Embracing the Natural World

Spring 2025 Update

Late Winter at Ellisville Inlet. Photo courtesy of Diane Jordan.

UPCOMING EVENTS

Spring Cleanup Day Saturday, May 3rd @ 10:00 am

Join us at Shifting Lots Preserve as we harvest the winter's crop of flotsam and jetsam from the barrier beach, marsh edge, dune and roadside. This event is being held in concert with Plymouth Hometown Cleanup. Coffee and donuts will be available. Bring work gloves and wear light clothes with white socks so you can spot ticks easily. Trash bags will be provided. Cleanup Day will occur in light rain or shine. Downpours will delay the event to the following day, Sunday, May 4th.

Annual Welcome Spring! Bird Walk Saturday, May 10 @ 9-11 am

The Friends are once again this year co-sponsoring the Welcome Spring! Bird Walk at Ellisville Marsh with the Wildlands Trust and Manomet. Under the leadership of Lisa Schibley, North America coordinator of Manomet's International Shorebird Survey, the group will investigate the perimeter of Ellisville marsh, tidal flats, barrier beach and inlet, spying on migrating and nesting birds in each habitat. Participants can expect educational birding information from Manomet staff and extensive knowledge about the area from Friends of Ellisville Marsh.

Meet up at inner parking lot of Ellisville Harbor State Park, 1861 State Road, Plymouth, MA. Leaders will set up spotting scopes to share, but bring binoculars, if you can. Uneven, varied, and possibly wet terrain; dress for potential ticks and poison ivy. No pets. Rain date is Sunday, May 11, 10:30 am-12:30 pm. (Registrants will be notified of change via email on the night of May 9.) FREE, but the number of participants is limited. Register here.

2025 Annual Meeting - Hold the Date

The Friends' 2025 Annual Meeting will take place on Saturday, July 12th, at the Southeastern Mass Pine Barrens Alliance facility at 158 Center Hill Road, Plymouth. Please plan to join us for a detailed review of the past year and a look forward. Details will be forthcoming.

State of the Salt Marsh

Last year's vegetative growth within the marsh was like 2023's growth, with the following fairly obvious exceptions when visiting the marsh and harbor area.

First, and foremost, was the smell of hydrogen sulfide gas produced by microorganisms within the marsh soils and sediment. Seemingly, this smell was judged as worse than last year by observers. This gas is formed when microorganisms known as sulfate reducers, use the sulfate in seawater and marine oils to serve as their energy source for their growth and metabolism. One end result of these processes is production of hydrogen sulfide. It is reasonable to assume that an increase in sulfate concentrations available to these types of organisms will enhance hydrogen sulfide production. Given the higher and larger areal extent of tides within the marsh this past year, and increased temperatures which accelerate metabolic processes, it is likely that more organisms had exposure to higher concentrations of sulfate and more hydrogen sulfide was produced overall. Regular changes in tidal coverage of sediment and shifting winds during seasonal change meant more obnoxious odor perceived by downwind observers.

Secondly, and in spite of the fact that the marsh inlet is fully open, the

higher elevation portions of the marsh were more often inundated due to rising sea levels and seasonal storms. Higher winds from the east and northeast were responsible for depositing rafts of seaweed containing eel grass and Fucussea weed/algal species in the marsh and harbor area, some in elevations rarely achieved.

Some of these rafts were responsible for smothering some of the shellfish population within the harbor area as evidenced by dead upright shells near the surface sediments. With higher temperatures accelerating the rotting of the seaweed, yet another not so nice odor was generated with a slightly brinier bent.

The *Spartina alterniflora* (marsh cordgrass) growth this past summer was prolific (taller plants and visible flowering throughout). As our 2024 remote-sensing photographs will likely show, it is expanding its territory because it prefers wetter conditions as compared to those species that grow at higher elevations. Very noticeable this past year was the blooming of this species in great abundance. The stands of this grass all appeared to be in flower at once, a condition not typically observed. This can be perceived to be a harbinger of poorer growth for 2025 since a single plant only has so much energy and metabolic resources available to it. When situations dictate a channeling of these resources into reproduction (flowering and seed production) versus storage and root growth, the plant becomes less likely to resist erosive forces (high winds, currents and waves) the following growing season.

