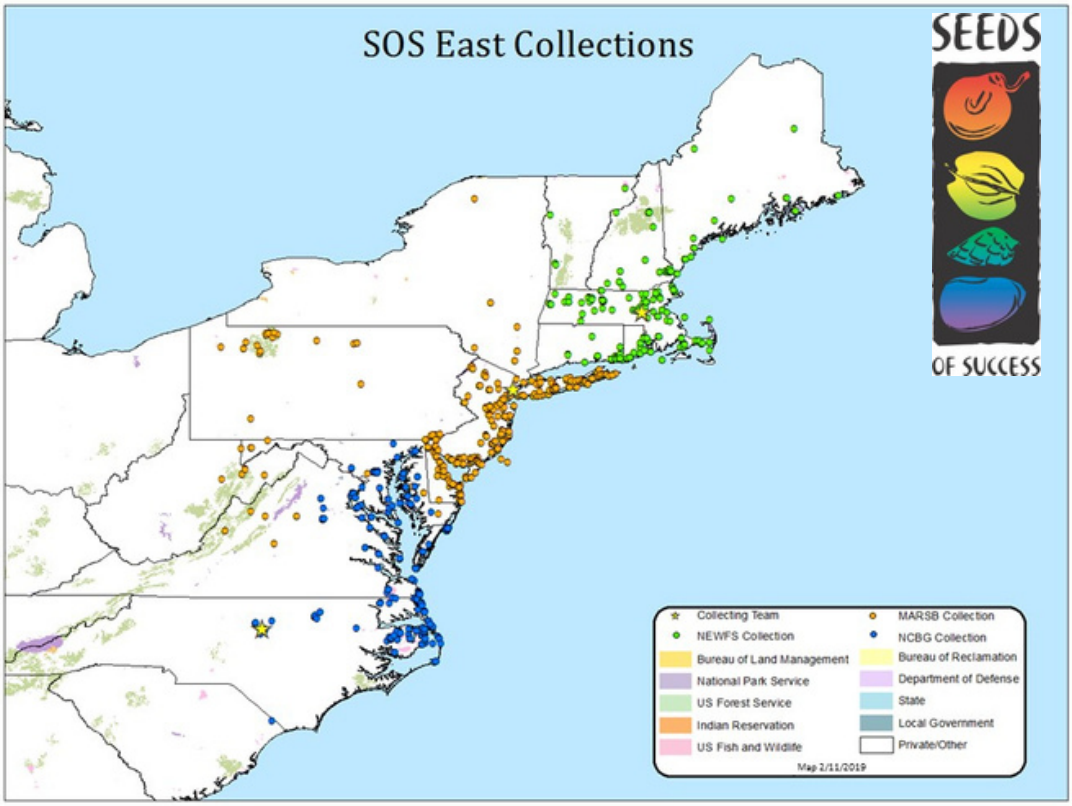
Seeds of Success East

Seed Banking for Resiliency and Coastal Restoration

Seeds of Success (SOS) is the national native seed collection program, led by the Department of Interior's Bureau of Land Management (BLM) in partnership with numerous other federal agencies and non-federal partners. Seeds of Success is the first step to increase the quality and quantity of native plant materials available for restoring and supporting resilient ecosystems through research, development, and germplasm conservation. As the first step in the Native Plant Materials Development Process, SOS's mission is to collect wildland native seed for long term storage and use in development of commercial native seed.

In 2015, the Department of Interior awarded the BLM a $3.5 million grant through the Hurricane Sandy Supplemental Mitigation Fund for seed collection in coastal habitats from Virginia to Maine. BLM worked with Chicago Botanic Garden, New York City's Greenbelt Native Plant Nursery, New England Wildflower Society (NEWFS) and North Carolina Botanic Garden (NCBG) to develop the SOS East Program. To date, the SOS East teams have made over 2170 collections of 359 different species spanning 73 plant families, 11 states and 12 ecoregions. Additionally, 35 interns were hired through Chicago Botanic Garden's Conservation and Land Management (CLM) internship program. This program provides hands-on experience to motivated and highly skilled recent college graduates. Additionally, each of the partner institutions employed several staff to support SOS East efforts.

SOS East reached out to various Federal Agencies and identified 30 USFWS projects and 2 NPS projects as needing native plant materials for restoration in 2015. One example of these projects is the FWS Prime Hook National Wildlife Refuge's Coastal Tidal Marsh/Barrier Beach Restoration in Delaware. As of 2018, over 125 SOS collections have been used for Hurricane Sandy restoration projects.



Restoration Case Study: Prime Hook National Wildlife Refuge – Milton DE

In Delaware, Hurricane Sandy dealt the final blow to a stretch of the barrier beach, allowing seawater to flood into the 4,000 acre freshwater habitat of Prime Hook National Wildlife Refuge. In response, Refuge Managers undertook the largest coastal marsh restoration along the Atlantic coast. The dominant species in the low salt marsh, *Spartina alterniflora*, or smooth cordgrass, is one of the only species able to withstand the tidal transition from salt water to fresh water twice a day. The seeds of smooth cordgrass are also recalcitrant, meaning the seeds cannot be stored with conventional seed banking methods and do not retain viability for long after harvest. As such, USFWS could not find enough seed of this species to supply the project prior to the SOS-East Program. Throughout the three years of active collections, MARSB collected nearly 1000 pounds of seed for this project.

In the first spring after collection efforts, thanks to the advice and assistance of Cape May Plant Materials Center, the project coordinators loaded the seed onto a biplane and began seeding the marsh. There has been significant positive response to these seedings, and the marsh in Prime Hook is beginning to play its role in the resiliency of Delaware's Coastline once again.
- Information provided by partners at MARSB.

A few of the species collected at Prime Hook by Seeds of Success East: Monarda punctata (top); Iva frutescens (middle); Tridens flavus (bottom)