



**AGENDA**  
**Technical Advisory Committee Meeting**  
**March 24th, 2022 10:00 am**  
**Zoom meeting recording & chat text available upon request**

10:00 AM     Introductions –*Matt Sclafani (CCE, TAC Chair)*

10:05 AM     Roll Call – *Joyce Novak, PEP Executive Director*

Sclafani referenced last meeting's focus on hardened shorelines. There are no minutes to approve.

10:10 AM     Presentation: Plan for the 5-Year Control Project for the invasive aquatic plant *Ludwigia peploides* in the freshwater portion of the Peconic River – *Nicole White (DEC)*

\*Presentation was shared & is available upon request.

Nicole White reminded the committee that there have been two public presentations and that both recordings were sent for reference. This presentation went over the steps taken and plan to be taken within the invasive *Ludwigia* control effort in Peconic River including the 2021 Aquatic Plant Surveys, 2021 Pilot Project and associated permits, Lab trials on European Frogbit as well as the Proposed Control Project 2022-2026, including its permits, funding sources, herbicide use, and monitoring plan.

10:55 AM     Presentation: General impacts of herbicides on seagrass and their prevalence in LI groundwater – *Jessica MacGregor (SBU)*

\*Presentation was shared & is available upon request.

10:50 AM     Discussion – Invasive species and use of herbicides

Chris Schubert expressed interest in known herbicide effects on invertebrates. Matt Sclafani added an interest in zooplankton effects and trophic transfer potential. Nicole White stated that it was not likely for these herbicides to bioaccumulate, that herbicides are broken down readily, almost immediately within the water column with sunlight, and the DEC is not anticipating adverse impacts. In addition, she stated that there are no known effects, but she will have to get back to Matt Sclafani with a source looking at zooplankton effects. Nicole White confirmed downstream pre and post treatment macro invertebrate surveys were done in the pilot study, which showed there were no significant adverse impacts, and none are anticipated. Surveys showed no changes to community assemblage within the river after treatment. Nicole White stated that DEC is working with Division of Water, who has a history of collecting macro invertebrate data. Division of Water's macro invertebrate surveys have much more depth and are separately assessing long term trends.



Chris Schubert shared that there should not be concerns with contamination of groundwater by instream application. Chris Schubert explained that streams on Long Island pick up groundwater flow, but it is rare for these streams to recharge the aquifer. Therefore, from a hydrogeologic point of view, it is unlikely for surface water or treatment within the river to make it into the groundwater system.

Adam Stark expressed interest in the *Ludwigia* introduction source and if this treatment is a control measure or an attempt at eradication. Nicole White answered that it is believed to have been through Peconic Lake, specifically Swezey's Pond, a private property to the north of Peconic Lake. The DEC has hopes to treat at this site. Nicole White added that there was a small introduction in Artist Lake. She explained that it is a risk to leave these invasive species, at this density, as it will likely lead to their spread into additional bodies of water throughout NYS.

