



Peconic Estuary Partnership Policy Committee Meeting Summary
June 10, 2020 10:00am – 1:00 pm
Zoom Conference Call (due to COVID-19)

Welcome and Introductions -Javier Laureano, US EPA

- Javier Laureano called a roll call of Peconic Estuary Partnership (PEP) Policy and Management Committee voting members, PEP staff and all other participants on the call.

Attendees: Joyce Novak (PEP), Elizabeth Hornstein (PEP), Lauren Scheer (PEP/CCE), Sarah Schaefer (PEP), Peter Scully (Suffolk County (SC) PC Rep), Carrie Meek Gallagher (NYSDEC PC Rep), Javier Laureano (USEPA and PC Chair), Scott Russell (Town of Southold Supervisor and Local Government PC Rep), Julia Socrates (NYSDEC MC Rep), Kevin McDonald (TNC/CAC Chair and MC Rep), Matt Sclafani (CCE/ TAC Chair and MC Rep), Ken Zegel (SC MC Rep), Richard Friesner (NEIWPCC MC Rep), John Bouvier (Town of Southampton Councilmember and Local Government MC Rep), Aisha Sexton-Sims (USEPA and MC Chair), Aimee Boucher (USEPA), Rick Balla (USEPA), Peter Brandt (USEPA), C. Theresa Masin (Town of Southampton), Emma Gildesgame (NEIWPCC), Susan Sullivan (NEIWPCC), Rebecca Shuford (NY Sea Grant), Holly Greening (CoastWise Partners, LLC.), Gerold Morrison (CoastWise Partners, LLC.), Rich Batiuk (CoastWise Partners, LLC.), Holly Sanford (PLT), Kyle Rabin (LIRPC)

- Javier welcomed Scott Russell as the new Local Government representative on the PEP Policy Committee.

Discussion and Approval of [February 5th 2020 Joint Meeting](#) and [May 2nd 2019 Policy Committee Meeting Minutes](#) -Javier Laureano

- No comments, approved by the Policy Committee.

FY20 Workplan and Budget -Joyce Novak, PEP Director

- Discussion:
- Javier Laureano stated that for the FY20 that begins in October 2020, the best scenario that we have in front of us is to keep the current hosting agents, NEIWPCC and Suffolk County. He believes we have a consensus, and he would like to further analyze other options including moving to The Stony Brook Research Foundation, which is another option that some of the Management Committee and Policy Committee voting members have suggested as an alternative host. Javier believes we do not have enough time to switch hosts at this juncture and funding might be in jeopardy for the Peconic Estuary Partnership (PEP) if a new host is pursued now. He believes NEIWPCC is an excellent fiscal agent and are doing a great job managing the federal funds awarded to the PEP. He stated NEIWPCC should remain one of the fiscal agents in FY20 until we analyze the next steps at US EPA.



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- Peter Scully enquired: who on the PEP Policy Committee has been involved in the conversations about alternative host agencies?
 - Carrie Meek Gallagher responded that there were discussions that she was involved in earlier on and there were discussions about Suffolk County being included in the conversations, but after COVID-19 hit she lost touch on most of the ongoing communications. There is uncertainty as to why Suffolk County has not been involved but they would be a valued addition to the conversation since they have a long history of hosting the PEP.
 - Kevin McDonald asked why we are going to put off a decision for 16 or more months that we could make in 3 or 4 months, when we know that this current situation is not working well. He would like a commitment immediately to working on a transition to move the PEP Program Director and the PEP Program.
 - Carrie stated that she would like more clarification on some of the discussions that have been ongoing about The Research Foundation because she thinks that might be a helpful next step for the voting members of the Policy Committee and Management Committee to provide a level of comfort to make a transition decision.
 - Peter Scully requested that someone state the reason for a transition.
 - Kevin McDonald responded that there have been a couple operational issues that NEIWPC's policies and business model create for the PEP. It was not an issue for PEP when only a couple PEP employees were employed by NEIWPC, but since NEIWPC now employs all PEP employees it seems NEIWPC would like to run the program as a NEIWPC program. Other issues include uncertainties in the NEIWPC budget between indirect and direct costs, and the issue of the East End Towns not being comfortable giving their Community Preservation Funds (CPF) to NEIWPC for the benefit of the PEP. Stony Brook has become a great resource for marine and natural science research on Long Island. What is the indirect rate that US EPA and The Stony Brook Research Foundation would be using for the grant?
 - Javier Laureano responded that the indirect rate that the US EPA and The Stony Brook Research Foundation is not determined at this time, there are different rates and it could be as high as 56%. He wants to make sure that the policies The Stony Brook Research Foundation has regarding use of their logo and budget transparency are going to put PEP in a better situation than they are in now with NEIWPC. Stony Brook University and The Stony Brook Research Foundation are 2 separate entities and The Research Foundation is the fundraising arm of the University and is a 501(c)(3) organization. . He stated that this is not the right time to transition to a new host organization. The Policy Committee needs more information and EPA needs to comply with federal policies to potentially transfer over \$600,000 in tax-payer funds.
 - Kevin McDonald responded we had these conversations have been ongoing since late last year and at this time we should have enough information. He would like to know in what month we are going to ask the questions that we still need answers to. He does not want to end up in the situation next year and not have enough time to make the transition before the next grant year.
 - Javier Laureano responded that Rick Balla is on the phone, he is the person that we have that is managing the program for the NY and NJ Harbor Estuary Program, we put out letters of interest for hosting the entity.



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- Kevin McDonald responded that if you are asking for more time to review the alternatives that is understandable but he would like to know when that is going to happen and what is the timeline for the conversations.
 - Carrie Meek Gallagher noted she will need to get on another call at 11:15 am and she knows she needs to be on the call for the Workplan and Budget vote. It would be good to get clarification on the timeline for the transition discussions that Kevin McDonald is requesting. She noted it seems there are people that are in support of The Research Foundation, but it would be helpful to have more clarity on what conversations have been had with The Research Foundation, It would be helpful for the people on this call to review and discuss this information to understand how hosting the PEP at The Research Foundation would be any different than hosting the PEP with NEIWPC and Suffolk County.
 - Peter Scully objects to being excluded from the discussions that have been happening about changing the host entity. In his view it is a continuation of a process of excluding the County from important discussions that started about 3 or 4 years ago, when the County was dragged out of the host role in private discussions, it was implied that we had a conflict of interest, notwithstanding the County is the entity that gave life to the program and were the host of the program for a long time, so it was determined the County should not have a part in those conversations. It was implied there was a lack of independence for the PEP staff as employees of the County and the decision was made to change hosts to NEIWPC, but the situation is no better now. The County is now again excluded from the host entity conversations and he objects to that.
 - Carrie Meek Gallagher added that it would be helpful to have the County's input as well in these host entity discussions. There should be more discussions between the County, Kevin McDonald, NYSDEC, US EPA and all the key players about the host entity transition. Is there a point of contact at The Research Foundation that people have been in contact with that these follow up discussions can continue with? A question for Javier- is there a problem with that process? The options that she understands are that we have now are to either stay where we are, develop a non-profit option similar to what was done for the San Juan Bay Estuary Program in Puerto Rico when Javier was the Director, or we move to an alternate host like The Research Foundation, or is there another option we are considering?
 - Joyce Novak responded that she was asked at the October 2019 Joint Policy and Management Committee meeting and again by the Task Force that was developed, to put together information on several options for an alternative host, which included a public benefit corporation, a water district, academia, remaining with NEIWPC. There was an email that was sent around that included this information and she collected information on the indirect range that would be anticipated at The Research Foundation and information collected during her conversations with the Dean of the Stony Brook University School of Marine and Atmospheric Sciences. The Dean indicated the US EPA grant would be handled like any other grant program at The Research Foundation and the workplan would dictate what tasks and costs would be incurred. There would be no other charges on the grant on top of the indirect charge. The questions that were asked by the Task Force were answered and the information was circulated.
 - Kevin McDonald stated Peter Scully may not have been on all the calls that the host alternatives were discussed. The intention may have been to provide an update to the Policy Committee for



review, but that got truncated and there were a lot of discussions about the host alternatives that took place without the full Task Force being involved.

- Javier Laureano stated in terms of the Workplan and the Budget that we need in order to have a PEP Program Office on October 1st, 2020 we need to approve this Workplan and Budget during this meeting or soon after this discussion. And then we need to have one additional meeting before making a decision on how we are going to be moving forward in terms of the host entity discussion. Peter Scully would like to be part of that discussion; Kevin McDonald is a strong voice and is an option too. **We should convene one meeting within 30 days of this call to discuss only the host entity issue and decide how we are going to be moving forward.** We have a precedent on how this transition should be handled, like how the EPA worked with the NY NJ Harbor Estuary Program to transition hosts a few years ago. We can coordinate that meeting set-up with other members of the Policy Committee and Management Committee.
- Carrie Meek Gallagher strongly seconds Javier's proposition and thanked Joyce for reminding her that the host alternative information had been circulated earlier. It would be great to start off this Host discussion meeting with Joyce recapping all of the research she had done on the host entity options and to get everyone on the same page.
- Javier Laureano stated we can use our experience with the NY NJ Harbor Estuary Program host transition and have a discussion with the group within 30 days.
- Peter Scully stated that he was not invited, to his knowledge, to any of the Task Force calls.
- Rick Balla offered to add some information about what was done with the NY NJ Harbor Estuary Program.
- Javier stated that Rick should provide that information at the next Host Entity meeting. We have the Workplan and Budget before us that needs to be approved to have an organization on October 1st, 2020. Rick can share all those experiences at the Host Entity meeting that is convened within the next month.
- Rick Balla added that it is not completely unusual that an entity that has received federal funding ceases to exist or transitions to another organization and that is what happened with the NY NJ Harbor Estuary Program. The Federal government and US EPA has a process in place that can take federal funds that were previously awarded to one entity for a program like this and then transfers them either in whole or in part to a new entity that is carrying out those services. It's called either a novation or a replacement grant depending on the individual circumstances. If there are unliquidated obligations that are with one entity which should really be with another entity due to a change in purpose and mission, there is a process to do that. He offers this as a piece of information for this discussion about the FY20 funds. He suggests that we work to award the FY20 funds as planned because there is a chance that the FY20 funds could be lost if they were not awarded by October 1st, 2020.
- John Bouvier added, when the Management Committee met they discussed lack of transparency in the budget on the part of NEIWPC. It has led him to conclude that PEP should change hosts, because there is a CPF that the Town of Southampton has been wanting to give a portion of to the PEP. The Town of Southampton's share of the CPF that would be available to the PEP would be \$170,000 to \$180,000. He does not have any great sense of confidence under the current budget structure that the CPF money will be spent as is required under the CPF statute. When we have asked this question of NEIWPC before we have not gotten any satisfactory answer from



NEIWPC. Unless we get some sort of assurances that moving forward that we are going to have those conversations with all of the MC and PC than we are most likely going to have to withhold our CPF funds until we know that going forward we have a transparent budget that is available and gets down to the line items that we need under the CPF statute. And he would like to have some assurance that if we vote on the Workplan and Budget that this discussion is not going to just trail off into the future and not be addressed in a serious matter. The Policy Committee was advised of the Management Committee's concerns when the Workplan and Budget was transmitted.

- Peter Scully asked what drives the timetable for the Policy Committee's approval for the Budget.
- Javier Laureano responded there are time constraints and we have Rick Balla, Aisha Sexton-Sims and Aimee Boucher that manage that grant who can provide that information.
- Rick Balla stated these are funds we are trying to award by the end of the federal fiscal year which ends on September 30th, 2020. The US EPA fortunately did have a budget in place relatively early this year. Typically, we are looking for grant applications to be submitted between May 1st and June 1st, this year it was May 1st to make sure our EPA grants people can review the application and all the supporting materials so that an award can be made by September 30th, 2020. There is a risk, a low risk, that if the funds are not awarded that they could be lost in what could be a difficult budget year for the FY21 budget that would begin October 1st, 2020.
- Javier stated there have been initiatives to zero out all of the National Estuary Programs (NEPs). We have the money, we have a program office, we have good host entities right now with a lot of experience managing EPA money. His recommendation is to move forward and decide if we approve the Workplan and Budget. And then within the next 30 days we should meet with all the main stakeholders of this organization to discuss the alternatives we have, including the information Joyce put together in addition to the information we have about NY NJ Harbor Estuary Program.
- Richard Friesner added that part of the timing constraint on the EPA grant application is related to the match requirements and the time that is needed for the State of New York to secure the match which is why the timing is so important. NEIWPC is happy to support the review of the host entity options and will provide information, and continue to provide information as NEIWPC has done in the past. And NEIWPC will continue to reach out to anyone who has questions on any of our procedures.
- Rick Balla added that he would think EPA could put a process in place in consultation with the Policy Committee and other stakeholders to ensure that in FY21 the EPA grant will be awarded to the current or successor/ new arrangement. The only exception might be that if a new not-for-profit was created to host the PEP, which would take more time, which has happened in other Estuary Programs, which would require a lot of certifications and legal requirements that need to be met for a new 501(c)(3) organization. But I believe that was done for the NY NJ Harbor Estuary Program or the Narraganset Bay Estuary Program where EPA grant funds are awarded to an existing entity that already is a recipient of federal funds or EPA funds, that we can have a process in place to ensure FY21 funds go to this new entity. And we can also consider the novation process or replacement process and look into how much unliquidated obligations or unawarded funds would need to be transferred to a new entity. The one thing that EPA needs to



fully understand is whether they can sole source the EPA grant funds to a new entity. Something might need to be done to solicit letters of interest from potential host entities.

- Carrie Meek Gallagher stated she found the summary document that Joyce sent around on the host entity discussion and it would be nice to recap all of the information included in the summary at the Host Entity meeting held within 30 days.
 - Javier Laureano stated that Rick should identify the request for Letters of Interest and send that to the PEP program office, the PEP program office can set up a package of information which would include the Host Entity alternative document that Joyce put together, the process that EPA did with NY NJ Harbor Estuary Program, and that information can be circulated and discussed at the Host Entity meeting to be held in 30 days. Suffolk County will be part of the process, and Kevin, and we can discuss the establishment of the Host Entity meeting outside of this meeting.
 - Rick Balla stated that the one thing we need to be careful of is conflicts of interest and advanced disclosure to those that might be interested in participating in the process. People may need to recuse themselves from the Host Entity discussion process.
 - Javier Laureano stated that if there is any entity that has interest in getting this annual grant, that entity should not be part of the Host Entity discussion. That would be a clear conflict of interest.
 - Rick Balla stated that is the difficult issue, which is why EPA consulted with stakeholders in the case of the NY NJ Harbor Estuary Program and Narragansett Bay Estuary Program, but because of the many opportunities for conflict of interest EPA administered the process on behalf of the Management Conference and Policy Committee, but of course worked in consultation with those stakeholders throughout the process.
 - Javier Laureano stated we should come up with some language that states that any organization interested in being the recipient of the EPA NEP grant should not be part of the Host Entity meeting that will happen within 30 days.
 - Aisha Sexton-Sims stated that she wanted to mention, as part of the Workplan and Budget discussion, she would like to reiterate the Management Committee's recommendations that came out of the Workplan and Budget discussions, but those points have been discussed by the group already.
- The FY 2020 Peconic Estuary Partnership Budget and Overview and Suffolk County and NEIWPC Workplans
- Joyce Novak presented the documents that were distributed to the Policy Committee prior to the meeting.
 - Refer to attached PEP FY 2020 Budget and Overview document and PEP Workplans and Budget document.
- The Policy Committee was asked to approve/disapprove the PEP FY20 Budget and Workplans
- Javier Laureano asked if there were any votes from the Policy Committee voting members against the Workplans and Budget that were presented.
 - There were no votes against
 - Javier Laureano stated the Policy Committee has approved the PEP FY20 Budget and Workplans.



Final PEP Water Quality Monitoring Strategy – Holly Greening of CoastWise Partners, LLC.

- Holly Greening of CoastWise Partners, LLC. presented the linked presentation:
<https://www.peconicestuary.org/final-pep-wq-monitoring-strategy-presentation-2020/>, which provided an overview of the Draft Peconic Estuary Partnership Water Quality Monitoring Strategy Document that was distributed to the Policy Committee prior to the meeting.
- Refer to the attached PEP Water Quality Monitoring Strategy document.
- Discussion:
 - Peter Scully asked that regarding OBJECTIVE C: Help local communities to take meaningful, well-informed action to prepare for and adapt to climate change impacts in the Peconic Estuary, are there specific actions that were discussed to address this objective?
 - Holly Greening responded the TAC and WQ Monitoring Partners identified Objective C as a need and the specifics of actions to address this objective will be included in next year's action plan in coordination with the TAC and WQ Monitoring Programs.
 - Matt Sclafani added that we don't have the metrics in mind yet and we will be exploring how to incorporate this Objective into monitoring programs.
 - Peter Scully asked regarding OBJECTIVE E: Increase understanding of nutrient pollution in groundwater and surface waters, and decrease negative impacts from legacy, current and future nutrient inputs, are there specific actions that were discussed to address this objective?
 - Matt Sclafani responded that we have some concepts in mind to intercept up gradient sources and monitor groundwater with wells, like Suffolk County has already established. USGS has done some monitoring and Cornell Cooperative Extension has done some monitoring, the idea is to bring these entities together to look at the whole picture, from the terrestrial side, to the nearshore and hyporheic zone. Hopefully we will come together on a plan to address this objective together and identify possible sources of funding. Given all of the actions that are happening to address nutrients and contaminants of concern, this can hopefully be tracked a little further and we can track to see if the management actions that are happening through the CCMP are actually effective and to identify priority areas. In addition the Solute Transport Model will bring us in the right direction.
 - Holly Greening added that the discussion about the importance of understanding groundwater and the source of groundwater pollutants were definitely front and center of the TAC and WQ Monitoring Program discussions when developing the plan.
 - Peter Scully asked regarding OBJECTIVE F: Reduce current and future inputs of toxics, pathogens, and marine debris into groundwater and surface waters, and minimize their impacts and Action 20: Conduct Analysis to understand the sources of toxic contaminants and implement measures to reduce their impacts, what are the specific toxics of concern?
 - Joyce Novak responded we had this discussion with the Suffolk County Groundwater Monitoring Program staff, we are concerned with 1-4 dioxane and the things we are seeing now that are



problems. The idea is to work closely with Suffolk County Groundwater Monitoring Program staff to re-establish a network of Peconic Estuary groundwater monitoring wells for testing for herbicides, pesticides and other contaminants that have been established as a concern and those that are an emerging concern. We were looking at getting groundwater monitoring data for larger areas within the Peconic Estuary watershed to get a better understanding of what contaminants are coming from what sources.