Higher tides, higher temperatures, and more open water within the marsh allowing greater wind fetch and wave generation does not bode well for Ellisville Marsh's future. This marsh is not unique amongst New England marshes facing the challenges of increasing sea level. What does make this estuary system and coastline unique, in some respects, is the natural armoring of the beach front by cobble that is protective against storm surge and wave energy and the oceanward formation of salt marsh that is occurring. Yet another odor to contend with as small pockets of salt marsh, known fondly as "fetid pools' by shorebird monitors, march their way towards a more resilient bit of coastline.

Another of the sensory experiences of walking through salt marsh during our annual survey has been the crunching underfoot of, at

times, hundreds of dead juvenile green crab carapaces. These crabs are not the infamous “marsh crab,” *Sesarma reticulatum*, known to eat marsh grasses and destroy large portions of saltmarsh. But this association brought Anna Bishop, our marsh surveyor, to recount the story of the “angry crab”. It goes something like this, according to Japanese legend, the ghosts or souls of the Heike samurais were reincarnated into the Heikegani crabs who ate their remains, their angry faces appear on the shells of the crabs. There are other, more explanatory renditions of this story available online, but what do you think?

Contributed by Dr. Ellen Russell, Friends’ co-founder and scientific advisor.

Sample collected during annual Ellisville Marsh survey in August 2024.

Photo by Ellen Russell, who was overheard saying, “Now I know why my daughter was nicknamed “Crabby Abby.”

Friends and Town Execute Memorandum of Agreement for Ongoing Maintenance of Ellisville Marsh Inlet

We are pleased to report that the Friends and the Town of Plymouth have executed an agreement that spells out responsibilities for Ellisville

Inlet maintenance. Under the agreement, the town is responsible for completing re-permitting with the state grant it has been awarded for this purpose and for acting as co-permit holder with the Friends. Having the town listed as a permit holder should enable consideration of longer term permits by the MassDEP. The Friends are responsible for inlet maintenance activities, permit compliance, and environmental monitoring that may be required under the new permits. This agreement was considered essential by the Friends' board to ensure that we could continue inlet maintenance without undue delays or outside involvement.

Harbor seal lounging on a rock off Harlow's Landing, just north of Ellisville Harbor State Park. Photo courtesy of Annette Leckie.

Re-Permitting Is Progressing

As you know from previous newsletters, the Town of Plymouth is leading a project to acquire new local, state, and federal regulatory permits that will enable the Friends to maintain the Ellisville Marsh Inlet going forward. The Plymouth Conservation Commission has issued a five-year permit. As luck would have it, we will gain two additional years on this permit under a recently enacted Permit Extension Act. The town's consultant is in discussions with the MassDEP and US Army Corps of Engineers regarding the remaining permits. We hope to have the permits in place in time for inlet maintenance in March of next year. Fortunately, the marsh inlet remains open and tidal flows are currently unrestricted.

To renew your membership for 2024-2025, click here

Drone footage captured March 24, 2025 showing the ecological devastation caused by developer EJ Pontiff at 71 Hedges Pond Road. Photo courtesy of Community Land and Water Coalition. (c) 2025. All rights reserved.

Sand Mining Projects Continue to Threaten Ellisville

The Friends' board of directors continues to closely monitor a series of projects to mine hundreds of thousands of cubic yards of sand from sites within one mile of Ellisville Marsh. Community opposition to these projects has swelled as their potential impacts on Plymouth's sole-source aquifer, globally rare pine barrens, natural habitat, and climate resilience have been highlighted. Even more concerning, the developer of the project at 71 Hedges Pond Road is engaged in extensive land clearing and excavation in spite of the fact that the site lies within a known settlement of ancient Wampanoag people known as the Great Lot and no survey has been undertaken to identify whether cultural artifacts are present. For detailed information on these projects, see: Plymouth Sand Mining - Community Land and Water Coalition. The extent of the natural destruction, and the possible desecration of Indigenous cultural artifacts, is breathtaking and saddening.

To Our Friends at Federal Environmental Agencies

For many years, our project to revitalize Ellisville Marsh has benefitted from the knowledge and experience of federal employees who view their roles as catalytic. Ed Reiner of the US Environmental Protection Agency, Susi von Oettingen of US Fish and Wildlife, and others have unselfishly shared their expertise with us, raised our awareness, and conditioned our work. As these agencies come under withering fire from the new administration, we voice our strong support for them and the critical work they do on behalf of all Americans.

The northern lights dazzle over Ellisville Marsh on October 10, 2024. Photo courtesy of Judy Quinn. (c) 2024. All rights reserved.

The Friends of Ellisville Marsh always welcome your feedback, questions, and comments.

Email the Friends' board