Maureen Dunn pointed out in the chat that florpyrauxifen-benzyl is listed by EPA as moderately toxic to Eastern oysters, 96hr LC50=2.4 ug/L (shell deposition) in the water column. She stated that although mussels were used, Eastern Oysters are a more appropriate example and there is data on them. Nicole White responded within the chat that based on DEC dilution models, DEC would not anticipate florpyrauxifen-benzyl to be in contact with Eastern Oyster habitat in any significant concentration. Maureen Dunn points out data gaps with these chemicals and shared concern related to if organisms chosen are the most appropriate as well as concern that the organisms chosen are representative of a much larger group. Nicole White responded that Eastern Oyster effects were included on one slide where the technical grade active ingredient was used, which is much stronger than what is planned to be used in this treatment. Nicole White reiterated that because treatments are being applied directly to floating plant leaves, they are being absorbed quickly into the plant tissues, and are being broken down readily by sunlight in the water column. DEC is not anticipating a significant concentration in the water column for any prolonged period that will impact oysters. Maureen Dunn responded that this does not include the degradation products, which are less toxic but that are expected to last within waterways. Nicole White stated that these degradation products in metabolite testing are of negligible toxicity for significant adverse effects. Maureen Dunn brought up concern for lack of information of these chemicals on larval oysters and that they are known to be highly toxic to Mysid Shrimp. She notes that she understands the timing of application takes this into account but expressed concerned for legacy application as well as the application of aquatic herbicide Clipper or flumioxazin on Donohue Pond at the same time, showing it is not truly a river-wide plan. Nicole White responded that the Donohue Pond treatment is in May and full two months after this treatment is set to begin in late July. DEC has no proposal to treat Donohue Pond. Nicole White also noted that it is up to the Bureau of Pesticide Management to decide on pesticide permitting and flow monitoring. Maureen Dunn noted that Seatuck provided public comment and a review of the proposed 5-year draft plan. Maureen Dunn asked for project goals because it seems to be eradication as the plan calls for reducing the amount of herbicide each year, insinuating treatment to continue forever. Nicole White responded that in the 60+ water bodies of New Hampshire, they did not see treated plants return, even after 3 years. This shows that treatment gets into root system of these plants, and they do not anticipate treating the same plants each year. A dense bed will be treated, any individual plants not reached will be spot-treated the following



year. In this process, the DEC will have time to study and review the viability of the seed bank to see if there are seed bank sourced plants coming up in years two and three. Nicole White also noted that all products are being used to the label directions. Maureen Dunn expressed that even if you eliminate all *Ludwigia* and *Frogbits* there will still be invasive issues due to the fundamental issue being excess nutrients and lack of flow within the water body. She suggested solutions should be centered around enhanced riparian management, increasing flow, and dam removal. She stressed that this is a sensitive habitat, especially for river herring. More problems will arise and you will have to continue herbicide application. Nicole White responded that dam removal is beyond the scope of this project.

Matt Sclafani asked for specification on size of treatment area. Nicole White responded that the project treatment area is delineated to be a maximum 50 acres, within 250 acres of whole Peconic river. This is less than 25% of the entire river.

Kevin McCalister referenced a letter to the DEC, sent the day prior, that copied the TAC committee. He highlighted that Nicole deferred to another department when speaking about dam removal but sites EIS's done in other locations. From SEQR standards, if there is public parkland present the action is to be elevated to a type one action, where EIS is considered. Kevin McCalister stated he would argue this must be a local EIS. In addition, the process would need to investigate alternatives, such as dam removal. Kevin McCalister continued that although this is a technical discussion, it does connect to the root of SEQR compliance. Nicole White responded that the department has assessed SEQR, the department will review Kevin McCalister's comments and review with the SEQR attorney to be sure DEC is within SEQR compliance. She affirms that dam removal will be explored if it comes up within the SEQR attorney review.

Lynn Mendelman asked about the data shown on the effects of herbicides on Watershield and Spatterdock (native species) within the presentation. Nicole White responded that the end of season data showed no significant long-term impacts to these plants after treatment. In addition, application technique is working to localize application to dense beds.

Chris Schubert noted in the chat that if atrazine is applied by utilities as a general defoliant along rights of ways, it might be found in GW outside (agricultural) areas targeted by existing/routine sampling. Chris Schubert, Nora Catlin, & Jessica MacGregor discussed the use of atrazine outside of agricultural areas and along right of ways within the chat. Jessica MacGregor asked for any source information found to be sent to her. Joyce Novak volunteered PEP program office to assist in coordinating looking deeper into pesticide use in relation to Jessica's project and put them in contact with each other.

Maureen Dunn noted within the chat that in anaerobic sterile environments Imazamox it can persist for 1,400 days — nearly 4 years. Chris Schubert added that we're still seeing DDT/degradants in estuarine organic sediments after all these years as well. Nicole White responded by reiterating that DEC is not expecting these degradants to stick around as they are not at detectable levels in other project areas.