- Matt Sclafani added that surface water impacts are not necessarily from stormwater and that groundwater is a major source of contaminants. We would like to monitor for broader contaminants besides just nitrogen.
- Matt Sclafani thanked CoastWise Partners, LLC. for their help on the development of the WQ Monitoring Strategy. The PEP Water Quality Monitoring Strategy has been vetted by the Technical Advisory Committee and we have been developing this document with our partners for about 1-2 years. We believe the methods that are in the Strategy document are drawn from existing monitoring programs, but we also want to develop a tangible framework to help us plan for the future water quality monitoring needs in the Peconic Estuary. The TAC hoped that the WQ Monitoring Strategy would be something that the Management Committee would approve (On May 4th, the TAC approved the recommendation that the Management Committee approve and adopt the PEP Water Quality Monitoring Strategy, for inclusion in the 2020 PEP CCMP, and approved by the Management Committee on May 28th, 2020). We hope the Policy Committee will approve the WQ Monitoring Strategy.
- The Policy Committee was asked to approve/disapprove the PEP Water Quality Monitoring Strategy
 - Javier Laureano thanked CoastWise Partners, LLC. for all of their work. He asked the Policy Committee to vote by consensus to approve the PEP Water Quality Monitoring Strategy document. Javier heard no votes against the PEP Water Quality Monitoring Strategy; therefore the PEP Water Quality Monitoring Strategy is approved by the Policy Committee and it will be forwarded to EPA HQ for formal program adoption.

Organizational Assessment – Status Update- Aisha Sexton-Sims, US EPA

- Javier Laureano stated that he went over this topic earlier in the meeting, and we are going to convene a meeting within 30 days with organizations and partners interested in discussing the issue of the host entity. Those organizations interested in hosting the PEP will recuse themselves from that meeting. Javier asked Aisha Sexton-Sims if there was anything else that she would like to present to the group on this topic.
- Aisha Sexton-Sims we discussed this document, the Draft Organizational Structure and Governance Document, in detail at our Joint Policy and Management Committee meeting in February of 2020. That document lays out the partnerships, organizational structure and guiding



procedures, it includes the roles and responsibilities of the PEP Policy Committee, Management Committee, Technical Advisory Committee, Citizens' Advisory Committee. It includes the roles of the host entity as well as the program director, program office and EPA. The Program Office has made good progress to incorporate comments and feedback that have been received from different partners. EPA has been assisting in this process and was able to help answer some questions about EPA's NEP Guidance and perspective in trying to reach consensus on the language provided by the partners. The EPA has been working with the PEP Program office and the partners to resolve those questions. We expect to have an updated draft within the next couple of weeks. The Management Committee will have a chance to review it one last time before we make a request for final approval by the Policy Committee.

- Joyce Novak stated that the document was not final enough for approval at this Policy Committee meeting and it will go back to the Management Committee to review how comments have changed the document.

Status of Expiring Money - Joyce Novak

- Joyce Novak stated there are three projects that are being funded with money that is due to expire September 30th, 2020. We have submitted extension requests to the EPA for this grant money which is from 2013-2015. Under normal circumstances this work would be able to be carried out, but none of the projects that are funded with these grant funds could be carried out due to restrictions from COVID-19. We have not gotten a formal response yet from the EPA.
- Javier Laureano asked how much money do we have that is expiring on September 30th, 2020?
- Sarah Schaefer responded that she believes it is about \$190,000. All of that money is allocated to projects that are in progress.
- Joyce Novak stated all that money is contracted to ongoing projects through Suffolk County. We are hoping that a COVID-19 related extension request can be granted.
- Javier Laureano asked if Aimee Boucher and Aisha Sexton-Sims could check on the status of the no-cost time extension.
- Aimee Boucher responded that the extension requests have been processed on the Water Division side, they are now with the Grants office and being processed now.
- Richard Friesner asked if those grants at the 5 year mark or the 7 year mark.
- Sarah Schaefer responded they are at the 7 year mark.
- Joyce Novak added that these are grant funds that under normal circumstances we would not be able to extend any further.

BREAK- Five minute break

John Bouvier stated he needed to leave for another meeting.



CCMP Update and Presentation of Draft Final Graphic Design - Joyce Novak

- The 2020 PEP CCMP is in the final stages of EPA review and approval.
- Graphic design work is in final stages- contractor is finalizing design template for the 2020 PEP CCMP. The Management Committee had previously reviewed and approved the template and color scheme in this CCMP. The CCMP is currently under review by the EPA Region 2 Administrator for final content approval. We still have the capability of changing the document, this is not the final document.
- Joyce Novak presented the draft final graphic design of the CCMP with the group including the DRAFT CCMP Document, the DRAFT CCMP Summary Document, and the DRAFT Postcard- Refer to the linked CCMP documents [here](#).
- Joyce Novak stated PEP is working with the EPA on a formal launch of the CCMP in early September or late August in the form of an outdoor press event with our main stakeholders and supporters. The press event message is to acknowledge everyone's hard work and to recommit to continuing working together and recommitting to support the PEP.

PEP Highlights in 2020 and New Projects in 2021 -Joyce Novak

- Joyce Novak presented the linked presentation titled PEP Highlights in 2020 and New Projects in 2021: <https://www.peconicestuary.org/pep-highlights-and-new-projects-for-policy-committee-meeting-6-10-2020/>
- Discussion of Updated Priority Habitat Sites for the 2017 Habitat Restoration Plan- with the adoption of the new sites (detailed below), this plan will be updated as the 2020 Habitat Restoration Plan for official submission to EPA HQ for formal adoption.
 - Joyce detailed that in the 2017 PEP Habitat Restoration Plan Update, a total of forty-one (41) projects were approved for inclusion in the Plan. In 2020, the NRS, TAC, and Management Committee are recommending adding an additional five (5) projects to the plan and modifying two (2) existing projects.

New Projects

- Widow's Hole Preserve Living Shoreline/Wetland Restoration Phase II (Southold, NY) - Cost: \$150K
- Napeague Harbor Hydrodynamic and Water Circulation Study (East Hampton, NY) - Cost: \$250K
- Diamondback Terrapin Habitat Restoration/Protection Strategy (Estuary-wide) - Cost: Staff time; Strategy implementation TBD



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- Horseshoe Crab Habitat Restoration/Protection Strategy (Estuary-wide) - Cost: Staff time; Strategy implementation TBD
 - River Otter Habitat Restoration/Protection Strategy (Estuary-wide) - Cost: Staff time; Strategy implementation TBD

Modified Projects

- Restoring Natural Hydrology to Accabonac Harbor Wetlands (East Hampton, NY)
Scope of work updated- Cost: \$35,000 for site studies and conceptual design plan; Design and construction costs TBD
- Forge Rd Diadromous Fish Passage (Peconic River, Phase III)
Monitoring and education components added- Cost: Additional \$15,528 needed.
- Elizabeth Hornstein added that if anyone has any questions she would be happy to answer them.
- Peter Scully stated he has interest in the river otter habitat restoration project and would like to know where their presence has been documented in the area and where they have been reestablishing populations.
- Elizabeth replied that we have a partner who has been doing that monitoring and has a report that we can circulate and make sure people are aware of that information. Elizabeth shared the link to the River Otter Monitoring report in the Zoom chat:
https://drive.google.com/file/d/1fysGsxm0a74x6uWu46pYT1BgEs6WRF_J/view?usp=sharing
- Javier asked the Policy Committee to vote by consensus to approve/disapprove new priority habitat sites. No votes were heard against the new priority habitat sites to be added to the 2020 PEP Habitat Restoration Plan; therefore the new priority habitat sites are approved by the Policy Committee and will be incorporated into the 2020 PEP Habitat Restoration Plan for official submission to EPA HQ for formal adoption.
- Joyce continued a review of PEP Highlights and New Projects.
- Lauren Scheer provided Education and Outreach updates that are detailed on slides 31-35 in the linked presentation.
- Javier added that he knows there is a large Hispanic minority in the watershed and you can count on him for his participation on any virtual classrooms that we do (he participated in a virtual classroom for kids in upstate New York). Javier offered to help us reach out to the Hispanic communities in our watershed. Environmental Justice and minority outreach are important, especially in the times we are living in now in the global movement towards social justice. About a month ago (May 2020) EPA published an article about how nationwide Hispanic and African American populations are more affected by pollution than other populations.

Funding Diversification Update - Joyce Novak



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- Joyce Novak detailed that the Community Preservation Funds from at least one Town have been dedicated to the PEP. There is no place to currently put these funds. Joyce has been working with the Town of Southampton, the Town attorneys, and the Group for the East End about establishing an LLC, a “Peconic Estuary Foundation” that could be named whatever we would like it to be called. This is currently under review by the Town of Southampton attorneys. The Town expressed a concern that establishing an LLC. might create a tax burden so the establishment of the LLC. is something the Town hopes is a temporary place to put the CPF money until there is another place to put the CPF money, with a host or another mechanism.
 - Kevin McDonald stated that the LLC. would still be classified as a 501(c)(3) so there would be less tax consequence.
 - Joyce Novak stated that at this time we are still investigating this LLC. option and nothing has been fully established, and there would need to be an MOU established between Group for the East End and the Town of Southampton and then with the other Towns as CPF money is made available to the PEP. The money is tied to CPF legislation in the State of New York and while the Town of Southampton did not ask for a workplan she would anticipate that funds would go through PEP’s process on determining and approving how these funds would be spent, through our own rules and regulations and as part of our workplan. We would report out to the Town of Southampton annually on how the funding was spent. The CPF legislation allows the Towns to give the money to PEP for implementation and there is no task-based allocation for the funds. Joyce is posing this option to the Policy Committee that she has been exploring and she wanted to update the Policy Committee and gauge their feelings on this subject. We will likely lose this opportunity for CPF money if we don’t find a place to accept this money, John Bouvier had previously stated around \$175-\$180,000.
 - Javier Laureano asked if we need a vote?
 - Joyce stated she just wanted to update the Policy Committee on this information and she does not need a vote. This will require a presentation to the Policy Committee at a later date when the lawyers have weighed in on the details of this LLC. establishment. She would like to know if this is something she should continue exploring. We do not really have another option at this time that she is aware of, to accept these funds.
 - Javier Laureano requested that Joyce send a white paper or a paragraph or two explaining more details about this option, it would be good for him to review the options. The last time he was briefed of this option was in possibly 2017 and this has been an ongoing conversation.
 - Joyce Novak stated she can provide that information. Just as background PEP had set up a foundation years ago to accept donations and that established foundation no longer exists. This foundation option was discussed during the Joint Policy Committee and Management Committee Retreat in October 2019.



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- Joyce Novak stated that there were extensive conversations between Joyce and the Town of Southampton (noted John Bouvier is no longer on the call) about establishing this mechanism. If this mechanism is set up, then it gives Joyce the leverage to go back to the other East End Towns to explain where the other East End Town CPF money would go and how it would work. The Town of Shelter Island has expressed that they are ready to give CPF money. If we can create the mechanism to accept the CPF money, the will is there and this will allow us to be better prepared for financial challenges federally.
 - **Javier Laureano stated he would like to explore this option further and requested Joyce send a white paper or fact sheet with more information, background and next steps.**

New Business

- Javier Laureano asked if there is any new business that anyone on the call would like to bring up.
- Aimee Boucher asked Joyce if she would like to provide a brief update about what was discussed on the PEP Bi-weekly Call that was held on June 9th, 2020.
- Joyce Novak provided an update on the discussions had on the PEP Bi-weekly call stating that in light of what has been happening in this county with racial injustices, she was taken aback and there are things we all need to do. As the Director, Joyce was hesitant to release a statement that was hollow and that did not accurately reflect what we can/ should do as an organization. Joyce reached out to the Management Committee on the PEP Bi-weekly call for help, prior she reached out to Aimee at EPA to see if the EPA had resources or guidance. On the Bi-weekly call there are some partners who agreed to help draft a statement and she would also like to put actions with our statements. Joyce said have verbal commitments in the CCMP about environmental justice, but what can we do as an organization on the ground, to contribute to helping to resolve some of these longstanding historical racial disparities in this country. Joyce said we will be working on releasing a statement in coordination with the people that agreed to assist on the PEP Bi-weekly call. Joyce would then like to create a workgroup with the proper person from the organization that you represent that does this as part of their job to help us clearly identify those communities and develop a dedicated strategy on how to move forward in this organization. For example, she has seen some organizations calling out policies in their bylaws that should be changed, like “new members have to be voted in by existing members”, recognizing that the existing board consisted of members who were a majority old, male and white and how this is a barrier to certain groups of people. Aimee and Joyce will be attending an Association of National Estuary Programs (ANEP) training session on how other NEPs can fold this out. We hope to get a statement out and to make meaningful change as an organization.
- Javier Laureano added that in EPA Region 2 they have just hired a new Environmental Justice (EJ) coordinator and Aimee Boucher or Aisha Sexton-Sims can put PEP in contact with that



person. There is an EJ grant that Javier is unsure of if it is still open, but applying for an EPA EJ grant is another alternative.

- Javier Laureano summarized the meeting:
 - PC approval of [February 5th 2020 Joint Meeting](#) and [May 2nd 2019 Policy Committee Meeting](#) Minutes.
 - PC approved the FY20 PEP Workplan and Budget.
 - Within 30 days we will have a meeting to discuss next steps in terms of the host organization of the PEP. The PEP office will be in charge of setting up this meeting, an offline call will be set up to discuss the invited entities that should be at this meeting.
 - Joyce will send a document regarding the Funding Diversification update.
 - PC approved the PEP Water Quality Monitoring Strategy.
- Javier Laureano asked if there was any other new business, no comments.

Adjourn

DRAFT PEP FY 2020 Budget for June 10th PC Meeting

TASKS	TASK COST	Funding Sources							
		EPA FFY2020 \$320 funds Total Funds available \$662,500	ULO		Partner Contributions				
			ULO EPA \$320 funds with NEIWPC	ULO EPA \$320 funds with Suffolk County	NYS DEC (OGL)	Suffolk County	Suffolk County Capital Budget	USGS Cost Share	CPF
Desc.									
Program Office	\$427,380	\$427,380	\$568,670*						
Program Director	\$128,793	\$128,793							
NY State Coordinator	\$103,182	\$103,182	Total:						
Program Coordinator	\$103,182	\$103,182	\$530,392*						
NEIWPC Program Management (0.18 FTE)**	\$23,280	\$23,280							
Office Supplies	\$0	\$0	\$8,294*						
Travel	\$0	\$0	\$21,995*						
Other	\$3,750	\$3,750	\$7,989*						
Indirect (18%)	\$65,193	\$65,193							
Monitoring	\$634,691	\$133,120		\$62,200	\$200,000***	\$125,000	\$150,000	\$27,660	?
Water Quality Monitoring - Suffolk County	\$247,600	\$60,400		\$62,200		\$125,000			
Water Quality Data Analysis - Suffolk County	\$32,720	\$32,720							
SAV Monitoring - Cornell Cooperative Extension	\$30,000	\$30,000							
NADP Monitoring - Wisconsin State Lab of Hygiene	\$10,000	\$10,000							
Water Quality Monitoring - USGS	\$164,371	\$0			\$200,000***			\$27,660	
Suffolk County Capital Budget Project (New USGS Monitoring station equipment)	\$150,000	\$0					\$150,000		
Contracts	\$102,000	\$102,000	\$9,324*						
Homeowner Rewards Program	\$0	\$0	\$9,324*						
Education & Outreach	\$102,000	\$102,000							
TOTAL	\$1,164,071	\$662,500	\$577,994*	\$62,200	\$200,000***	\$125,000	\$150,000	\$27,660	?

Light blue cell = NEIWPC Request for EPA FFY2020 \$320 funds	\$529,380
Green cell = Suffolk County Request for EPA FFY2020 \$320 funds	\$133,120

* NEIWPC ULOs are reported as of 1/01/2020.

** NEIWPC Program Management positions included are Division Director, Environmental Analyst and Information Officer

*** NYSDEC (OGL) \$200,000 covers cost of USGS Monitoring and remaining funds will be rolled over to future budget years.

