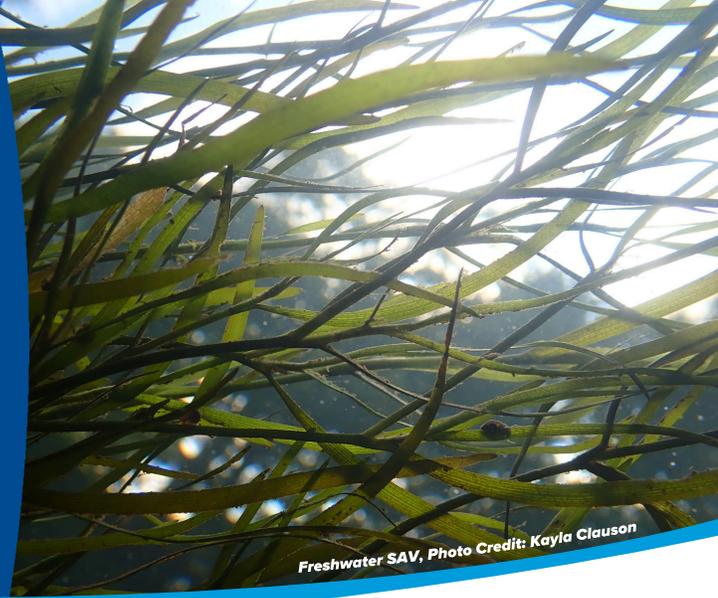


February 2026

SUBMERGED AQUATIC VEGETATION (SAV)

The Superpower Beneath Our Waters



Freshwater SAV, Photo Credit: Kayla Clauson

What is SAV?

Imagine an underwater forest swaying gently beneath the surface of Delaware's waters. That's SAV! Short for **S**ubmerged **A**quatic **V**egetation (but you can call them seagrass, underwater grasses or bay grasses), these amazing plants spend their entire lives completely underwater. Unlike lily pads that float on the surface, SAV grows roots in the muddy or sandy bottoms and relies on the water to hold them upright.

These underwater superheroes are built differently than land plants. Instead of drinking water through their roots, SAV absorbs nutrients and oxygen directly from the water around them. You can find them in all kinds of watery homes, from salty bays, rivers and canals to freshwater ponds, streams and even ditches.

Delaware has its own special collection of SAV species. There are only a handful of species that can survive the brackish or salty waters, but venture upstream to our freshwater creeks, rivers and ponds, and you will discover many more species creating bustling underwater neighborhoods.



SAV has been identified as Essential Fish Habitat (EFH) by National Oceanic and Atmospheric Administration (NOAA) because it is important to the survival of several commercially important fish species.

Why SAV Matters

Think of SAV as nature's ultimate multitaskers that are working 24/7 to keep Delaware's waters healthy. When waves roll through a SAV meadow, the leaves create friction that acts like a speed bump, slowing down the water and protecting our shorelines and wetlands from washing away.

As the water calms down, something magical happens: sediment that was swirling around starts to settle and gets trapped in all the nooks and crannies between the plants, where it is locked away by their strong roots. At the same time, SAV plants are busy absorbing excess nutrients from the water (like a natural filter!) and pushing out oxygen, making the water cleaner and healthier for everyone.

They are also secret climate heroes. SAV stores carbon in leaves, stems and the sediment below, preventing CO² from escaping into the atmosphere, thereby fighting climate impacts from beneath the waves.

But perhaps the coolest superpower of all? SAV meadows are the ultimate underwater neighborhoods, providing food, homes and hiding spots for an incredible variety of life. In brackish waters, you will find blue crabs, striped bass and young fish darting between the leaves, while freshwater SAV shelters everything from tiny snails and dragonfly larvae to bass, sunfish and even river otters hunting for their next meal. Without these grassy hideouts, many of Delaware's fishes, waterfowl and wildlife would not have safe places to live, eat and raise their young!





Brackish SAV: Widgeon Grass, Photo Credit: Brittany Haywood

Research reveals that SAV beds and their associated bare bottom habitats, though occupying only a fraction of available space, can support up to 90% of juvenile blue crab populations in an area—demonstrating the critical importance of these essential nursery grounds for crab populations. (Lipcius et al., 2005)



Building Delaware's SAV Future

There is huge potential to grow SAV research and restoration in the First State. Here is what is being tackled:

- ✓ **Unmapped Territory** – Delaware's underwater world is largely unexplored. We're discovering and documenting SAV to create the state's first comprehensive maps.
- ✓ **Room to Grow** – Our Delaware Bay and Inland Bays currently have limited SAV, indicating significant potential for restoration to bring back these beneficial underwater meadows.
- ✓ **Invasive Species Management** – We are learning to control invasive SAV plants that compete for space and negatively impact native fishes and drainage.
- ✓ **Water Quality Improvements** – As we reduce nutrient pollution, we are creating better conditions for SAV to naturally expand.
- ✓ **Community Science Power** – Through iNaturalist and SAV Seekers, we are building a network of community scientists to monitor, restore and protect these habitats.
- ✓ **Nature-Based Solutions** – We are exploring how SAV can help reduce nutrient pollution and erosion and investigating its potential as a natural filter in stormwater management ponds.

SAV vs. Macroalgae: Know the Difference

Not every plant-like thing that is green and underwater are SAV. Macroalgae (seaweed) often shares the same waters, may be found in higher abundance in saltier water, and while both occur naturally in healthy ecosystems, they are totally different. SAV are true plants with roots, stems, leaves, flowers and roots anchored deep in the sediment. Macroalgae are not real plants; they are multicellular organisms that may attach using a "holdfast" (like a suction cup) or float around and have a stipe and blades that drift in the current without true roots. They also come in many different colors and shapes.

The trouble starts when excess nutrients in the water cause macroalgae to explode in growth. Thick mats block sunlight from reaching SAV below, and when the algae die, decomposers use up the oxygen in the water, sometimes causing fish kills. A healthy ecosystem needs balance: a little macroalgae are natural and beneficial, but too much spells disaster for SAV and the creatures depending on it.

Make an Impact

There are many ways you can help protect SAV. Join a community science monitoring program to collect valuable data firsthand. At home, reduce lawn fertilizer and plant native species along shorelines to naturally filter runoff before it reaches our waters. Boaters can practice "SAV-safe" navigation by steering clear of shallow beds and using deeper channels to avoid propeller damage to these fragile underwater meadows. Every action, big or small, helps Delaware's SAV thrive!

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