Pete Topping asked about a plan for removal of decaying vegetation to minimize localized adverse effects from plant decomposition and if there has been any consideration given to physical removal of vegetation prior to herbicide application to reduce herbicide use and reduce adverse water quality effects from decomposition. Nicole White responded that the goal is to treat these plants in accordance with their phenology. She explains that their goal is to treat these plants before peak density within the river. In the past years, *Ludwigia* reaches peak density, creating dense mats that break down at the end of each growing season causing potential DO issues. Within the plan, DEC is looking to treat plants before they reach peak density. These plants are dying slowly over the course of several weeks and they will break down and consume oxygen, but it is within localized portions of the river. DEC does not anticipate for there to be significant DO issues but are monitoring for it throughout the river. DEC reached out to the herbicide manufacturer asking if pulling the plant after treatment would be beneficial, manufacturer responded no, explaining that once herbicide has entered the plant tissues, it will translocate throughout the plant over time and pulling may disturb that transfer of herbicide to those underground plant parts. Treating dense beds does create concern of DO, but this is a year 1 issue and will be better in subsequent years. Pete Topping expressed that he would love to see something more integrated for long term management and recognizes the resource of participants on this call and the potential for concerted efforts reducing *Ludwigia* beforehand as this will lead to reduction in the amount herbicides used to treat the area.

11:46 AM      Presentation: Predicting spawning horseshoe crabs habitat use in relation to natural and hardened shorelines – *Abigail Costigan (SBU)*

\*Presentation was shared & is available upon request

Kevin McDonald asked how this research can potentially affect horseshoe crab take in the Peconics. Abigail Costigan and Matt Sclafani shared that these identified high quality habitat areas have application to create areas of exclusion for harvest but have more potential as data used to identify shoreline areas that should be protected and prevent shoreline hardening.

Chris Schubert asked is there is biomedical harvesting in local/regional waters. Abigail Costigan and Matt Sclafani responded that there is currently no biomedical harvest in NYS and the effects of biomedical bleeding are still being studied.

11:57 AM      Presentation: Tools to Identify and Ground-Truth Submarine Groundwater Discharge Zones for Nitrogen Remediation– *Molly Graffam and Ron Paulsen (CCE)*

Chris Schubert asked is they had compared measurements with those of late winter. He stated that when the inverse temperature contrast is strongest as these might help identify discharge zones that are only pronounced when the discharge gradient is near its seasonal high (~ early spring). Ron Paulsen responded that their work within Agawam Lake, where the temperature profile data was taken in



January, was very effective in identifying areas where nitrogen was being introduced into the lake by Agawam Park. The time of year helped to map out warmer groundwater areas. In Agawam Lake, this data helped to find area of strong nitrate and they are moving forward with design of a PRB for remediation.

Chris Schubert asked if they have compared and contrasted data from late summer and late winter to see relationships between discharge rates and concentration of loads that may be quite different. He continued that this could give key data needed to design best PRB systems and will compliment modeling efforts.

Lynn Mendelman asked if nitrogen plumes that affect water systems have been mapped within east Hampton. Ron Paulsen referenced colleagues at Suffolk County Health Services & DEC to speak on this, and that he knows of wells that have been affected by nitrates, but cannot speak to that.

Joyce Novak noted that PEP water quality monitoring strategy next steps are to see how groundwater data can be brought to public forums to answer some of these questions alongside Suffolk County.

Matt Sclafani suggested potential collaboration with Brad Peterson in relation to mapping potential eelgrass restoration sites. Ron Paulsen responded that they have collaborated with Brad in the past, a very long time ago. They investigated how groundwater discharge affects temperature within water body. Ron Paulsen's work mapped some areas where groundwater has cooling effects and therefore indicated the potential for successful eelgrass bed expansion. They are looking to modify equipment to assist in mapping more of these areas. Brad Peterson noted that Ron's work inspired some of the original pesticide work presented today. He noted complexities of understanding the cocktail of breakdown products from the herbicides and pesticides. Brad Peterson asked if there is an entity in the state to process potential samples. Ron Paulsen responded that there is some funding for porewater pesticide measurements, and perhaps this can be part of a future endeavor working with Suffolk County as they investigate pore water and submarine groundwater discharge.