PEP FY 2015-FY 2019 US EPA \$320 Funds Budget Summary

Tasks	2019 EPA \$320 Funds	2018 EPA \$320 Funds	2017 EPA \$320 Funds	2016 EPA \$320 Funds	2015 EPA \$320 Funds
Desc.					
Program Office	\$416,720	\$284,300	\$375,000	\$380,000	\$358,000
Monitoring	\$40,000	\$40,000	\$125,000	\$120,000	\$110,000
Education & Outreach	\$102,000	\$102,000	\$100,000	\$100,000	\$45,000 (due to forward funding)
Homeowner Rewards Program	\$6,000	\$0	\$0	\$0	\$0
Additional EPA Assistance	\$0	\$50,000	\$0	\$0	\$0
Implementation Projects TBD	\$35,280	\$173,700	\$0	\$0	\$87,000
Total	\$600,000	\$650,000	\$600,000	\$600,000	\$600,000

Draft Simplified Peconic Estuary Partnership FY 2020 Budget Overview

for the June 10th, 2020 Policy Committee meeting

Overview:

The Peconic Estuary is one of 28 estuaries in the country designated by U.S. Environmental Protection Agency as an “estuary of national significance” under Section 320 of the Federal Clean Water Act. The National Estuary Program (NEP) was established to protect and restore nationally significant estuaries threatened or impaired by pollution, development, and overuse. The Peconic Estuary was formally accepted as part of the NEP in 1992. Officially commenced in 1993, the Peconic Estuary Program (PEP) includes numerous stakeholders, representing citizen and environmental groups, businesses and industries, academic institutions, and local, county, state and federal governments. The EPA, New York State Department of Environmental Conservation (NYSDEC) and the Suffolk County Department of Health Services (SCDHS) are the sponsoring government agencies for the program. The PEP Comprehensive Conservation and Management Plan (CCMP) was approved by the EPA Administrator on November 15, 2001, with the concurrence of the New York State Governor. The PEP is in the final stages of updating the CCMP which will be finalized in early 2020. The CCMP will continue to promote a holistic approach to protecting, enhancing and restoring the Estuary and its watershed, the annual Workplan and Budget provides funds to implement the CCMP.

Total EPA FY2020 \$320 Fund Grant Request: \$662,500

Program Office: \$427,380

➤ Salaries/ Fringe: \$358,437

- **PEP Program Director**- This task continues support of a full-time program director to work in the SCDHS Office of Ecology. The director leads a team of staff that works on the tasks and activities outlined in the Annual Workplan. The Program Director provides overall leadership to the program office, management and administration to the Program on behalf of the Management Conference.
- **PEP State Coordinator**- This task continues support of a full-time state coordinator to work in the NYSDEC Bureau of Marine Resources in East Setauket, NY. The incumbent coordinates NYS participation in the PEP, with an emphasis on habitation protection/restoration, stormwater control, and nutrient management.
- **PEP Program Coordinator**- This task continues support of a full-time program coordinator to work in the SCDHS Office of Ecology. The coordinator is part of a team of staff that works on the tasks and activities outlined in the Annual Workplan.
- **NEIWPCC Program Management**- Supports staff time for NEIWPCC Lowell staff to continue management of PEP-related grants and contracts and supervision of the program staff. Funding will mainly support the NEIWPCC Project Manager, but also the Director of Water Quality Programs (for oversight of program management support and preparation of grant applications and paperwork) and an Information Officer.

➤ Office Supplies, Travel, and Other: \$3,750

Costs associated with the Program Office. This includes funding for office supplies, travel, conference and meeting registration fees, website support, advertising, and printing/publication costs. **For FY 2020 office supplies and travel are being partially funded with ULO EPA 320 Funds awarded to NEIWPCC.**

➤ Indirect: \$65,193

An 18% indirect charge by NEIWPCC on the total direct costs less: subawards over \$100,000, equipment, rental space, and participant support costs.

Monitoring: \$133,120

➤ **Water Quality Monitoring - Suffolk County, Ongoing Activity: \$60,400**

For FY 2020 PEP will partially fund this task with \$62,200 of ULO EPA 320 funds awarded to Suffolk County. The funding supports 2 Suffolk County personnel monitoring water quality of surface and marine waters within the Peconic Estuary as part of the Suffolk County Department of Health Services (SCHDS) Surface Water Quality Monitoring Program. SCDHS will assess water quality and bathing beach data and provide PEP with an annual water quality summary report. The NADP monitoring station will also be maintained.

➤ **Water Quality Data Analysis and Reporting– Suffolk County, New Activity: \$32,720**

The funding supports Suffolk County personnel analyzing data collecting through the SCDHS Surface Water Quality Monitoring Program. The data analysis will contribute directly to annual Peconic Estuary Water Quality monitoring reporting.

➤ **Submerged Aquatic Vegetation Long Term Monitoring (a.k.a. SAV Monitoring) - Cornell Cooperative Extension of Suffolk County, Ongoing Activity: \$30,000**

The PEP Long-term Eelgrass Monitoring Program (LTEMP), conducted by Cornell Cooperative Extension of Suffolk County, currently includes thirteen eelgrass beds located throughout the estuary and represents a range of environmental factors. Evaluate success of seagrass restoration efforts. Refine habitat restoration site suitability indices (based on light, temperature, and seagrass extent) used in planning the extensive seagrass habitat restoration program funded by PEP and its partner agencies, primarily NYS and Suffolk County. Additionally, these data contribute to scientific studies and will be used in future seagrass management plan developed through the New York State Seagrass Protection Act.

➤ **National Atmospheric Deposition Program (a.k.a. NADP Monitoring) – Wisconsin State Laboratory of Hygiene, Ongoing Activity: \$10,000**

This monitoring program is conducted by SCDHS personnel and data is analyzed and reported on by the Wisconsin State Laboratory of Hygiene. The program monitors local atmospheric deposition of major cations in precipitation, local mercury deposition in precipitation and helps to evaluate success of Clean Air Act policies and program in reducing atmospheric deposition of nitrogen in the Peconic region.

➤ **Water Quality Monitoring- USGS, Ongoing Activity: No EPA 320 funds requested**

For FY 2020 this task is funded by \$200,000 of NYSDEC Ocean and Great Lakes Funding. The task supports 3 United State Geological Survey (USGS) Continuous Water Quality Monitoring Stations in the Peconic Estuary. NYSDEC (OGL) \$200,000 covers cost of USGS Monitoring (approximately \$164,371) and remaining funds will be rolled over to future budget years. USGS provides a cost share of approximately \$27,660.

➤ **Suffolk County Capital Budget Project: No EPA 320 funds requested**

For FY2020 this task is funded by \$150,000 of Suffolk County Capital Budget 8235 project funds. Funds will be allocated to equipment for the new USGS Monitoring station to be established at South Ferry on Shelter Island.

Contracts: \$102,000

➤ **Homeowner Rewards Program, Ongoing Activity: No EPA 320 funds requested**

For FY2020 PEP will utilize \$9,324 of ULO EPA 320 Funds awarded to NEIWPC . This task supports the Green Infrastructure Homeowner Rewards Program and Residential Nutrient Management activities consistent with the existing program.

➤ **Public Education & Outreach, Ongoing Activity: \$102,000**

Annual contract supports coordination and conduct of public education and outreach for the PEP.



MEMO: ACCOMPANYING MANAGEMENT COMMITTEE RECOMMENDATIONS TO THE PEP FY20 WORKPLANS & BUDGET

May 29th, 2020

The Management Committee of the Peconic Estuary Partnership, on April 28th, 2020 voted unanimously to approve recommending the Peconic Estuary Partnership FY20 Suffolk County and NEIWPCCC Workplans and Budget to the Policy Committee with the following recommendations:

The Management Committee recommends the PEP Suffolk County FY20 Workplan and Budget without incident.

The Management Committee recommends the PEP NEIWPCCC FY20 Workplan and Budget while also recommending that the Management Conference begin exploring alternate host entities to suit the specific needs of the Partnership.

An alternate host may be better suited to meet the needs and challenges of the PEP, including the limited financial resources that are available to the Program and program autonomy to ensure the Program is run efficiently. Specific needs and challenges that can't be accommodated by NEIWPCCC include:

- (1) Detailed description of staff salary and indirect costs and how they are applied to the program;*
- (2) The ability for the MC and PEP committees to agree on how all monies are spent in the program;*
- (3) Detailed description of host agency policies and how they impact the PEP; and,*
- (4) Program management should be maintained locally and should be the responsibility of the Program office, the Director, and the PEP MC; not the program host.*

FY20 WORKPLAN AND BUDGET



Applicant:
Suffolk County Department of Health Services

Submitted by:
PEP Management Conference

Prepared by:
Peconic Estuary Partnership Office
Suffolk County Department of Health Services (SCDHS)
Riverhead County Center
300 Center Drive
Riverhead, NY 11901
(631) 852-2961

Final draft dated:
April 10th, 2020

Peconic Estuary Partnership

FY20 WORKPLAN AND BUDGET

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I. INTRODUCTION

The Peconic Estuary is one of 28 estuaries in the country designated by U.S. Environmental Protection Agency as an “estuary of national significance” under Section 320 of the Federal Clean Water Act. The National Estuary Program (NEP) was established to protect and restore nationally significant estuaries threatened or impaired by pollution, development, and overuse. The Peconic Estuary was formally accepted as part of the NEP in 1992. Officially commenced in 1993, the Peconic Estuary Partnership includes numerous stakeholders, representing citizen and environmental groups, businesses and industries, academic institutions, and local, county, state and federal governments. The EPA, New York State Department of Environmental Conservation (NYSDEC) and the Suffolk County Department of Health Services (SCDHS) are the sponsoring government agencies for the program. In 2019, the Peconic Estuary Partnership re-named to the Peconic Estuary Partnership (PEP) to more accurately reflect the varied partnerships that allow the NEP to thrive.

The original PEP Comprehensive Conservation and Management Plan (CCMP) was approved by the EPA Administrator on November 15, 2001, with the concurrence of the New York State Governor. The CCMP promotes a holistic approach to protecting, enhancing and restoring the Estuary and its watershed. Priority management topics in the original PEP CCMP include Brown Tide, nutrients, habitat and living resources, pathogens, toxic pollutants, and critical lands protection. These six priority topics, together with public education and outreach, financing, and post-CCMP management, form the basis for the CCMP action plans. The Peconic Estuary Partnership has submitted an updated final draft CCMP for EPA review and acceptance to address new issues that have arisen; the 2020 CCMP is anticipated to be published in early summer 2020.

Overall Funding Sources

The core FY20 budget reflects the following sources of funding:

EPA FY20 Base Funding	\$662,500.00*
Non-Federal Match	\$662,500.00**
Total	\$1,325,000.00

Resources Requested:

The total Section 320 funds requested in this **NEP grant to the Suffolk County Department of Health Services is \$133,120** which will be matched at the required 1:1 rate, making the full budget of this award \$266,240.

*EPA FY20 Base funding will be provided to Suffolk County Department of Health Services (SCDHS) (\$133,120) and NEIWPC (\$529,380).

**The non-Federal match is provided by the Suffolk County Department of Health Services (SCDHS) (\$XXX) and the New York State Department of Environmental Conservation (\$XXX). Match is itemized in detail in Section IV. Suffolk County, New York State and other partners are expected to provide significant support above and beyond the committed match in the budget table in support of Peconic

Estuary Partnership goals and objectives. [April 2020 DRAFT does not include match documentation yet, match amount is not final].

II. SUMMARY OF FY19 ACCOMPLISHMENTS

The FY19 year for the Peconic Estuary Partnership was a year filled with milestones and new beginnings. We began the Organizational Assessment which was initiated using EPA funds and as a result of our 2017 Program Evaluation. This process is on-going and has thus far resulted in significant progress such as draft Organizational documents which outline the roles and responsibilities of our Committees, draft By-Laws and Guiding Principles, and a partnership willing to make changes for the successful future of the organization. Perhaps, most telling is the unanimous decision by the Policy and Management Committees to change our name from the Peconic Estuary Program to the Peconic Estuary Partnership; thus reflecting the commitment by all members to work together going forward. Additionally, and also as a result of the 2017 Program Evaluation, we have progressed with the Water Quality Assessment and have finalized water quality targets to use in our annual water quality reports which will be released in Fall annually, beginning with 2020.

PEP remained on-track to submit the Final Draft of the CCMP to the EPA for approval. Through a long and publicly engaging process the PEP has been able to develop a document that has extensive public input as well as substantial input from all of our committee members and active partners. We are excited for the new goals and actions we have identified to be rolled out to our watershed

PEP completed extensive work under funded by EPA Assistance Award No: 99200217; the Workplan goals, completed projects and outcomes are summarized below in Section III these projects include: the Peconic Estuary Seagrass Bio-Optical Model, the Living Shoreline Demonstration Project in Greenport, the Climate Ready Assessment for our watershed and the Shinnecock Indian Nation, and the Conceptual Habitat Restoration Design Plans in the Towns of East Hampton, Riverhead, Southampton, and Southold.. PEP also made substantial progress on diadromous fish passage projects on the Peconic River using partner funding. Additional partner grant funding has been secured for the Woodhull Dam Fish Passage Construction (planned for fall 2020) and the final engineering designs are being developed for the Upper Mills Fish Passage project. Moreover, the PEP is assisting the Town of Brookhaven in their efforts to finalize engineering design and move forward with the construction of the Fish Pass at Forge Road Dam. PEP has also begun to work with the Town of Southampton to right-size the existing culvert at Noyak Road and implement some stormwater control measures on Alewife Creek in Southampton to allow for improved aquatic organism passage and diadromous fish migration.

Our partnership based work became stronger this year, as Suffolk County released the draft Subwatersheds Wastewater Plan to tackle nitrogen pollution into the estuary and PEP has worked with multiple community organizations and local governments throughout the watershed to highlight this work and teach the public about the importance of nitrogen reduction. PEP has also begun the process of working closely with the NYSDEC Long Island Nitrogen Action Plan to align the goals and actions of each organization to maximize funding opportunities and work products.

Our outreach efforts continued and were further developed in FY19. We created a series of short informative videos for the public and conducted social media campaigns, including #NitrogenActionLI with our Long Island Nitrogen Action Plan partner to improve our efforts on social media. This has resulted in an increase in followers across our social media channels. We have also expanded our efforts for bi-lingual outreach by hiring a Spanish speaking outreach intern and creating a Spanish language video for the public entitled: *La Importancia del Estuario Peconic*. All videos can be found here: <https://www.peconicestuary.org/news-and-blogs/media-library/>. Outreach efforts also resulted in an increase in attendance at Citizens' Advisory Committee meetings and an increase in reinvigorated and enthusiastic members. Educational programs, citizen science internships, and distributing digital and print outreach materials have expanded PEP's footprint and impact in the watershed.

III. WORKPLAN

1. CCMP Goals

With a new CCMP being rolled-out, our goals and actions have been updated to reflect current issues affecting the Peconic watershed. Our strong focus will be on reducing nitrogen pollution in our estuary, advancing our on-going diadromous fish passage projects and wetland restoration work, and securing funding for eel grass restoration for both blue carbon initiatives and increased shellfish and juvenile fish nursery habitat. In order to achieve the goals laid out in this workplan, the program office staff will facilitate committee meetings in conjunction with the Committee Chairs as follows, note meeting frequency may be altered based on Partnership needs: Policy Committee (two meetings annually – one jointly with Management Committee), Management Committee meetings (four meetings annually, one jointly with Policy Committee), Technical Advisory Committee (TAC) meetings (four meetings annually, one jointly with Natural Resource Sub-Committee), Natural Resource Sub-Committee meetings (two meetings annually, one jointly with TAC), Citizens' Advisory Committee (CAC) meetings (three meetings annually), Local Government Committee meetings (two meetings annually), Peconic Bay Scallop Technical Review Committee meetings (up to six meetings annually). The following CCMP Actions will specifically be addressed this year by the portion of the grant addressed in this workplan:

2. Budget and Staff Elements

Program Office Staff

All funding to be used for direct staff time is covered under the NEIWPC portion of the NEP grant request. For information regarding staff funding of the Peconic Estuary Partnership staff in FY2020, please see the workplan for grant agreement CE97230304 to NEIWPC. However, time from the following staff will be used toward managing the projects funded via the NEP grant awarded to the Suffolk County Department of Health Services since this award supports the Peconic Estuary Partnership:

Director:

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 204N, Riverhead, NY 11901

Responsibilities: Provides overall leadership to the program office, management and administration to the Program on behalf of the Management Conference.

Program Coordinator:

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 204N, Riverhead, NY 11901

Responsibilities: Coordinates all projects in Suffolk County and acts as support and lead for a variety of other projects carried out by the program office.

3. New and On-Going Project Information

In addition to the *New* projects listed below that will be funded with FY20 §320 funds; the PEP Staff will be working on the following *Ongoing* tasks funded by previous §320 Budgets and Grant Awards awarded to SCDHS.

CCMP GOAL: CLEAN WATERS

Objective D: Protect areas with clean water from degradation.

Action 16: Identify areas of clean water quality and deliver information that local governments and others can use to protect those areas.

Performance Measure: Annual review of water quality data and water quality monitoring programs with assessment and recommendations regarding changes to water quality data collection in order to adequately monitor all waterbodies in the Estuary.

2020 Task 1: Water Quality Monitoring (New/ Ongoing)

- a. **Estimated Budget:** \$60,400: §320 funds Request in FY20 budget*
*Suffolk County is utilizing ULO §320 Budget funds from previous years in the amount of \$62,200.00 awarded to Suffolk County for personnel to supplement the funding request for this task. These changes are reflected in modification requests to award numbers 99200218 and 99200219.
- b. **Partners and their roles:** Suffolk County Department of Health Services (SCDHS), Office of Ecology (Lead Partner and Contracting Entity), PEP (Supporting Partner).
- c. **Description and Objectives:** SCDHS monitors water quality of surface and marine waters within the Peconic Estuary. The water quality monitoring program conducted by the SCDHS Office of Ecology includes monthly monitoring at approx. 40 Peconic surface water quality stations throughout the year, periodic monitoring of approx. 30 point source and stream stations, and weekly monitoring at the NADP rain and atmospheric deposition gauge. Task funds will be used

to support 2 Suffolk County personnel monitoring water quality of surface and marine waters within the Peconic Estuary as part of the Suffolk County Department of Health Services (SCHDS) Surface Water Quality Monitoring Program.

