1. **Introductions**

M. Dolan Murphy called the meeting to order at 7:03 p.m. and introductions were made.

2. **Canaan Lake Restoration Project: Presiding Officer Calarco**

M. Dolan introduced Presiding Officer Calarco who provided background about Canaan Lake. Canaan Lake is in North Patchogue, north of Sunrise Highway and has had a history being affected by aquatic invasive species including Variable Leaf Water Milfoil which created eutrophic conditions and negatively impacted recreation. Past solutions were discussed.
including use of a reaping machine, sterilized Grass Carp which were initially effective as juveniles but had a limited effect as adults, the possible use of herbicides which was not utilized, and other methods. A feasibility study was completed in 2010 which identified invasive species and potential remediation strategies which noted an estimated cost of dredging the lake of $700,000, alternatively herbicides could be used but treatment would be needed every two years costing $10,000 to $20,000 per treatment.

Town of Brookhaven began a similar project at Yaphank Lakes to remove aquatic invasive species. Complications arose when dredging the upper lake related to turbidity issues and the effort cost more than anticipated. Based on the lessons learned from Town of Brookhaven, a new feasibility study was conducted for Canaan Lake in 2016 that resulted in a plan to drain Canaan Lake and the material from the lake bottom would be scraped and removed to eliminate invasive species at the site. Some obstacles included record rainfall, machinery difficulties at the site, and costly removal of lake bottom sediment. A benthic barrier was used on part of the lake bottom to eliminate aquatic invasive species, and the shoreline was built up using the excavated material instead of removing from the site. The lake was refilled in 2021. Canaan Lake is now deeper, the sandy bottom is restored, with a long-term (30-40 years) eradication of aquatic invasive species. Property values around the area have increased, the water is now clear providing increased recreational opportunities and expanded lake access for the community. The total project cost was $3.5 million.

Question: M. Dolan Murphy: Has this site been considered for part of the Suffolk County Blueway Trail?
Answer. J. Calarco: The lake is self-contained and does not connect to other bodies of water but there is a small kayak launch there.

3. Turtle Poaching
J. Turner of Seatuck Environmental Association presented on Diamondback Terrapins and provided background information including biology, ecology, threats and protection efforts. They are a protected species. Terrapins are known to drown in commercial crab pots, attracted by the bait but are then unable to escape the pots once inside and then drown. DEC requires Terrapin Excluder Devices (TEDs) on crab pots in certain hot spot areas, TEDs prevent 80% of terrapins from entering traps with minimal effect on crabbing. Ghost lobster pots are also a known threat and local groups are removing ghost traps. Other hazards include toxic algae blooms, excessive predation (ex: foxes, raccoons, etc.) on eggs, shoreline hardening which destroys Terrapin habitat, and vehicle conflicts. Terrapins can be found as roadkill on roads such as Ocean Parkway but there are strategies and efforts in place to stop terrapins from crossing roads. Climate change is also an issue for terrapin populations as the temperature of the eggs determines the sex. A. Santos highlighted Seatuck’s Terrapin Watch survey and encouraged attendees to download and participate. Information found here: https://seatuck.org/diamondback-terrapins/

4. Patchogue River Microbeads
K. Jackson gave background for the Protecting the Environment in Patchogue (PEP) Committee. PEP conducted citizen science research with support from Patchogue Village on microplastics in the waterways and worked with St. Joseph’s College for analysis. Microplastics are small pieces of plastic debris usually from deterioration of larger plastics, from clothing made from synthetic materials, from direct release, accidental loss of industrial raw materials, discharge of macerated waste, sewage treatment plants or littering. The goals of the study included: documenting if microplastics existed in the study area, assessing the size and concentration if present, identifying sources of microplastic, comparing survey methods (Manta trawling vs. Zooplankton net), educating the public, and informing legislators and policy makers. The study area was Patchogue Lake, Patchogue River, and 2 transects in Great South Bay. Samples were taken in 15 minute transects however the manta trawl was not able to be used in Patchogue Lake due to aquatic invasive species. Surveying was done with volunteers on weekends. Sampling was done one a month from July 2019 – October 2019. Analysis was initially delayed due to the COVID 19 pandemic but eventually performed by two students from St. Joseph's College. It was found there was no statistical difference between sampling methods or between location. Due to issues with samples it was not able to be determined if there was a concentration difference above vs below the sewage treatment output. The results from the study showed most plastics were green fragments. The concentration of microplastics in NY/NJ Harbor is greater than the concentration in Patchogue River and Great South Bay which is consistent with the population densities and amount of impervious surfaces of the regions. The concentration of microplastics in Patchogue River and Great South Bay was less than Long Island Sound and Shinnecock Bay. In Summary, microplastics were present in the study area, there was no difference between sampling methods and outreach materials will be created to share the findings with the public.

Comment: M. Dunn: Seatuck looked at microplastics on the shoreline in the sand during a similar time period at Corey Beach and Talisman Beach but had no significant difference in the concentrations found between locations. Green plastic fragments were also commonly found in this study which could be from eroding docks.

5. **Bay Park Conveyance Project: Long Beach Update**
Postponed until next meeting.

6. **South Shore Estuary Reserve Office**
J. Campbell noted the SSER office coordinated Horseshoe Crab monitoring in Southampton and are currently planning for Estuary Week which is September 18-25, 2021. He encouraged CAC members to send volunteer opportunities to R. Neville and S. Kellogg.

7. **Public Comment/Announcements**

**Kelly Britt and Becky Boger**— Brooklyn College received a grant for a pilot study to examine environmental, historical and heritage sites at risk of climate change in the Great South Bay. They are collecting stories to help identify sites that need further attention. The focus area is currently Islip and a presentation will be given on the topic at the September CAC meeting.
M. Dolan Murphy – A survey will be sent to members to access the interest in future in-person CAC meetings. The Stewardship Award will be reviewed for pursuit in 2022.

L. Smith – The SSER TAC is working on an SAV management document, and nominations for the new TAC chair will occur at the August meeting.

E. Hall – Bellmore Creek fish passage project had advisory and public meetings and are working with Nassau County to choose the most appropriate fish passage option (nature like, technical and dam lowering). Seatuck worked with SSER Program, PEP, LISS, NY Sea Grant and LISMA to hold the Long Island Coastal Bioblitz. The Long Island Coastal Bioblitz had 91 people join the project with over 2800 observations of over 900 species. This could be an annual event moving forward.

The meeting adjourned at 8:44 p.m.