBF) owns and operates Port Isobel Island as one of its field program sites to educate students and teachers on the importance of preserving the Chesapeake Bay. The center of the island, once reinforced with the placement of dredged material from the Tangier Sound Federal Channel, is surrounded by a marsh buffer that attenuates offshore wave energy. However, as water levels rise and shoreline sediment is transported offshore, island extents recede, marsh elevations become more vulnerable to degradation due to too frequent inundation, and the dwindling buffer to erosive coastal processes threatens the resiliency of the island.

A shoreline assessment identified stretches of shoreline eroding at rates as high as 16 feet to 20 feet per year and concluded that 90% of the marsh is below the elevations believed to be sufficient for healthy marsh by 2050. The assessment divided the shoreline into 10 reaches based on similar exposure and site characteristics. Reaches were then ranked for project implementation based on their vulnerability to wave induced erosion and sea level rise. Beneficial use of dredged material, re-distribution of on-site material, modular precast concrete habitat features, and traditional living shoreline techniques were explored as potential protection. Finally, an Implementation Plan was developed that includes a total of six projects of grouped mitigation strategies and categorized into short-term, long-term, and monitor

implementation schedules to address flooding and erosion to construct a more resilient Port Isobel Island.

Roads, Water, and Living Shorelines: How VDOT is using Living Shorelines to help meet its Chesapeake Bay TMDL Goals - Daniel Proctor

Since 2017, the Virginia Department of Transportation (VDOT) has been actively pursuing shoreline stabilization through living shorelines as a key element of its plan for meeting its water quality improvement requirements within the Chesapeake Bay Watershed. VDOT has completed or is in progress on living shoreline projects in each of the major Chesapeake Bay estuaries in Virginia.

At first glance, living shorelines may not seem like an obvious practice for a department of transportation to implement, but its Chesapeake Bay Total Maximum Daily Load (TMDL) nutrient reduction requirements prompted the VDOT to consider potential tools outside of its normal toolbox to meet its water quality improvement goals. Shoreline stabilization through living shorelines can provide large water quality benefits at a relatively low cost while also providing other benefits such as habitat creation and infrastructure protection.

This presentation describes how VDOT became involved in living shorelines, the statewide site assessment to determine the best sites for living shoreline projects, the site investigation and concept design process, the partnerships VDOT has been able to achieve with other state agencies and private non-profits, and summaries of the projects that have been or are being implemented in each of the major Chesapeake Bay estuaries in Virginia.