- d. **Outputs and Deliverables:** Routine monitoring conducted in the Peconic Estuary makes it possible for the PEP to have accurate, up-to-date information regarding water quality conditions throughout the Estuary. All Suffolk County Department of Health Services Water Quality Data and Information is available [here](https://gisportal.suffolkcountyny.gov/gis/home/group.html?id=cbd4d20b287d4ef79af28a9b56cea71a#overview):
(<https://gisportal.suffolkcountyny.gov/gis/home/group.html?id=cbd4d20b287d4ef79af28a9b56cea71a#overview>)
- e. **Estimated Milestones:** Annual water quality summary report.
- f. **Long Term Outcomes:** Water quality data will be used to assess environmental conditions in the Peconic Estuary and refine management programs as necessary. Based on water quality data, priority projects and research initiatives can be identified and the PEP can continue its success in efforts to protect and restore the Estuary. Data collected by these monitoring efforts inform periodic reporting, including environmental indicators reports and “State of the Bay” publications, and support adaptive management.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

Performance Measure: Annual water quality data reports that support partner’s efforts to increase local and regional stewardship of areas of clean water quality.

2020 Task 2: Water Quality Data Analysis and Reporting (New)

- a. **Estimated Budget:** \$32,720: \$320 funds Request in FY20 budget
- b. **Partners and their roles:** Suffolk County Department of Health Services (SCDHS), Office of Ecology (Lead Partner), PEP (Supporting Partner).
- c. **Description and Objectives:** The SCDHS Surface Water Quality Monitoring Program data will be analyzed by personnel within the SCDHS Office of Ecology and a water quality monitoring report will be produced for the Peconic Estuary Partnership to incorporate in the Annual “State of the Bay” Report. Task funds will be used to support personnel time allocated to this task.
- d. **Outputs and Deliverables:** Routine analysis of SCDHS Surface Water Quality Monitoring Program and an annual water quality summary report provided to the PEP.
- e. **Estimated Milestones:** Annual water quality summary report produced and provided to the PEP in the Fall.
- f. **Long Term Outcomes:** Water quality data will be used to assess environmental conditions in the Peconic Estuary and refine management programs as necessary. Based on water quality data, priority projects and research initiatives can be identified and the PEP can continue its success in efforts to protect and restore the Estuary. Data collected by these monitoring efforts inform periodic reporting, including environmental indicators reports and “State of the Bay” publications, and support adaptive management.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

2020 Task 3: National Atmospheric Deposition Program (New/ Ongoing)

- a. **Estimated Budget:** \$10,000: \$320 funds Request in FY20 budget
- b. **Partners and their roles:** Suffolk County Department of Health Services, Office of Ecology (Lead Partner and Contracting Entity) is responsible for sample collection; University of Wisconsin (cations) and Frontier Global Sciences, Inc. (mercury) are responsible for data analysis; University of Wisconsin National Atmospheric Deposition Program is responsible for data assessment, reporting, and coordination with the national network; Mercury Deposition analyses are funded through a partnership with New York State Energy Research and Development Authority (NYSERDA), PEP (Supporting Partner).
- c. **Description and Objectives:** Monitor local atmospheric deposition of major cations in precipitation and local mercury deposition in precipitation at Site ID 96 at Cedar Beach Southold, NY. Objective is to evaluate success of Clean Air Act policies and program in reducing atmospheric deposition of nitrogen in the Peconic region and track progress toward nitrogen TMDL goals.
- d. **Outputs and Deliverables:** Results published as part of the National Atmospheric Deposition Program system on their website: (<http://nadp.slh.wisc.edu/data/sites/siteDetails.aspx?net=NTN&id=NY96>)
- e. **Estimated Milestones:** Annual Reporting
- f. **Long Term Outcomes:** To assess the long term trends of nitrogen and mercury and nitrogen deposition in the Peconic watershed and Estuary. Utilize the results to understand the sources of nitrogen pollution and implement science-based approaches for monitoring and reducing nitrogen pollution. Results will be used to determine implications for coastal acidification in the Estuary.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

Objective E: Increase understanding of nutrient pollution in groundwater and surface waters, and decrease negative impacts from legacy, current, and future nutrient inputs.

Action 17: Plan science-based approaches for monitoring and reducing nitrogen pollution.

Performance Measure: Completion of BMP cost per pound of nitrogen removal assessment from nature-based point source removal technologies. This will help to develop cost-effective, subwatershed-specific strategies to achieve target nutrient load reductions.

Ongoing Task: Peconic Estuary Nitrogen Load Reduction Cost Assessment (Ongoing- FY15 Workplan and Budget)

- a. **Estimated Budget:** \$320 funds: \$87,000 (FY15)
- b. **Partners and their roles:** PEP (Lead Partner), Anchor QEA, LLC. (Contractor), Suffolk County Department of Health Services (Contracting Entity)
- c. **Description and Objectives:** Assessment of the cost per-pound of nitrogen reduction to groundwater for various nature-based nitrogen reduction best management practices (BMPs) currently being employed in the New England and Mid-Atlantic region of the United States that,

based on the geographical, environmental and climate based needs of the County, have potential to be installed in Suffolk County. The contractor will be responsible for comparing the cost and benefit estimates based on a per-pound of nitrogen reduction for any public or private property owner. This information will be analyzed and developed into a user friendly tool by the contractor in conjunction with and with approval of the County. This tool will be made available for the public to use and will also be used as a tool for municipalities for geographic and financial planning purposes.

- d. **Outputs and Deliverables:** On-line tool to assess cost per pound of nitrogen in nature-based nitrogen pollution reduction techniques.
- e. **Estimated Milestones:** Completion Fall 2020.
- f. **Long Term Outcomes:** Enable communities and local governments to achieve the most cost effective measures to reduce nitrogen in the watershed.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

Objective F: Reduce current and future inputs of toxics, pathogens, and marine debris into groundwater and surface waters, and minimize their impacts.

ACTION 21: Expand non-point source subwatershed management plans to all pathogen-impaired waterbodies and continue to use existing plans.

Performance Measure: Review of current PEP Non-point Source Subwatershed Management Plans and implementation of viable projects.

Ongoing Task: Peconic Estuary Non-Point Source Pollution Management Program (Ongoing-FY14 Workplan and Budget)

- a. **Estimated Budget:** §320 funds: \$24,711 (FY14)
- b. **Partners and their roles:** PEP (Lead Partner), Village of Sag Harbor (Contractor/property owner), and Suffolk County (Contracting Entity).
- c. **Description and Objectives:** Implement a non-point source pollution management project at Havens Beach Sag Harbor, NY. The project involves utilizing green infrastructure best management practices to treat stormwater that would otherwise flow across the beach and/ or through an existing discharge pipe directly to Sag Harbor Bay.
- d. **Outputs and Deliverables:** A waterfront stormwater retention and filtration system using native plants. Educational signage at the site about the benefits of stormwater retention and rain gardens.
- e. **Estimated Milestones:** Completion Fall 2020
- f. **Long Term Outcomes:** Long term filtration of stormwater and related pollutants associated with this non-point source pollution. Significant reduction in the nitrogen pollutant loads to the waterbody and improving the overall health of the Peconic Estuary.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

CCMP GOAL: HEALTHY ECOSYSTEMS WITH ABUNDANT, DIVERSE WILDLIFE

Objective H: Restore and protect key habitats and species diversity in the Peconic Estuary and its watershed.

Action 30: Monitor and protect existing eelgrass beds; where appropriate, restore and expand eelgrass beds.

Performance Measure: Financial and logistical support for the Annual Long-term Eelgrass Monitoring Program to monitor changes in eelgrass density and extent.

2020 Task 4: Submerged Aquatic Vegetation Long Term Monitoring and Management (SAV Monitoring) (New/Ongoing)

- a. **Estimated Budget:** \$30,000: \$320 funds Request in FY20 budget
- b. **Partners and their roles:** Cornell Cooperative Extension of Suffolk County (Contractor), Suffolk County (Contracting Entity), PEP (Supporting Partner)
- c. **Description and Objectives:** Monitoring of seagrass survival and bed expansion at thirteen eelgrass beds located throughout the estuary. Nine sites are monitored annually and four additional sites are monitored biennially. Long-term measurements of seagrass extent and deep edge location, eelgrass shoot density, measurements of light, temperature, macroalgae cover and sediment conditions are done at these sites. Measurements of light and temperature were only monitored at six of those sites.
- d. **Outputs and Deliverables:** Maps of individual eelgrass beds with shoot density, imagery, and bed alterations on an annual timescale.
- e. **Estimated Milestones:** Annually and report generated in March.
- f. **Long Term Outcomes:** An extensive and accurate record of eel grass beds on a micro scale to allow for successful management decisions.
- g. **Clean Water Act Core Programs:** Protecting Wetlands

Action 33: Implement living shoreline projects, monitor for ecological and financial benefits, and use model projects to educate planners and homeowners on the benefits of living shorelines over hardened shorelines.

Performance Measure: Dissemination of monitoring results from two pilot living shoreline projects.

Ongoing Task: PEP Expansion and Monitoring of the Town of Southold Living Shoreline Demonstration Project (Ongoing-Referred to as Nitrogen Mitigation Pilot Assessment - FY18 Workplan and Budget)

- a. **Estimated Budget:** \$320 funds: \$155,000. \$55,000 (FY15) (\$100,000 (FY11) spent down).
- b. **Partners and their roles:** PEP (Supporting Partner), Cornell Cooperative Extension of Suffolk County (Contractor), Suffolk County Department of Health Services (Contracting Entity)

- c. **Description and Objectives:** Expansion and Monitoring of the Town of Southold Living Shoreline Demonstration Project. This project involves expansion to an existing Town of Southold Living Shoreline Demonstration Project contract with the Town of Southold Trustees and the Suffolk County DEDP. The PEP funded project establishes a larger geography of the project and monitoring services to run in tandem with the existing project to enable the quantification of nitrogen and pathogen uptake results and assessment of the effectiveness of the living shoreline to mitigate nitrogen pollution in the Peconic Estuary. The living shoreline coconut fiber (coir) logs, planting of *Spartina alterniflora* and hatchery cultivated ribbed mussels to provide shoreline stabilization, improve habitat, reduce nitrogen and enhance ecosystem services. Assess the project's ability to improve water quality and use results to develop decision-support information.
- d. **Outputs and Deliverables:** The creation of a living shoreline demonstration project using ribbed mussels and *Spartina alterniflora* in a sheltered embayed coastal habitat. Educational materials for public dissemination and permanent signage at the demonstration site.
- e. **Estimated Milestones:** Completion Fall 2020
- f. **Long Term Outcomes:** The results from these analyses are intended to be used in recommendations for future nitrogen and pathogen mitigation techniques and nitrogen and pathogen management activities, including those regarding cost-effective nitrogen removal strategies on a subwatershed basis, thus assisting local decision makers determine the most cost-effective means of reducing nitrogen in subwatersheds.
- g. **Clean Water Act Core Programs:** Elements of this project prevent or mitigate the impacts of nutrient pollution. Wetlands Protection.

4. Completed Major Projects

a. Seagrass Bio-optical model (Peconic Estuary Partnership Eelgrass Assessment Services)

Objective: This project obtained specific information to inform eelgrass management and restoration programs to lead to a better understanding of specific light and temperature requirements for eelgrass in the PE as well as the factors that contribute to reduced light conditions throughout the PE. The project will lead to a better understanding of the effects of eelgrass restoration projects and pollution prevention initiatives undertaken within the PE Watershed.

Description: Eelgrass beds in the Peconic Estuary (PE) were decimated by disease in the 1930's and further impacted by reduced light penetration due to the Brown Tide blooms of 1985-1995. Eelgrass is also damaged by excess nitrogen inputs, anchor scarring, and boating in shallow water. Eelgrass coverage declined by at least eighty-two percent (82%) from the 1930's through 2000; an inventory taken in year 2000 found only 1,550 acres of eelgrass in one-hundred and nineteen (119) beds within the PE, and a 2014 survey showed that nearly half of that had been lost, leaving less than nine-hundred (900) acres of seagrass remaining. The benefits that this ecosystem provides, including preventing shoreline erosion, supporting species valuable to our economy, and improving water quality, has a monetary value twice that of other marine habitats. Over the past few decades, eelgrass restoration projects have been completed and few have been successful, partly due to the lack of understanding of light requirements for local eelgrass populations and water quality and sediment condition requirements. The PEP contracted with The Research Foundation of SUNY Stony Brook to examine the combined effects of light and temperature on eelgrass physiology and survival.

Lead Implementer: PEP (Project Lead), The Research Foundation of SUNY Stony Brook (Contractor), SCDHS (Contracting Entity)

Accomplishments and Deliverable(s): An eelgrass site suitability index and bio-optical model and an improved ability to make management decisions for eelgrass protection and restoration within the Peconic Estuary. The suitability index and bio-optical model provide an understanding of the light and temperature dynamics associated with eel grass in the Peconics. This has allowed for the creation of eel grass zones for appropriate management of the resource with specific light and temperature conditions, existing and predicted. This habitat is especially sensitive to higher temperatures as a result of climate change and this work has allowed the program to begin development of a climate related management strategy. Report: [The Peconic Estuary Seagrass Bio-optical Model Final Report.](#)

\$320 grant/cooperative agreement funds: \$82,000 (\$320 funds: \$35,311 (FY 11); \$46,689 (FY12))

Expected Long-term Outcomes: Increase understanding of light limits of seagrass plants under different temperature conditions so that numeric nutrient criteria can be established for the maintenance of sufficient light for plant survival. Increased light availability for healthier eelgrass due to the implementation of regulatory and voluntary programs to manage for nitrogen loadings, suspended sediment, or other factors.

Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; addressing diffuse, nonpoint sources of pollution.

b. Climate Ready Estuaries – Climate Ready Assessment and Critical Land Protection Strategy

Objective: Update the PEP 2004 Critical Land Protection Strategy, taking into account climate related variables, specifically sea level rise, in order to update acquisition priorities. Provide climate change analysis of the environmental restoration and protection programs of both the PEP and Shinnecock Indian Nation and to conduct a risk based climate change vulnerability assessment, and to develop an adaptation action plan consistent with USEPA's Climate Ready Estuaries Program.

Description: The Peconic Estuary faces numerous pressures including development, habitat loss, and nutrient loading. Climate change poses another set of challenges; among them are sea level rise (SLR), more frequent and more intense storms, and changing weather patterns. Suffolk County has already seen a 2.3°C (4.14°F) increase in annual temperature since the late 1890s, above the 1°C average increase for the United States over the same period (Mufson et al. 2019). All these pressures and challenges have the potential to further degrade water and habitat quality and lead to greater habitat loss and fragmentation. But PEP's 2001 CCMP and 2004 CLPS do not take climate change into account. In 2016, PEP embarked on a Climate Ready Assessment (CRA) Project to incorporate climate change into an updated CLPS, to conduct a risk based climate change vulnerability assessment, and to develop an adaptation action plan consistent with USEPA's Climate Ready Estuaries Program. The CRA included broad stakeholder outreach and collaboration to fully identify risks. It also included the development of tools to identify the spatial distribution of potential climate change impacts and to provide a way to prioritize land for protection based on revised environmental criteria that include climate change considerations.

Lead Implementer: PEP (Project Lead), Anchor QEA, LLC. (Contractor), the Nature Conservancy (Sub-contractor), SCDHS (Contracting Entity)

Accomplishments and Deliverable(s): A report documenting the approach, methods, and results of the CRA,

Procedures for ensuring climate change considerations are incorporated into all environmental protection and restoration activities of the Peconic Estuary Partnership and Shinnecock Indian Nation to create a more climate resilient program positioned to track climate indicators, manage adaptively and participate in regional climate initiatives.

Reports: [Peconic Estuary Partnership Climate Vulnerability Assessment and Action Plan.](#)

[Shinnecock Indian Nation Climate Vulnerability Assessment and Action Plan.](#)

§320 grant/cooperative agreement funds: \$97,699 (§320 funds: Various (FY09, FY11, FY12, FY14)

Expected Long-term Outcomes: This project will result in the protection and acquisition of lands that will continue to preserve and improve water and habitat quality in the face of rising sea levels and increased temperatures. It will allow for the natural inland migration of critical salt marsh habitats as sea level rises and preserve living shorelines in an environment where shoreline hardening is likely to become increasingly common. The information resulting from the Services will serve as an important tool for New York State, Suffolk County, and local agencies. The Services will be a critical step towards updating the current PEP CCMP and addressing a long-term goal of prioritizing management actions and planning within the Peconic Estuary watershed. It will be a first step towards the PEP and SIN working together toward climate adaptation by assessing our highly overlapping climate vulnerabilities.

Clean Water Act Core Programs: Elements of this project prevent or mitigate the impacts of nutrient pollution. Wetlands Protection.

c. Widows Hole Living Shoreline Demonstration Project (Habitat Restoration Plan Implementation)

Objective: Provide funding for the habitat restoration project at the Peconic Land Trust's (PLT) Widow's Hole Preserve in Greenport, NY that will involve non-native species removal restoring degraded saltmarsh and shoreline communities.

Project Description: Widow's Hole Preserve is a property owned by the Peconic Land Trust that was developed for commercial purposes and used as a petroleum product storage facility which has resulted in degradation of the shoreline and native plant species. The Peconic Land Trust, in coordination with the Cornell Cooperative Extension of Suffolk County, designed and implemented plans for salt marsh restoration and coastal grass restoration at the site. The project resulted in a living shoreline restoration project and educational signage and materials.

Lead Implementer; Partners and Their Roles: PEP (Project Lead), PLT (Contractor), Cornell Cooperative Extension of Suffolk County (Sub-contractor).

Accomplishments and Deliverable(s): Advance a habitat restoration project in Greenport Village within the Town of Southold which completed the first Living Shoreline Demonstration Project in the Peconic Estuary watershed.

Report: [Widows Hole Preserve Living Shoreline Project- Final Report](#)

§320 grant/cooperative agreement funds: \$150,000 FY11 §320 Funds

Expected Long-term Outcomes: The use of living shorelines will provide an opportunity to analyze the effectiveness of living shorelines in the Peconic Estuary. Provide assistance to local governments and partners to support habitat restoration project plans. Enhancement of existing resources and/or restoration of habitats that have been lost or degraded.