Jonathan Wanlass added that SC Health Services is in the process of working on the next workplan with NYSDEC. In the past, they had tried this at golf courses and found that the hardest part was getting these samples. Jonathan Wanlass stated that if Ron Paulsen's team's sampling technique has been updated and can include a port, this may make it easier to grab samples. He added that he can talk to DEC to see if they are willing to add this back to the pesticide plan. Ron Paulsen responded that his team has become more adept at taking these samples, so revisiting this initiative sounds great. Molly Graffam noted that although they have focused mostly on Nitrogen, they have also been using this strategy to take data on fecal coliforms and PFAS and they are actively expanding to other contaminants.

Matt Sclafani added that this work compliments the Solute Transport Model and is a great way to ground truth these measurements. He is looking forward to seeing results and their implications for restoration such as eelgrass.

12:35 PM      New Business/Public Comment Period



- TAC Co-Chair nominations

Matt Sclafani notes that there are now bylaws that allow for co-chairs to be nominated.

Co-Chair for candidates include:

Brad Peterson PhD., Stony Brook University

Corey Humphry: Soil & Water Suffolk County, recused himself from election due to possible conflict of interest as a voting member of the Management Committee, thinks Brad is a great choice & looks forward to any future TAC needs

Day Dayton, Friends of Long Pond Greenbelt

Corey Humphries asked if anyone else be nominated and if write ins are valid.  
Joyce Novak responded that she would check bylaws and be in contact about it.

Agencies/entities will vote by email and results will be emailed.

\*See results at the end of these meeting minutes

12:50 PM      Wrap Up/Adjourn

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Co-Chair Voting Results email sent April 6<sup>th</sup>, 2022

Dear TAC members,

Thank you all for your participation in the TAC Co-Chair election process. After counting all your votes, the results are ready. Please join me in congratulating Dr. Brad Peterson for his victory and his new role as TAC Co-chair! Congrats Brad!!

Regards,

Sara

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Attendees: (67) Sara Cernadas-Martin(PEP), Joy Bausman, Kevin McDonald(TNC/CAC Chair and MC Rep), Camilo Salazar(SC), Alexa Fournier (DEC), Valerie Virgona (PEP), Chris Schubert (USGS), Joyce Novak (PEP), Nicole White (DEC), Eleni Nikolopoulos (SoFo), Jeremy Campbell (NYSDOS – SSER), Jade Blennau





(PEP), Gregg Rivara (CCE), Nina Leonhardt(LIPB Society), Ashley Morris, Alyssa Carroll, Thomas Corcoran (PLT), Robert Nyman (USEPA, MC Chair), Lynn Mendelman, Matthew Sclafani(CCE/TAC Chair), Jonathan Wanlass (SCDHS), Jessica Macgregor (SBU), Alan Duckworth (Brookhaven Town), Steve Schott (CCE), Aimee Boucher (USEPA Region 2), Kim Shaw (TOEH), Michele Golden (DEC), Kevin McAllister(Defend H2O), Pete Topping (Peconic Baykeeper), Kathleen Fallon (NYSG), , Mike Jensen (SCDHS), Cassie Bauer (DEC), Lena DeSantis (Anchor QEA), Adam Starke (TNC), Julia Socrates (NYSDEC), Scott Curatolo-Wagemann(CCE), Diana Lynch (SC Parks), Maureen Dunn (Seatuck), Glynis Berry (Peconic Green Growth), Brian Pedersen (SCDHS), Roy Reynolds, Matt Richards (NYDEC), Steven Pearson(DEC), C. Theresa Masin (Southampton Town), John Aldred (East Hampton Town), Nora Catlin (CCE), Tom Iwanejko (SC Vector) Mary Ann Eddy (Sag Harbor, Harbor Committee), Corey Humphrey (SC Soil & Water), Joe Finora (SI Town)Emily Hall (Seatuck), Nina Leonhardt, Sally Kellogg (DOS -SSER), Ron Paulsen (CCE) , Heidi Oriordan (DEC), Molly Graffam (CCE), Bradley Peterson(SBU), Brian Call In, Abigail Costigan(SBU), Unknown Call in Users (3)