Clean Water Act Core Programs: Wetlands Protection

d. Conceptual Habitat Restoration Design Planning Services

Objective: Peconic Estuary Conceptual Habitat Restoration Design Plans, feasibility assessments, conceptual designs/ plans and planning-level cost estimates for four designated habitat restoration projects identified in the 2009 Peconic Estuary Partnership Habitat Restoration Plan.

Project Description: Conceptual habitat restoration design plans for Southold: Narrow River Road, Southampton: Iron Point Wetland Restoration, East Hampton: Lake Montauk Alewife Access and Habitat Enhancement, and Riverhead: MH-2 Main Road Wetland Construction.

Lead Implementer; Partners and Their Roles: PEP (Project Lead), Land Use Ecological Services, Inc. (Contractor)

Accomplishments and Deliverable(s): The PEP contracted with Land Use Ecological Services, Inc. to complete feasibility assessments, conceptual designs/plans and planning-level cost estimates for nine designated habitat restoration projects in support of implementing the PEP Habitat Restoration Plan. The development of conceptual design plans in the five East End Towns will make permitting and other requirements for these projects able to be fulfilled in a timelier manner for habitat restoration projects to be completed.

Reports: [Conceptual Habitat Restoration Design- Narrow River Road \(2019\)](#); [Conceptual Habitat Restoration Design-Iron Point Park \(2019\)](#); [Conceptual Habitat Restoration Design- Lake Montauk \(2019\)](#); [Conceptual Habitat Restoration Design- Main Road \(2019\)](#)

§320 grant/cooperative agreement funds: \$99,980 §320 funds (FY10)

Expected Long-term Outcomes: Having conceptual plans completed will facilitate applying for funding sources as they become available. It is also more likely that habitat restoration efforts will be fulfilled and thus the benefits of such projects can be realized. The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded. Significant natural habitats such as eelgrass beds and wetland complexes will benefit from restoration efforts.

Clean Water Act Core Programs: Wetlands Protection; Elements of this project prevent or mitigate the impacts of nutrient pollution.

IV. BUDGET DETAILS

1. Resources Requested

The total 320 funds requested in this PEP grant to Suffolk County Department of Health Services is **\$133,120**. This grant will be complimented by a request for PEP support to NEIWPC for \$529,380, and together these two components make up the full Peconic Estuary Partnership FFY2020 workplan for a total §320 request of \$662,500 with a total of \$662,500 match.

The \$133,120 funding to Suffolk County Department of Health Services, and the required 1:1 match, is distributed among the following budget categories:

BUDGET DETAIL 2020 Workplan	Total Requested from EPA	Total Match Provided by Applicant	Total
Personnel	\$93,120.00	\$60,400.00	\$153,520.00
2020 Task 1 - Ongoing Personnel - wages and salary*	\$60,400.00	\$60,400.00	\$120,800.00
Monitoring Personnel: Chemist	\$29,150.00	\$29,150.00	\$58,300.00
Monitoring Personnel: Boat Operator	\$31,250.00	\$31,250.00	\$62,500.00
*Suffolk County is utilizing ULO §320 Budget funds from previous years in the amount of \$62,200 awarded to Suffolk County for personnel to supplement the funding request for this task. These changes are reflected in modification requests to award numbers 99200218 and 99200219.			

2020 Task 2 - Personnel – wages and salary	\$32,720.00	\$0.00	\$32,720.00
Other	\$40,000.00	\$72,720.00	\$112,720.00
2020 Task 3 - Ongoing Atmospheric Deposition Monitoring via NADP	\$10,000.00	\$0.00	\$10,000.00
2020 Task 4 - Ongoing SAV Monitoring via Cornell Cooperative Extension	\$30,000.00	\$0.00	\$30,000.00
Water Quality Protection and Restoration Program (WQPRP) Projects & Suffolk County Capital Projects	\$0.00	\$72,720.00	\$72,720.00
TOTAL	\$133,120.00	\$133,120.00	\$266,240.00

2. Non-Federal Contribution

Suffolk County will provide \$133,120 in matching funds toward water quality monitoring. The total non-federal contribution is \$133,120 for this award.

3. Grant Agreement Allocations For 2020

The Federal Fiscal Year Award is expected to be awarded by Cooperative Agreement CE-99200220-2. The table below details the agreement.

Grant/Amendment Number	CE-99200220	CE-99200220-1	CE-99200220-2	Total CE-99200220
Federal Fiscal Year	FFY 2018	FFY 2019	FFY 2020	
1. Personnel	\$40,000.00	\$40,000.00	\$153,520.00	\$233,520.00
2. Fringe Benefits	\$0.00	\$0.00	\$0.00	\$0.00
3. Travel	\$0.00	\$0.00	\$0.00	\$0.00
4. Equipment	\$0.00	\$0.00	\$0.00	\$0.00
5. Supplies	\$0.00	\$0.00	\$0.00	\$0.00
6. Contractual	\$0.00	\$0.00	\$0.00	\$0.00
7. Construction	\$0.00	\$0.00	\$0.00	\$0.00
8. Other	\$40,000.00	\$40,000.00	\$112,720.00	\$192,720.00
9. Total Direct Charges	\$80,000.00	\$80,000.00	\$266,240.00	\$426,240.00
10. Indirect Costs: % Base	\$0.00	\$0.00	\$0.00	\$0.00
11. Total (Share: Recipient 50.00 % Federal 50.00 %.)	\$80,000.00	\$80,000.00	\$266,240.00	\$426,240.00
12. Total Approved Assistance Amount				\$0.00
13. Program Income	\$0.00	\$0.00	\$0.00	\$0.00
14. Total EPA Amount Awarded This Action	\$40,000.00	\$40,000.00	\$133,120.00	\$213,120.00
15. Total EPA Amount Awarded To Date				\$213,120.00

Attachment B Program Narrative
Peconic Estuary Partnership
NEIWPCC Job Cost Code: TBD

Applicant: NEIWPCC
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**Peconic Estuary Partnership
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joyce.novak@suffolkcountynyny.gov

QA/QC Plan Required: Yes

Project Period: October 1, 2020 - September 30, 2022

Resources Requested: The total budget requested for this application is \$1,058,760.

Federal Cost: Current request: \$529,380

Non-Federal Match: The New York State Department of Environmental Conservation will provide a match of \$529,380. **[April 2020 DRAFT does not include match documentation yet, match amount is not final]**

Peconic Estuary Partnership

NEIWPCCC FY20 Workplan & Budget

EPA Grant # 97230304
Draft date: April 3, 2020

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I. INTRODUCTION

Peconic Estuary Partnership

The Peconic Estuary is one of 28 estuaries in the country designated by U.S. Environmental Protection Agency as an “estuary of national significance” under Section 320 of the Federal Clean Water Act. The National Estuary Program (NEP) was established to protect and restore nationally significant estuaries threatened or impaired by pollution, development, and overuse. The Peconic Estuary was formally accepted as part of the NEP in 1992. Officially commenced in 1993, the Peconic Estuary Program includes numerous stakeholders, representing citizen and environmental groups, businesses and industries, academic institutions, and local, county, state and federal governments. The EPA, New York State Department of Environmental Conservation (NYSDEC) and the Suffolk County Department of Health Services (SCDHS) are the sponsoring government agencies for the program. The current hosts of the program are SCDHS and NEIWPC. In 2019, the Peconic Estuary Program was re-named the Peconic Estuary Partnership (PEP) to more accurately reflect the varied partnerships that allow the NEP to thrive.

The original PEP Comprehensive Conservation and Management Plan (CCMP) was approved by the EPA Administrator on November 15, 2001, with the concurrence of the New York State Governor. The CCMP promotes a holistic approach to protecting, enhancing and restoring the Estuary and its watershed. Priority management topics in the original PEP CCMP included Brown Tide, nutrients, habitat and living resources, pathogens, toxic pollutants, and critical lands protection. These six priority topics, together with public education and outreach, financing, and post-CCMP management, form the basis for the CCMP action plans. As of April 2020, the PEP has submitted an updated final draft CCMP for EPA review to address new issues that have arisen; the 2020 CCMP is anticipated to be published in summer 2020. The tasks in this workplan are structured around the 2020 CCMP goals of strong partnerships and engagement, clean waters, resilient communities prepared for climate change, and a healthy ecosystem with abundant, diverse wildlife.

NEIWPC

NEIWPC is a regional commission that helps the states of the northeast preserve and advance water quality. We engage and convene water quality professionals and other interested parties from New England and New York to collaborate on water, wastewater, and environmental science challenges across shared regions, ecosystems, and areas of expertise. We help states find effective ways to achieve their own clean water goals, often filling resource gaps in order to do so. We collaborate with state and federal partners to make efficient and effective use of available resources. NEIWPC’s mission is to advance clean water in the Northeast through collaboration with, and service to, our member states.

Overall Funding Sources

The core FY20 budget reflects the following sources of funding:

EPA FY20 Base Funding:	\$662,500.00*
Non-Federal Match:	\$662,500.00**
Total:	\$1,325,000.00

Resources Requested:

The total Section 320 funds requested in this **NEP grant to NEIWPC is \$529,380**, which will be matched at the required 1:1 rate, making the full budget of this award \$1,058,760.

*EPA FY20 Base funding will be provided to Suffolk County Department of Health Services (SCDHS) (\$133,120) and NEIWPC (\$529,380).

**The non-Federal match is provided by the New York State Department of Environmental Conservation (NYSDEC) and SCDHS. New York State, Suffolk County, and other partners are expected to provide significant support above and beyond the committed match in the budget table in support of Peconic Estuary Partnership goals and objectives.

II. SUMMARY OF FY19 ACCOMPLISHMENTS

The FY19 year for the Peconic Estuary Partnership was a year filled with milestones and new beginnings. We began an Organizational Assessment using EPA funds and as a result of our 2017 Program Evaluation. This process is on-going and has thus far resulted in significant progress, including draft Organizational documents which outline the roles and responsibilities of our Committees, draft Guiding Principles, and a partnership willing to make changes for the successful future of the organization. Perhaps, most telling is the unanimous decision by the Policy and Management Committees to change our name from the Peconic Estuary Program to the Peconic Estuary Partnership, thus reflecting the commitment by all members to work together going forward. Additionally, and also as a result of the 2017 Program Evaluation, we have progressed with the Water Quality Assessment and have finalized water quality targets to use in our annual water quality reports which will be released in fall annually, beginning in 2020.

PEP remained on-track to submit the Final Draft of the CCMP to the EPA for approval. Through a long and publicly engaging process, the PEP has been able to develop a document that has extensive public input as well as substantial input from all of our committee members and active partners. We are excited for the new goals and actions we have identified to be rolled out to our watershed.

PEP completed extensive work funded by EPA \$320 grants; these projects include: the Peconic Estuary Seagrass Bio-Optical Model, the Living Shoreline Demonstration Project in Greenport, a Climate Ready Assessment which included the Peconic Estuary watershed and the Shinnecock Indian Nation, and Conceptual Habitat Restoration Design Plans in the Towns of East Hampton, Riverhead, Southampton, and Southold. PEP also made substantial progress on diadromous fish passage projects on the Peconic River using partner funding. Additional partner funding has been secured for the Woodhull Dam Fish Passage Construction (planned for fall 2020) and the engineering designs are being developed for the Upper Mills Fish Passage project. Moreover, the PEP is assisting the Town of Brookhaven in their efforts to finalize engineering design and move forward with the construction of the Fish Pass at Forge Road Dam. PEP has also begun to work with the Town of Southampton to right-size the existing culvert at Noyak Road and implement some stormwater control measures on Alewife Creek in Southampton to allow for improved aquatic organism passage and diadromous fish migration.

Our partnership-based work became stronger this year. As Suffolk County released the draft Subwatersheds Wastewater Plan to tackle nitrogen pollution into the estuary, PEP has worked with multiple community organizations and local governments throughout the watershed to highlight this work and teach the public about the importance of nitrogen reduction. PEP has also begun the process of working closely with the NYSDEC Long Island Nitrogen Action Plan (LINAP) to align the goals and actions of each organization to maximize funding opportunities and work products.

Our outreach efforts continued and were further developed in FY19. We created a series of short informative videos for the public and conducted social media campaigns, including #NitrogenActionLI with our LINAP partner to improve our efforts on social media. This has resulted in an increase in followers across our social media channels. We have also expanded our efforts for bi-lingual outreach through a Spanish speaking outreach intern and created a Spanish language video for the public entitled: *La Importancia del Estuario Peconic*. All videos can be found here: <https://www.peconicestuary.org/news-and-blogs/media-library/>. Outreach efforts also resulted in an increase in attendance at Citizens' Advisory Committee meetings and an

increase in reinvigorated and enthusiastic members. Educational programs, citizen science internships, and distributing digital and print outreach materials have expanded PEP's footprint and impact in the watershed.

III. WORKPLAN

CCMP Goals

With a new CCMP being rolled-out, our goals and actions have been updated to reflect current issues affecting the Peconic watershed. Our strong focus will be on reducing nitrogen pollution in our estuary, advancing our on-going diadromous fish passage projects and wetland restoration work, and securing funding for eel grass restoration for both blue carbon initiatives and increased shellfish and juvenile fish nursery habitat.

In order to achieve the goals laid out in this workplan, the program office staff will facilitate committee meetings in conjunction with the Committee Chairs as follows, note meeting frequency may be altered based on Partnership needs: Policy Committee (two meetings annually – one jointly with Management Committee), Management Committee meetings (four meetings annually, one jointly with Policy Committee), Technical Advisory Committee (TAC) meetings (four meetings annually, one jointly with Natural Resource Sub-Committee), Natural Resource Sub-Committee meetings (two meetings annually, one jointly with TAC), Citizens' Advisory Committee (CAC) meetings (three meetings annually), Local Government Committee meetings (two meetings annually), Peconic Bay Scallop Technical Review Committee meetings (six meetings annually).

Budget and Staff Elements

Program Office Staff

The following outlines FY20 §320 budget requests and FY20 tasks to support the Peconic Estuary Partnership Office to implement the CCMP. Costs include salary, fringe and indirect costs (FY2020 rate is 18%, NEIWPC's indirect rate is approved annually by EPA and the NEIWPC Executive Committee. We apply the approved indirect rate throughout the life of the grant and thus indirect charges may fluctuate. ¹)

Program Director (Ongoing) – \$151,975 requested

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 204N, Riverhead, NY 11901

Responsibilities: Provides overall leadership to the program office, management and administration to the Program on behalf of the Management Conference.

Program Coordinator (Ongoing) – \$121,755 requested

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 204N, Riverhead, NY 11901

¹ NEIWPC utilizes 2 CFR § 200 to determine its indirect rate and submits the appropriate paperwork to EPA HQs. The rate is approved annually by the NEIWPC Executive Committee and Commission and EPA HQs. NEIWPC's current approved indirect rate is 18.00% for FY 2020. NEIWPC applies its approved indirect rate throughout the life of the grant and thus indirect charges may fluctuate. NEIWPC does not charge indirect on individual contractual projects and subawards of \$100,000 or greater, office rent, participant support costs, or equipment. The indirect rate may change in subsequent fiscal years. NEIWPC will charge its approved rate at the time that work occurs.

Responsibilities: Coordinates all projects in Suffolk County and acts as support and lead for a variety of other projects carried out by the program office.

New York State Coordinator (Ongoing) – \$121,755 requested

Location: New York State Department of Environmental Conservation, Division of Marine Resources/Bureau of Marine Habitat, 205 North Belle Mead Road, Suite 1, East Setauket, NY 11733

Responsibilities: Coordinates NYS participation in the PEP, with an emphasis on habitat protection/restoration, stormwater control, and nutrient management.

Public Education & Outreach Contract (Ongoing) - \$102,000 requested

Current Location: Cornell Cooperative Extension (CCE) of Suffolk County, 423 Griffing Avenue Riverhead, NY 11901

Responsibilities: The Public Education and Outreach Coordinator is currently hired through a contract with CCE, who coordinates and conducts public outreach and education for the Peconic Estuary Partnership. The current Public Education and Outreach Workplan outlines specific tasks to be completed under the contract and contract budget covers costs associated with tasks identified in the contract in addition to supporting part-time outreach assistants.

Refer to the Peconic Estuary Partnership and Cornell Cooperative Extension Contract “Scope of Work 2020” for Tasks and Outcomes dealing with Public Education and Outreach. (The current contract period is January 8, 2020 – December 31, 2020. The workplan for the contract beginning January 1, 2020 will be shared with the Management Conference and EPA once finalized and executed.

NEIWPC Program Management (Ongoing) - \$27,470 requested

NEIWPC will continue supporting personnel time for NEIWPC Lowell staff to manage PEP-related cooperative agreements and contracts and supervise PEP staff. Funding will mainly support the NEIWPC Project Manager, with additional oversight from the Director of Water Quality Programs. Specific tasks include, but are not limited to:

- Supervise PEP’s Program Director, in consultation with the Policy and Management Committees.
- Coordinate with the Program Director on supervision of all PEP staff, including participation in staff performance appraisals. Consult with NYSDEC and SCDHS regarding PEP staff in their offices.
- Support PEP management of all tasks listed in this workplan.
- Coordinate with the Program Director in preparation of the annual work plan and budget.
- Prepare and submit grant applications to EPA in coordination with the Program Director and the Management Conference.
- Lead the hiring process for all open staff positions. Work collaboratively with PEP Program Director—and Management Conference when position appropriate—throughout process.
- Manage program budgets
- Execute and manage PEP contracts and vendor agreements.
- Submit quarterly financial summaries to the Program Director and annual financial summaries to the Management Conference.
- Process invoices and travel reimbursements.
- Communicate with the Program Director and EPA Project Officer on a regular basis.
- Review, comment upon, and submit quarterly progress reports developed by the Program Director and program staff that describe PEP activities and outputs.
- Facilitate coordination with other regional NEP and NEIWPC activities.

Table 1: Budget Summary

Detailed budget information is available in Appendix A of this workplan.

	FY20 Request	Notes
Personnel	\$258,739	
Fringe	\$99,698	39.9% of MA personnel, 38.5% of NY personnel
Travel	\$0	Supported by FY18 and FY19 funds
Equipment	\$0	
Supplies	\$0	Supported by FY18 and FY19 funds.
Contracts or Subawards	\$102,000	Outreach & Education
Other	\$3,750	Includes costs for printing & production, website development and services, advertising, telephone
Total Direct	\$464,187	
<i>Indirect</i>	<i>\$65,193</i>	<i>For FY20, 18.00% of Total Direct less: subawards over \$100,000, equipment, rental space, and participant support costs)</i>
Total EPA §320 Funds Request	\$529,380	
NYS Match	TBD	
Suffolk County Match	TBD	
Total Project Cost	TBD	

FY2021 Tasks

This workplan includes all projects which PEP plans to be involved with in the coming fiscal year. Each of these projects supports PEP's 2020 CCMP, which also highlights PEP's role as an active partner with other government agencies and nonprofits working in the Peconic. In light of this renewed focus on partnership, much of PEP's staff time will focus on supporting projects directed and funded by partners. In these cases, PEP staff are responsible for providing technical expertise, coordinating projects, and facilitation collaboration as needed; their responsibilities support the ultimate project outcomes but can be accomplished even if the project does not move forward.

Under this workplan, NEIWPC and PEP commit to the projects which are funded by FY20 §320 funds awarded to NEIWPC and for which PEP is a lead partner. For all other projects, PEP commits to supporting and facilitating progress on partner projects, but is not responsible for the ultimate project outcomes.

New projects are not currently included in previous years' §320 workplans or awards. FY20 §320 funds are also requested to support **ongoing projects**, unless specified otherwise. There are several ongoing projects for which **no new funds** are requested; these are wholly funded by previous §320 Budgets and Grant Awards awarded to NEIWPC.

Table 2 outlines the project type, FY20 funding request, and PEP role for each task in the workplan.

Our primary responsibility in this workplan will be towards the tasks highlighted below, for which we are requesting FY20 funds and are lead partner. Changes in scope, funding, and timelines in all other tasks will not require an amendment to this workplan.

Table 2: Summary of all FY21 Tasks

Task Description	Project Type	Funding requested from FY20 §320 award:	PEP Role
Task 1: Organizational Assessment	No new funds	None (funded by FY18 §320 funds)	Lead – project is exclusively PEP.
Task 2: CCMP Tracking System	New	Staff time	Lead – project is exclusively PEP.
Task 3: Financial Plan	New	Staff time	Lead – project is exclusively PEP.
Task 4: PEP Education and Outreach Program	Ongoing	\$102,000 (contract)	Lead – project is exclusively PEP.
Task 5: Continuous Water Quality Monitoring	No new funds	None	Supporting partner (USGS lead)
Task 6: Water Quality Monitoring Assessment	No new funds	None (funded by FY18 §320 funds)	Lead – project is exclusively PEP.
Tasks 7a-d: Implement science-based approaches for monitoring and reducing nitrogen	Ongoing	Staff time	Supporting partner (various leads per project)
Task 7e: Green Infrastructure Homeowner Rewards Program and Resident Nutrient Management	No new funds	None	Lead – project is exclusively PEP
Task 8a-b: Expand non-point source subwatershed management plans to all pathogen-impaired waterbodies and continue to use existing plans	Ongoing	Staff time	Supporting partner
Task 8c: Meetinghouse Creek Engineering Design Services	No new funds	None (funded by FY18 and FY19 §320 funds)	Lead
Task 9: Distribute information and tools developed in the Peconic Estuary Critical Lands Protection Strategy and Climate Ready Action Plan to municipalities within the watershed.	New	Staff time	Lead
Task 10: NYS Ocean Acidification Taskforce – National Ocean Acidification Network	Ongoing	Staff time	Supporting partner
Task 11: Ecosystem-Based Model of the Peconic Estuary	Ongoing	Staff time	Lead partner, NYS-DEC funded project
Task 12a-e: Complete design and construction of diadromous fish passage on the Peconic River and in other priority tributaries in the Peconic Estuary watershed	Ongoing	Staff time	Supporting partner – local governments lead and fund these projects.
Task 13: Develop and Implement Alewife Monitoring Strategy on the Peconic River	Ongoing	Staff time	Lead partner
Task 14: Carry out Eelgrass Aerial	Ongoing	Staff time	Lead partner,

Task Description	Project Type	Funding requested from FY20 §320 award:	PEP Role
Survey			collaboration with LISS
Task 15: Work with the NRS and TAC to prioritize restoration projects identified in the 2017 Habitat Restoration Plan and secure funding for conceptual design plans	New	Staff time	Lead partner
Task 16a-c: Implement priority wetland restoration projects identified in the PEP Habitat Restoration Plan	Ongoing	Staff time	Lead and coordinate projects funded by NYS DEC, Suffolk County, and local governments
Task 17: Living Shoreline Stakeholder Education	Ongoing	Staff time	Lead partner

CCMP GOAL: STRONG PARTNERSHIP AND ENGAGEMENT

Objective A (Over-Arching Priority Objective): Enhance PEP's organizational structure, operational practices, and financial position to support successful implementation of CCMP Actions.

ACTION 1: Finalize and implement the updated PEP Organizational Plan.

Performance Measure: Addition of the updated PEP Organizational Plan to this CCMP document by December 2020 outlining the recommendations adopted by the Policy and Management Committee.

Task 1: Organizational Assessment

Ongoing- no new funds (FY18 Workplan and Budget)

- a. **Estimated Budget:** FY18 §320 funds: \$25,000
- b. **Partners and their roles:** PEP (Lead Partner), CoastWise Partners (Contractor), PEP Management Conference
- c. **Description and Objectives:** The contractor will assist the PEP in examining the relationships between all groups in the Management Conference and provide recommendations about how they can work together more effectively.
- d. **Outputs and Deliverables:** A Final Organizational Strategy Report with Roles and Responsibilities, By-Laws, and Guiding Principles.
- e. **Estimated Milestones:** Completion in December 2020.
- f. **Long Term Outcomes:** A stronger national estuary program whose committees and all members and partners have a clear understanding of how to achieve our mission and how we work together to strengthen the organization.
- g. **Clean Water Act Core Programs:** N/A

ACTION 2: Develop and launch a CCMP Tracking System on PEP Website to report progress in implementing CCMP actions.

Performance Measure: Development and deployment of web-based CCMP Tracking System by December 2021.

Task 2: CCMP Tracking System

New for FY20

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** PEP (Lead Partner), PEP TAC
- c. **Description and Objectives:** The PEP is developing a 2020 CCMP to guide its collective work over the next decade. PEP's partner organizations have agreed to be responsible for carrying out the Actions in the CCMP in either leading or supporting roles. To help facilitate implementation of the CCMP, PEP will develop and maintain a new section of the PEP website that shows progress on implementation of Actions.
- d. **Outputs and Deliverables:** An on-line tool for tracking CCMP success.
- e. **Estimated Milestones:** Completion December 2021.
- f. **Long Term Outcomes:** PEP staff, our Management Conference and all partners will be able to easily track out progress of all goals and actions of the CCMP.
- g. **Clean Water Act Core Programs:** N/A

ACTION 4: Secure increased funding as part of a final Financial Plan to ensure successful implementation of all CCMP Actions.

Performance Measure: Release of a final Financial Plan by April 2021 that includes potential sources of new and increased funding, as well as a strategic outline to securing such funding.

Task 3: Financial Plan

New for FY20

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** PEP (Lead Partner), USEPA
- c. **Description and Objectives:** The finalization of a Financial Plan as specified in the EPA 2017 Program Evaluation to provide robust funding for PEP to carry out the CCMP Actions. Details within the Financial Plan will outline plans to pursue expanded initiatives to obtain increased funding in support of CCMP implementation.
- d. **Outputs and Deliverables:** A Financial Plan for PEP.
- e. **Estimated Milestones:** Completion April 2021.
- f. **Long Term Outcomes:** Implementation of the Financial Plan for a long term strategy will allow for the financial growth of PEP to diversify funding and allow PEP to grow.
- g. **Clean Water Act Core Programs:** N/A

Objective B (Overarching Priority Objective): Empower local communities to support estuary health, including underrepresented groups.

ACTION 6: Increase community members' awareness of the Peconic Estuary, key issues relating to the CCMP's Goals, and PEP as a resource to help them address the issues.

ACTION 7: Involve community members in citizen science programs to cultivate personal connections to the Peconic Estuary and inspire positive behavioral change to support Estuary health;

ACTION 8: Conduct outreach events and programs that engage community members in learning about the Peconic Estuary and taking action to support Estuary health;

ACTION 9: Incorporate environmental justice considerations into public education and outreach materials and events.

Performance Measures: Includes all listed.

Task 4: PEP Education and Outreach Program

Ongoing

- a. **Budget:** \$102,000
- b. **Partners and their roles:** PEP (lead partner)

For all other project information, refer to the 2020 Annual Education and Outreach Program Workplan for details; 2021 workplan will be shared with the Management Conference and EPA once the contract is executed. (Expected January 2021)

CCMP GOAL: CLEAN WATERS

Objective D: Protect areas with clean water from degradation.

ACTION 16: Identify areas of clean water quality and deliver information that local governments and others can use to protect those areas.

Performance Measure: Annual review of water quality data and water quality monitoring programs with assessment and recommendations regarding changes to water quality data collection in order to adequately monitor all waterbodies in the Estuary.

Task 5: Continuous Water Quality Monitoring

Ongoing match-funded project - no new 320 funds

- a. **Estimated Budget:** Approximately \$150,000 annually funded through the USGS and NYSDEC.
- b. **Partners and their roles:** United States Geological Survey (USGS) (Lead Partner and Contracting Entity), PEP (Supporting Partner), NYSDEC (Funding Entity).
- c. **Description and Objectives:** USGS maintains two continuous water quality monitoring stations in the Peconic Estuary, one located at the mouth of the Peconic River under the County Road 105 bridge in [Riverhead](#) and one in [Orient Harbor](#). These two monitoring stations complement the periodic sampling conducted by SCDHS by providing continuous sampling of the water quality conditions within the estuary. The stations provide high frequency measurements of key water quality parameters to allow long-term trend assessment of climate and other incremental changes; estimates of frequency, severity, and duration of hypoxia and anoxia. A third USGS station is being installed in the spring 2020 on the south shore of Shelter Island to provide a tide-warning system and additional water quality monitoring equipment will be added as funding is available.
- d. **Outputs and Deliverables:** USGS produces daily data reports, real-time data downloadable via the internet, incorporated by PEP staff into State of the Bays Report and used by researchers and partner other agencies.
- e. **Estimated Milestones:** Contract is between NYSDEC and USGS, PEP staff provide additional support as needed throughout the year.
- f. **Long Term Outcomes:** Water quality data will be used to assess environmental conditions in the Peconic Estuary and refine management programs as necessary. Based on water quality data, priority projects and research initiatives can be identified and the PEP can continue its success in efforts to protect and restore the Estuary. Data collected by these monitoring efforts inform periodic reporting, including environmental indicators reports and “State of the Bay” publications, and support adaptive management.

- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

Objective E: Increase understanding of nutrient pollution in groundwater and surface waters, and decrease negative impacts from legacy, current, and future nutrient inputs.

ACTION 17: Plan science-based approaches for monitoring and reducing nitrogen pollution

Task 6: Water Quality Monitoring Assessment

Ongoing- no new funds (FY18 Workplan and Budget)

- a. **Estimated Budget:** FY18 §320 funds: \$25,000
- b. **Partners and their roles:** PEP (Lead Partner), Coastwise Partners (Contractor)
- c. **Description and Objectives:** The Peconic Estuary Partnership has a robust monitoring program that assesses a range of critical indicators throughout the Estuary. Despite the range of monitoring data available, the PEP does not have a regular and detailed way of reporting out on the data collected. The goals of this project are to 1) Review the current Monitoring Strategy and the existing data that is collected, and 2) Work the Peconic Estuary Partnership Water Quality Workgroup to revise the PEP Monitoring Strategy to ensure the data being collected is actually the most relevant data to the PEP, EPA, and stakeholders, and develop a plan for how the wide range of collected data will be reported on regularly.
- d. **Outputs and Deliverables:** Revised Monitoring Strategy that will 1) Evaluate and recommend appropriate indicators of estuarine health to assess the impact of management actions to restore the estuary; (2) Assess available data, and how these data are being used by both the PEP and its partners to understand and report on the status of the estuary; (3) Recommend where additional or alternative indicators and monitoring may be required to comprehensively assess progress of CCMP implementation; and (4) Develop methods and mechanisms to share data among academia, nonprofit organizations and government, including enhancing regular reporting on status and trends.
- e. **Estimated Milestones:** Completion December 2020.
- f. **Long Term Outcomes:** A recommendation of the 2017 Program Evaluation. Long term outcomes will be annually reported resulting in more local governments making better decision for clean water.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

ACTION 18: Implement science-based approaches for monitoring and reducing nitrogen pollution.

Task 7: Implement science-based approaches for monitoring and reducing nitrogen pollution.

Performance Measure: Phased Implementation of the Suffolk County Subwatershed Wastewater Plan to abate septic-related current and future nitrogen loading.

Task 7a: Long Island Nitrogen Action Plan (LINAP)

Ongoing

- a. **Estimated Budget:** Staff time

- b. **Partners and their roles:** NYSDEC and the Long Island Regional Planning Council (LIRPC), in partnership with numerous local governments and interested organizations on Long Island. PEP (Supporting Partner)
- c. **Description and Objectives:** LINAP will determine nitrogen load reduction targets as well as alternatives and strategies to meet those targets. Through LINAP, PEP will work to provide information that local governments need to reduce nitrogen loading. In the fall of 2017, the LINAP Project Management Team moved forward with a PEP-USGS Solute Transport Modeling project, which will allow for the quantitative analysis of nitrogen loading rates to the Peconic Estuary resulting from wastewater and fertilizer inputs to groundwater in Suffolk County. The Solute Transport Model is anticipated to be complete in 2020. See below Peconic Estuary Solute Transport Model Task for more information. Additionally, PEP and LINAP developed a Cross-walk document outlining specific actions where we can coordinate and future actions.
- d. **Outputs and Deliverables:** Strategy Plan with LINAP identifying areas for collaboration.
- e. **Estimated Milestones:** Quarterly calls/and or meetings between PEP and LINAP.
- f. **Long Term Outcomes:** Streamlined plan that avoids duplication of efforts by partners and achieves a more efficient way forward for achieving nitrogen reduction goals in the Peconic watershed.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

Performance Measure: Completion of the Peconic Estuary Solute Transport Model analysis to understand historical nitrogen loading and to develop management strategies.

Task 7b: Peconic Estuary Solute Transport Model

Ongoing

- a. **Estimated Budget:** Staff time, NYS 2015 Budget: \$750,000
- b. **Partners and their roles:** USGS, PEP (Supporting Partner), NYSDEC (Contracting Entity)
- c. **Deliverables and Objectives:** Develop a solute transport model to be used in conjunction with the results of the Nitrogen Load Model to establish updated load reduction goals for non-point source loads.
- d. **Outputs and Deliverables:** A USGS report will document model development as well as analytical results for a limited set of representative wastewater management scenarios. The report will be designed with the dual purposes of 1) documenting the models and methods developed as part of the USGS investigation and 2) providing a detailed description of surface-water loading rates under changing land-based nitrogen-input conditions. Preliminary model results will be transmitted as PDFs to stakeholders as needed during the course of this investigation. The USGS will present progress and results of the investigation at technical meetings and public forums upon request. Modeling will proceed collaboratively with NYSDEC and PEP personnel to ensure that the two projects are complementary. An additional USGS report or journal article may be published near the end of the project to compare the solute-transport methods and results from the Cape Cod and Peconic Estuary investigations. Numerical models and data used to represent nitrogen source terms will be publicly disseminated as a separate web-hosted USGS Data Release product, in accordance with USGS policies. PEP staff acts as project manager, coordinating all meetings and working in conjunction with the TAC on technical review of the body of work. PEP staff organize quarterly progress meetings, distribute summary minutes and work with USGS to gather the necessary data inputs for the model.
- e. **Estimated Milestones:** Completion Fall 2021.
- f. **Long Term Outcome:** Reduce nitrogen loads to the Peconic Estuary towards attainment of the Peconic Estuary TMDL and ensure a healthy and productive estuarine ecosystem.

- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads.

Task 7c: Village of Greenport Sewer Extension

Ongoing

- a. **Estimated Budget:** Staff time, 2019 NYS Empire State Development Grant \$390,000
- b. **Partners and their roles:** PEP (Supporting Partner), Village of Greenport (Lead Entity), Safe Harbor Marina (Lead Entity, Property owner).
- c. **Description and Objectives:** Description and Objectives: The Village of Greenport will design and construct an expansion of their municipal sewer system to the marina and homes within the Stirling Basin, reducing current nitrogen pollution input to the nearby Peconic Estuary. PEP will assist the project lead in identifying and applying for funding, coordinating all parties in meetings and updates, and assisting the Village of Greenport as needed and appropriate, coordinating all parties in meetings and updates, and assisting the Village of Greenport as needed and appropriate.
- d. **Outputs and Deliverables:** Engineering design plans for sewer extension project. Additional funding sources identified for construction phase.
- e. **Estimated Milestones:** Engineering and design planned to be completed in 2021.
- f. **Long Term Outcomes:** Reduction of nitrogen into Peconic Bay
- g. **External Constraints:** This project has secured \$390,000 in grant funding from NYS. It will require significantly more funding for the construction. PEP will assist the project lead in identifying and applying for funding but substantially more funding is currently required.
- h. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads, Elements of this project prevent or mitigate the impacts of nutrient pollution.

Performance Measure: Completion of Peconic Estuary Water Quality Monitoring Strategy.

Task 7d: Suffolk County Subwatersheds Wastewater Plan (SWP)

Ongoing

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** Suffolk County Department of Health Services (funding agency), Long Island Sound Study, South Shore Estuary Reserve, PEP (Supporting Partner).
- c. **Description and Objectives:** The purpose of the SWP will be to provide a wastewater management plan specific to all parcels within the priority subwatersheds of Suffolk County in order to meet the County's first order of nitrogen load reduction goals for surface water restoration and the protection of groundwater and drinking water. The SWP is an early action element of the LINAP and is expected to guide County wastewater policy by providing a map and narrative depicting the location, number, and location specific- methodology for required sanitary upgrades using a phased approach linked to current and predicted ecological and public health risks. PEP will work to provide information that local governments need to reduce nitrogen loading.
- d. **Outputs and Deliverables:** When the SWP is final, PEP will develop a strategy Plan with Suffolk County identifying two communities in the high need area (Level 1) to focus PEP efforts for Septic Improvement.
- e. **Estimated Milestones:** Quarterly calls/ and or meetings between PEP and Suffolk County.
- f. **Long Term Outcomes:** Streamlined plan that avoids duplication of efforts by partners and achieves a more efficient way forward for achieving nitrogen reduction goals in the Peconic watershed.

- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

Performance Measure: Increase funding and expanded outreach for PEP's Homeowner Rewards Program, which provides financial incentives for homeowners to install rain gardens, native plantings, and/or rain barrels on their properties that benefit the environment.

Task 7e: Green Infrastructure Homeowner Rewards Program and Resident Nutrient Management
Ongoing- no new funds (FY19 and FY18 Workplan and Budget)

- a. **Estimated Budget:** \$320 funds: \$12,050 (\$6,050 from FY18; \$6,000 from FY19)
- b. **Partners and their roles:** PEP (Lead partner)
- c. **Description and Objectives:** The [Peconic Estuary Partnership \(PEP\) Homeowner Rewards Program](#) provides financial rewards for homeowners, who live within the Peconic Estuary watershed, to add rain gardens, native plantings, and/or rain barrels to their properties. Simultaneously, the program educates the community about the benefits of rain gardens, rain barrels, and native plants for nitrogen reduction, stormwater pollution reduction, and other ecosystem benefits.
- d. **Outputs and Deliverables:** Installation and completion of sustainable landscaping projects on properties within the Peconic Estuary watershed.
- e. **Estimated Milestones:** Annual spring – fall season application period.
- f. **Long Term Outcomes:** Improve public's understanding of benefits of sustainable landscaping and long-term and wide spread behavior change favoring landscaping best management practices. Reductions in fertilizer use, pesticide use, water use, and the promotion of natural vegetation and benefits to pollinators and native fauna.
- g. **Clean Water Act Core Programs:** Elements of this project prevent or mitigate the impacts of nutrient pollution.

Objective F: Reduce current and future inputs of toxics, pathogens, and marine debris into groundwater and surface waters, and minimize their impacts

ACTION 21: Expand non-point source subwatershed management plans to all pathogen-impaired waterbodies and continue to use existing plans

Task 8: Expand non-point source subwatershed management plans to all pathogen-impaired waterbodies and continue to use existing plans

Ongoing, see project descriptions

Performance Measures: Development of strategies and outreach materials to help achieve stormwater reduction goals.

Task 8a: Peconic Estuary Protection Committee (PEPC) (Intermunicipal Agreement for Stormwater Management)

Ongoing

- a. **Estimated Budget:** Staff time, \$15,000 Suffolk County Capital Budget Funds and member municipality dues.
- b. **Partners and their roles:** PEPC Coordinator (Lead), PEP (Supporting Partner), Six East End Towns and the Villages of Sag Harbor, North Haven and Greenport, Suffolk County, NY State Department of Transportation (NYSDOT).

- c. **Description and Objectives:** PEP established a collaboration of East End municipalities to share resources and work together on projects to reduce stormwater runoff, reduce pollution from septic system discharges, agricultural and residential fertilization, groundwater flows, illegal dumping, floatable debris and boat waste.
- d. **Outputs and Deliverables:** Assistance with MS4 compliance. Public signage related to storm drains and the importance of storm water management
- e. **Estimated Milestones:** Bi-monthly PEPC meetings.
- f. **Long Term Outcomes:** The East End municipalities and Suffolk County working together to both ensure MS4 compliance and further non-point source pollution solutions
- g. **Clean Water Act Core Programs:** Elements of this project prevent or mitigate the impacts of nutrient pollution.

Performance Measure: Development of a Quality Assurance Management Plan (QAMP) to enable sampling, analysis, and reporting of ground and surface water by municipalities for use in NYS, Suffolk County, and East End Municipality decision making and management actions.

Task 8b: Quality Assurance Project Plan Services for a Supplemental Water Quality Sediment Data Collection

Ongoing

- a. **Estimated Budget:** Staff time, \$75,000 2015 SC Capital Budget Funds.
- b. **Partners and their roles:** PEPC Coordinator (Lead), PEP (Co-lead Partner), Tetra Tech, Inc. (Contractor), Six East End Towns and the Villages of Sag Harbor, North Haven and Greenport, Suffolk County, NY State Department of Transportation (NYSDOT), NYSDEC and USEPA.
- c. **Description and Objectives:** The Peconic Estuary Protection Committee received funding for a project that will allow the PEPC to develop a quality assurance management plan (QAMP), approvable by the US EPA and NYS DEC, for water quality sampling and analysis activities; and this project is a necessary step for any data collected by the Peconic Estuary Protection Committee, or its member municipalities, to be used to inform regulations, policies, or guidelines of the US Environmental Protection Agency or NY State Department of Environmental Conservation, such as shellfish bed certification, waterbody classification and impairment designations, total maximum daily loads, and other related nutrient and pathogen related management activities. The PEP is currently contracting through Suffolk County with Tetra Tech, Inc. to complete the services.
- d. **Outputs and Deliverables:** EPA-NYSDEC approved QAMP.
- e. **Estimated Milestones:** Completion Fall 2020.
- f. **Long Term Outcomes:** The PEPC member municipalities will have a QAMP to expand the collection of water quality data and provide the foundation for a long-term water quality monitoring program which will serve as a planning tool to identify and prioritize subwatersheds in the Peconic Estuary that should be targeted for water quality improvement activities, ensure water bodies are properly listed on the NYS Impaired Waters list so that those in need of restoration may receive needed resources, and those that are healthy can be delisted.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads.

Performance Measure: Review of current PEP Non-point Source Subwatershed Management Plans and implementation of viable projects.

Task 8c: Meetinghouse Creek Engineering Design Services

Ongoing- no new funds (FY19 and FY18 Workplan and Budget)

- a. **Estimated Budget:** \$320 funds: \$208,999 (\$35,280 from FY19; \$173,719 from FY18)
- b. **Partners and their roles:** PEP (Lead Partner), Town of Riverhead (Property Owner, Engineering Supervision)
- c. **Description and Objectives:** The PEP Management Committee committed \$208,999 of EPA §320 Funds from FY18 and FY19 to support engineering and design of the Meetinghouse Creek Main Road Wetland Construction/Restoration project from the 2017 PEP Habitat Restoration Plan. PEP recently completed a Conceptual Habitat Restoration Design for the Meetinghouse Creek project. The conceptual design recommendation is to construct a 1.2-acre stormwater wetland to treat stormwater runoff in the 5.6 acre contributing watershed. This will improve water quality in the downstream wetland and surface waters. Additionally, it will greatly increase the ecological quality of the habitat and improve plant and wildlife diversity. This site is located at a large wetland area that forms the headwaters to Meetinghouse Creek in Riverhead, New York. Meetinghouse Creek is listed as an impaired waterbody on the NYSDEC Priority Waterbodies List. The wetland vegetation at this site is dominated by Phragmites.
- d. **Outputs and Deliverables:** Final design, permitting for the Meetinghouse Creek Main Road Wetland Construction/Restoration project.
- e. **Estimated Milestones:** Contract estimated to begin fiscal year 2020, Engineering design completion by September 2022.
- f. **Long Term Outcomes:** The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded. Significant natural habitats such as wetland complexes will benefit from restoration efforts and stormwater management will improve at this site.
- g. **Clean Water Act Core Programs:** Protecting Wetlands. Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.

CCMP GOAL: RESILIENT COMMUNITIES PREPARED FOR CLIMATE CHANGE

Objective C: Help local communities to take meaningful, well informed action to prepare for and adapt to climate change impacts in the Peconic Estuary.

ACTION 11: Provide tools and assistance to local government to mitigate and adapt to the impacts of climate change.

Task 9: Distribute information and tools developed in the Peconic Estuary Critical Lands Protection Strategy and Climate Ready Action Plan to municipalities within the watershed.

New

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** PEP (Lead Partner), Local Governments, Anchor QEA and TNC (Supporting Partner)
- c. **Description and Objectives:** PEP completed an update to the Peconic Estuary Critical Lands Protection Strategy and conducted a risk-based climate vulnerability assessment to develop the Peconic Estuary Partnership Climate Vulnerability Assessment and Action Plan consistent with EPA's Climate Ready Estuaries Program. PEP plans to use the information and tools completed in those

reports as a tool for East End municipalities to make decisions related to resiliency and climate adaptation. PEP plans to coordinate training workshops to present information and train appropriate staff within each municipality on the usefulness and application of these tools.

- d. **Outputs and Deliverables:** Meeting minutes and feedback from trainings. One training workshop on the north fork and one training on the south fork. More workshops can be coordinated as needed.
- e. **Estimated Milestones:** At least three workshops to be held in FY21
- f. **Long Term Outcomes:** Educated local governments equipped with tools and information to plan for a changing climate.
- g. **Clean Water Act Core Programs:** N/A

ACTION 13: Collaborate on coastal and ocean acidification monitoring and research

Performance Measure: Participation with the New York Ocean Acidification Task Force to monitor and address ocean acidification locally and regionally.

Task 10: NYS Ocean Acidification Taskforce – National Ocean Acidification Network

Ongoing

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** PEP (Supporting Partner), NYSDEC (Lead Partner)
- c. **Description and Objectives:** PEP's local and regional partners will work together to ensure that the best available science is used to assess and respond to this emerging threat to NY's estuarine and marine waters and fisheries. PEP will participate on the NY Ocean Acidification (OA) Task Force and act as a NEP coordinator for NY State.
- d. **Outputs and Deliverables:** Collaborative document regarding NYS OA policy.
- e. **Estimated Milestones:** NY OA Task Force Meetings as scheduled.
- f. **Long Term Outcomes:** A cohesive and collaborative approach to OA mitigation in New York. Regional adoption of recommendations from the NY OA Task Force as appropriate for the watershed.
- g. **Clean Water Act Core Programs:** N/A

CCMP GOAL: HEALTHY ECOSYSTEM WITH ABUNDANT, DIVERSE WILDLIFE

Objective G: Expand scientific understanding of the Peconic Estuary ecosystem and deliver information that supports management decision-making

ACTION 23: Conduct scientific studies to expand understanding of the Peconic Estuary ecosystem and support ecosystem-based management.

Performance Measure: Development of an ECOSIM model to characterize the estuarine food web and examine structural changes in ecosystem properties over time.

Performance Measure: Detailed spatial and temporal analysis of the Peconic Estuary trawl survey data to assess how species use the Estuary and how species and communities have responded to local and regional environmental changes over time.

Task 11: Ecosystem-Based Model of the Peconic Estuary

Ongoing

- a. **Estimated Budget:** Staff time, \$200,000 NYSDEC FY18 Funds
- b. **Partners and their roles:** PEP (Lead Partner), NYSDEC (Funding Entity), The Research Foundation at Stony Brook University (Contractor).

- c. **Description and Objectives:** Analyze spatial and temporal trends in the Peconic Estuary finfish trawl survey dataset, and develop risk metrics from ecological relationships for the Peconic Estuary that examine whether local and regional environmental changes have increased the vulnerability of individual finfish and mobile invertebrate species, community assemblages, and ecosystem processes. ECOSIM is a quantitative modeling framework that can represent all major ecosystem functional groups and can be used to identify and assess structural changes in the ecosystem in response to environmental change. The proposed study will identify vulnerable species, critical habitats, and ecosystem properties within the Peconic Estuary. This information has direct application to decisions affecting the use, management, and conservation of the natural resources in the bay.
- d. **Outputs and Deliverables:** ECOSIM and ECOPATH Model, plan and facilitate meetings.
- e. **Estimated Milestones:** Model developed by end of FY21, analysis underway.
- f. **Long Term Outcomes:** An understanding of the food web dynamics and organism/habitat interactions will allow for optimized planning for the Peconic Bays.
- g. **External Constraints:** Project is behind schedule due to NYS contracting issues.
- h. **Clean Water Core Programs:** protecting Large Aquatic Ecosystems.

Objective H: Restore and protect key habitats and species diversity in the Peconic Estuary and its watershed.

ACTION 29: Maintain, restore, and enhance viable diadromous fish spawning and maturation habitat in the Peconic Estuary watershed.

Performance Measure: Completion of the Woodhull Dam, Forge Road Dam, and Upper Mills Dam diadromous fish connectivity project on the Peconic River to restore 300 acres of habitat;

Performance Measure: Completion of culvert improvements on Alewife Creek to enhance the largest alewife run on Long Island;

Performance Measure: Completion of priority diadromous fish habitat connectivity projects identified in the PEP Habitat Restoration Plan or Long Island Diadromous Fish Restoration Strategy, or through the Volunteer Alewife Monitoring Survey, in other areas of the Peconic watershed to restore additional habitat.

Task 12: Complete design and construction of diadromous fish passage on the Peconic River and in other priority tributaries in the Peconic Estuary watershed

Ongoing – details in project descriptions

- a. **Estimated Budget:** Staff time, Partner funds (details in project description section)
- b. **Partners & Roles:** PEP, Suffolk County, NYSDEC, East End towns and villages.
- c. **Description and Objectives:** Support fish passage construction in the Peconic River and its tributaries. During the upcoming year PEP and its partners are working towards opening up acres of freshwater spawning area to diadromous fish through the completion of fish passage projects. PEP will continue to support the design, permitting and construction of fish passage throughout the Peconic River and in other priority tributaries in the Peconic Estuary watershed. Descriptions, budgets, and anticipated external constraints for each project are listed below.
- d. **Outputs and Deliverables:** Successful completion of fish passage design, permitting and construction.
- e. **Estimated Milestones:** Completion of Woodhull Dam Fish Passage construction and Upper Mills Fish Passage Engineering Designs 2021, Meetings with project partners for other projects.

- f. **Long Term Outcomes:** Restoring and strengthening ecosystem services, fish and wildlife of the Peconic Estuary will benefit from access to critical habitat, increased biodiversity and restoration of historic food webs.
- g. **Clean Water Act Core Programs:** protecting Large Aquatic Ecosystems.

Task 12a Woodhull Dam: The Permitting Services for Construction of a Fish Passage at the Woodhull Dam, Town of Riverhead contract through Suffolk County Parks is complete and funding for the construction of the dam has been secured through a NYSDEC Water Quality Improvement Grant, Suffolk County Capital Budget, Suffolk County Fun 477. Other sources of grant funding are pending at this time. Ninety-five (95) acres of freshwater habitat will be opened with project completion. The construction of the fish passage project is anticipated to be complete before the end of 2021.

Estimated Budget: \$801,951 (\$278,964 NYSDEC WQIP Funds, \$192,987 Suffolk County Capital Funds (Suffolk County Parks: \$21,987 & Suffolk County Capital Budget: \$171,000), \$330,000 Suffolk County Fund 477).

External Constraints: Suffolk County Parks has a limited number of contracts they can execute each year. Additionally, there have unforeseen delays due to priorities of the COVID19 health crisis. These factors may combine to create project delays.

Task 12b Upper Mills Dam- PEP is contracting with the selected contractor (L.K. Mclean Associates P.C.) to complete the Engineering Design and Permitting Services for Construction of a Fish Passage at the Upper Mills Dam, Town of Riverhead. The selected design alternative is being developed with the additional information from soil boring and test holes that were conducted in spring 2020. The Upper Mills Dam is an earthen embankment with an asphalt/concrete road on top and two (2) parallel spillways located approximately 2.9 miles from the mouth of the Peconic River in Flanders Bay. The northern banks of the Peconic River at this location are located in the Town of Riverhead, while the southern banks are located in Southampton. The dam is currently owned by PSEG but is maintained by the Town of Riverhead. This project will open forty (40) acres of historic spawning and maturation habitat for diadromous fish within the Peconic River. Target species that will benefit from the restoration are the Alewife (*Alosa pseudoharengus*), Blueback herring (*Alosa aestivalis*), and American eel (*Anguilla rostrata*). The Engineering Designs and Permit Services are anticipated to be completed by February 2021.

Estimated Budget: \$129,000 2013 Suffolk County Capital Budget Funds

External Constraints: Significant delays to this project were the result of land owner (PSEG) approval to carry out survey work for this project.

Task 12c Forge Road Dam- Fish passage design plans at the Forge Rd. Dam are being finalized and permitting is underway. NYSDEC funds have been secured for fish passage construction. The dam is owned by the Town of Brookhaven. PEP is assisting Town of Brookhaven on the implementation of this project. This project will open approximately 115 acres of historic spawning and maturation habitat for diadromous fish within the Peconic River.

Estimate Budget: Staff time, \$307,000 NYSDEC WQIP Funds

Task 12d Lake Montauk – PEP recently completed a conceptual habitat restoration design plan to restore connectivity for diadromous fish species between Lake Montauk and Big Reed Pond by replacing an undersized culvert and between Lake Montauk and Stepping Stones Pond by replacing an undersized, impassable culverts under Old West Lake Drive and removing debris. Suffolk County Capital funds have been secured to replace the culvert that leads to Big Reed Pond and PEP staff will be working with Suffolk

County parks to complete the permitting and construction. PEP staff are also working with partners to secure funding to complete engineering design plan and construction of the culvert leading to Stepping Stones Pond.

Estimated Budget: Staff time, \$50,000 2016 Suffolk County Capital Budget Funds

External Constraints: This project will be contracted through Suffolk County Parks and they currently have limited staff to oversee construction works. This may cause a delay in the contracting process based on priorities identified by Suffolk County in the next two years.

Task 12e Alewife Creek – The Town of Southampton received a Climate Smart Communities Grant award to complete the engineering design and construction of the Alewife Creek Habitat Enhancement project which includes the right-sizing of the existing culvert under Noyac Road, reducing stormwater runoff and enhancing the ability of alewife to reach freshwater spawning habitat in Big Fresh Pond within the Town of Southampton. PEP will assist in guiding the design of the project. Expected project completion is 2024.

Estimated Budget: \$410,000 NYS Climate Smart Communities Grant, \$410,000 Southampton Town Community Preservation Fund

Performance Measure: Development of an alewife survey to monitor the population and assess the success of fish connectivity projects.

Task 13: Develop and Implement Alewife Monitoring Strategy on the Peconic River

Ongoing

- a. **Estimated Budget:** Staff time
- b. **Partners and Roles:** PEP (lead), NYSDEC, Academic and Environmental Partners
- c. **Description and Objectives:** Obtain video footage of alewife coming up the Peconic River to spawn and analyze video footage to estimate alewife abundance. Continue to collect biological data (sex, size and age) on the Peconic River alewife population with the assistance of partners and continue to promote and expand the Long Island Volunteer River Herring Survey. Monitoring activities will be conducted in accordance with the Peconic Estuary Alewife Monitoring QAPP. Abundance data will be used by the Peconic Estuary Partnership and our partners to evaluate the success of fish passage restoration efforts. Additionally, the data will be provided to the New York Department of Environmental Conservation and the Atlantic States Marine Fisheries Commission to aid in stock assessments and the management of alewife.
- d. **Outputs and Deliverables:** Annual alewife monitoring reports.
- e. **Estimated Milestones:** Annual alewife monitoring report winter 2021, Hold two trainings winter 2021 for Volunteer River Herring Survey.
- f. **Long Term Outcomes:** Accurately track alewife abundance in the Peconic River, evaluate the success of fish passage restoration efforts and guide management of the species.
- g. **Clean Water Act Core Programs:** protecting Large Aquatic Ecosystems.

Action 30: Monitor and protect existing eelgrass beds; where appropriate, restore and expand eelgrass beds.

Performance Measure: A comprehensive aerial survey of eelgrass in the Peconic Estuary to support future management decisions.

Task 14: Carry out Eelgrass Aerial Survey

Ongoing

- a. **Estimated Budget:** Staff time; \$100,000 NYSDEC Environmental Protection Fund (additional funds to be contributed by Long Island Sound Study)
- b. **Partners and their roles:** PEP (Co-Lead Partner), LISS (Co-Lead Partner), NYS Department of Environmental Conservation (Funding and Contracting Entity)
- c. **Description and Objectives:** Coordinate with Long Island Sound Study to conduct an aerial survey to evaluate the current extent of eelgrass habitat in the Peconic Estuary and Long Island Sound watersheds and any increases or decreases in eelgrass habitat extent since the last aerial surveys.
- d. **Outputs and Deliverables:** Aerial maps of eel grass extent in the Peconic Estuary and eelgrass habitat report
- e. **Estimated Milestones:** Aerial survey anticipated to be conducted spring 2021
- f. **External Constraints:** Funding will be required to ground-truth the aerial surveys. This funding has not yet been identified.
- g. **Long Term Outcomes:** Continual partnership between the two NEPs for a common goal will benefit both programs and allow for temporal alignment with eelgrass bed assessments every five years.
- h. **Clean Water Act Core Programs:** protecting Large Aquatic Ecosystems.

Action 31: Use available habitat quality assessment and climate change resiliency tools to prioritize wetland restoration projects identified in the 2017 PEP Habitat Restoration Plan, and implement the top projects.

Performance Measure: Completion of design and construction of ongoing, priority restoration projects (Indian Island Wetland Restoration, Narrow River/ Broad Meadows Wetland Restoration, Cedar Creek Wetland Restoration, Paul Stoutenburgh Wetland Restoration, and Meetinghouse Creek Wetland Restoration) to restore at least 65 acres of habitat.

Performance Measure: Identification of the top five projects from the Habitat Restoration Plan that have yet to be initiated and funds secured for conceptual design plans.

Task 15: Work with the Natural Resources Subcommittee and Technical Advisory Committee to prioritize restoration projects identified in the 2017 Habitat Restoration Plan and secure funding for conceptual design plans

New

- a. **Estimated Budget:** Staff time
- b. **Partners and their Roles:** PEP (Lead Partner), NYSDEC, Suffolk County, East End Towns, Environmental and Academic Partners
- c. **Description and Objectives:** The 2017 Habitat Restoration Plan is a comprehensive plan that is a culmination of numerous stakeholder meetings and communications with the East End Towns and partners. Then plan outlines goals, objectives, actions to guide habitat restoration and protection in the Peconic Estuary watershed over the next 10 years. The 2017 Peconic Estuary Partnership Habitat

Restoration Plan also includes a list of priority habitat restoration projects that align with the defined goals/objectives, potential funding sources, and habitat restoration resources. The overall goal of the 2017 Peconic Estuary Partnership Habitat Restoration Plan is to protect and restore Peconic Estuary habitats to support ecosystem function. A number of wetland and shoreline restoration projects are listed in the 2017 Habitat Restoration Plan. These projects largely seek to restore/recreate lost marsh habitat, remove barriers to tidal flow and sediment supply, enhance the habitat by increasing native wetland communities, and allow for natural marsh migration necessitated by rising seas. There are several available tools that can help to prioritize these projects, including the Long Island Tidal Wetland Trends Analysis, other ongoing marsh health assessment work, and the recently completed PEP Critical Lands Protection Strategy. PEP Staff will work with the PEP Natural Resources Subcommittee (NRS) and Technical Advisory Committee (TAC) to prioritize projects and identify funding for the top priority projects.

- d. **Outputs and Deliverables:** Identification of the top priority projects and identification of potential funds (not all secured) to complete conceptual design plans.
- e. **Estimated Milestones:** Meetings with the PEP NRS and TAC to identify the top priority projects.
- f. **External Constraints:** Securing funds for all projects is subject to availability of funds in the next fiscal year, stakeholder participation, etc.
- g. **Long Term Outcomes:** The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- h. Clean Water Act Core Programs: Wetland Protection

Action 33: Implement living shoreline projects, monitor for ecological and financial benefits, and use model projects to educate planners and homeowners on the benefits of living shorelines over hardened shorelines

Performance Measure: Dissemination of monitoring results from two pilot living shoreline projects;

Performance Measure: Development of user-friendly living shoreline guides for homeowners.

Task 16: Implement priority wetland restoration projects identified in the PEP Habitat Restoration Plan

Ongoing

Task 16a: Complete Engineering Design Plans for Paul Stoutenburgh Habitat Restoration Project

Ongoing

- a. **Estimated Budget:** Staff time, \$100,000 2017 Suffolk County Capital Budget Funds
- b. **Partners & Roles:** PEP (Lead Entity), Town of Southold, Suffolk County (Contracting Entity), Contractor TBD.
- c. **Description and Objectives:** Engineering design of a habitat restoration project at Paul Stoutenburgh Preserve in the Town of Southold. This project involves improving the tidal flow into the wetland and removal of 6 acres of invasive *Phragmites* and restoration to native vegetation within the larger Paul Stoutenburgh Preserve (*formerly* Arshamomaque Pond Preserve).
- d. **Outputs and Deliverables:** Final engineering design, and permitting of wetland habitat restoration at site.
- e. **Estimated Milestones:** RFP released and contract finalized end of year 2021
- f. **External Constraints:** Suffolk County contracting can be a time-consuming process. This timeline is subject to the ability of Suffolk County to complete this process.

- g. **Long Term Outcome:** The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- h. Clean Water Act Core Programs: Wetland Protection

Task 16b: Complete Engineering Design and Construction of Indian Island Wetland Restoration Project

Ongoing

- a. **Estimated Budget:** Staff time; \$1,406,666 from partner awards and match: NYSDEC WQIP/AHR Grant (\$788,000 award & \$262,666 match; \$56,000 FY00 Grant), \$300,000 Suffolk County 1/4% Funds
- b. **Partners and Roles:** PEP (project coordinator), NYSDEC (Funding and Contracting Entity), Suffolk County (Lead Partner)
- c. **Description and Objectives:** This project aims to restore a tidal wetland located within the Indian Island County Park that adjoins with Terry Creek and Flanders Bay. Dredging of nearby creeks in the 1940s-1970s accounted for nearly 1 million cubic yards of dredge material being placed over 54 acres at Indian Island County Park- wiping out an entire tidal wetland ecosystem. This project seeks to excavate approximately 6,400 cubic yards of previously placed dredge materials from the site, install tidal channels and restore the area to a productive salt marsh ecosystem. The restored marsh system will be established based on similar local reference high and low marsh elevations; with particular focus to allow for marsh migration and vegetation shifts in response to sea level rise. PEP is assisting Suffolk County and providing technical guidance on the design plans.
- d. **Outputs and Deliverables:** Final engineering design, permitting, and implementation of wetland restoration at site
- e. **Estimated Milestones:** Project expected to be completed December 2021
- f. **External Constraints:** This project has experienced severe delays to date. The funds are currently expiring in December 2021. If this work is not completed in this time frame the possibility exists that it will not move forward as funding will be lost.
- g. **Long Term Outcomes:** The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- h. Clean Water Act Core Programs: Wetland Protection

Task 16c: Work with Partners to Secure Funds for Narrow River Wetland Restoration Project

Ongoing

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** PEP (Lead), NYSDEC (property owner), Town of Southold (property owners), Ducks Unlimited, TNC
- c. **Description and Objectives:** PEP recently completed a conceptual design plan for wetland restoration at Narrow River/Broad Meadows marsh. Narrow River is a tributary of the Peconic Bay and flows south from the Town's Whitcom Marsh Preserve under Route 25 and along the eastern side of Narrow River Rd in Orient, NY. NY State owns most of the properties on the east side of Narrow River Rd and the Town and County own farm land development rights on both sides of the road that includes tributaries to Narrow River. An earthen dam was constructed after the 1938 hurricane to prevent tidal flooding of the lands north of the dam. The western-most section of the dam blocked the tidal flow from Narrow River to the large meadow area north of the dam known as Broad Meadows and Whitcom Marsh Preserve north of Route 25. The dam was modified overtime to include culverts, but these culverts are no longer functioning as originally designed and allow very little water to drain to the south. Additionally, the wetlands north of the earthen dam and culvert to Whitcom Marsh Preserve, which were historically used for duck hunting, are currently choked with

Phragmites. Remediation of the culvert and earthen dam is needed to improve the tidal exchange throughout the extent of the river and increase the salinity of the river. These actions will help to eradicate the *Phragmites* and will promote the re-establishment of native vegetation and important waterfowl and wading bird habitat. The potential extent of the restoration area is 80 acres. PEP is working with partners to secured funding for engineering design plans and construction.

- d. **Outputs and Deliverables:** Project funds secured
- e. **Estimated Milestones:** Quarterly meetings with projects partners.
- f. **External Constraints:** Securing implementation funding could be a challenge due to the high cost of the project and the unique hydrology the project plan presents.
- g. **Long Term Outcomes:** The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- h. **Clean Water Act Core Programs:** Wetland Protection

Task 17: Living Shoreline Stakeholder Education

Ongoing

- a. **Estimated Budget:** Staff time
- b. **Partners and their roles:** PEP (Lead Partner), NYS DEC (Partner – permitting and wetland consulting – potential funder), NY Sea Grant (Partner – research and living shoreline expertise), Cornell Cooperative Extension (Living Shoreline expertise).
- c. **Description and Objectives:** The PEP working with the NYSDEC and NY Sea Grant, is developing living shoreline guides to encourage the appropriate use of living shorelines in place of hardened approaches for erosion control, and encourage, where appropriate, modification of existing shoreline erosion control structures into living shorelines. The living shoreline guides will provide information on the benefits of living shorelines, information on the projects established in the Peconic Estuary and the region, and information on how a stakeholder could establish a living shoreline. Details of the task scope are being finalized. The goal is to use the guides to work with various property owners on living shoreline projects.
- d. **Outputs and Deliverables:** Living shoreline guides for stakeholders.
- e. **Estimated Milestones:** Completion of guides in 2022.
- f. **External Constraints:** There are potential permitting issues with permitting by NYS DEC on private property. PEP is working with DEC on several possibilities, including potential ‘group’ permitting or ‘group submission’ of permits for ease of this project.
- g. **Long Term Outcomes:** Create a series of adjacent property owners who will install living shorelines in place of hardened shorelines. Each completed living shoreline project will serve as a demonstration to promote and track benefits of living shorelines as an alternative to hardened shoreline.
- h. **Clean Water Act Core Programs:** Wetland Protection

IV. BUDGET DETAILS

1. Resources Requested

The total requested in this PEP budget amendment to NEIWPC is **\$529,380**. Attachment A provides the FFY2020 itemized budget and overall grant budget. This grant will be complimented by a request for PEP support to SCDHS in the amount of **\$133,120**, and together these two components make up the full Peconic Estuary Partnership FFY2020 workplan for a total grant request of **\$662,500**.

Non-Federal Match: NYSDEC will provide **\$XXXX** (estimated to be spent during the grant period). Suffolk County will provide **\$XXX**.

Trips Anticipated for FFY2020:

Date	Meeting/Event	Purpose	Destination	Number of Staff	Estimated Cost
October 4-8, 2020	RAE	Restore Americas Estuaries Conference	Providence, Rhode Island	3 (Program Director and Coordinators)	\$1,200 each; \$3,600 total
October TBD, 2020	ANEP Annual Meeting	Tech Transfer	Providence, Rhode Island	3 (Program Director and Coordinators)	Included in above cost.
November 12-13, 2020	NEIWPC All Staff meeting	PEP Director, NYS Coordinator and PEP Coordinator attend NEIWPC All Staff meeting	Bedford, MA	3 (Program Director and Coordinators)	\$400 each; \$1,200 total
February/March TBD, 2021	NEP meeting - EPA HQ	Tech Transfer	Washington, DC	1 (Program Director)	\$1,500
March 25-26, 2021	NEIWPC All Staff meeting	PEP Director, NYS Coordinator and PEP Coordinator attend NEIWPC All Staff meeting	Bedford, MA	3 (Program Director and Coordinators)	\$400 each; \$1,200 total
September TBD, 2021	Annual staff performance appraisals	Conduct annual performance appraisals for PEP-NEIWPC staff	Riverhead, NY East Setauket, NY	1 (NEIWPC Project Manager)	\$500

Trips Taken During FFY2019:

Date	Meeting/Event	Purpose	Destination	Number of Staff	Final Cost
October 1-4, 2019	NEP	Tech Transfer	Dewy Beach, DE	2 (NYS Coordinator and PEP Coordinator)	\$600 each; \$1,200 total
September 30, October 1-4, 2019	ANEP & NEP	Tech Transfer	Dewey Beach, DE	1 (Program Director)	\$850

Trips Expected to Occur Between Date of Submission and End of FFY2019:

Approximate Date	Meeting/Event	Purpose	Destination	Number of Staff	Estimated Cost
September, TBD, 2020	Annual staff performance appraisals	Conduct annual performance appraisals for PEP-NEIWPC staff	Riverhead, NY and East Setauket, NY	1 (NEIWPC Project Manager)	\$500

Appendix A: Detailed Budget See attached excel budget.

Appendix B: Match Documentation See attached files. **[April 2020 DRAFT does not include match documentation yet, match amount is not final]**

DRAFT

DRAFT Budget
Peconic Estuary Partnership
Base Project and Budget Period: 10/01/2020-09/30/2023
Contract Period 10/01/2020-09/30/2023
Revised 3/30/2020

	Total			Total
Personnel	Hrs	Rate	\$258,739	\$258,739
Division Director (MA)	30	\$85.40	\$2,562	\$2,562
Information Officer (MA)	20	\$44.33	\$887	\$887
Environmental Analyst (MA)	300	\$44.33	\$13,299	\$13,299
Program Director (NY)	1,490	\$62.41	\$92,991	\$92,991
Environmental Analyst (NY)	1,490	\$50.00	\$74,500	\$74,500
Environmental Analyst (NY)	1,490	\$50.00	\$74,500	\$74,500
Fringe	Notes (if any)	\$99,698	\$99,698	
Full time (39.0% of MA Personnel)		\$6,532	\$6,532	
Full time (38.5% of NY Personnel)		\$93,166	\$93,166	
Travel	Notes (if any)	\$0	\$0	
Equipment	Notes (if any)	\$0	\$0	
Supplies	Notes (if any)	\$0	\$0	
Contracts	Notes (if any)	\$102,000	\$102,000	
Contract 1 (Under \$100,000)				
Contract 3 (Over \$100,000)	Outreach & Ed	\$102,000	\$102,000	
Other	Notes (if any)	\$3,750	\$3,750	
Printing & Production		\$500	\$500	
Website Development/Services		\$1,000	\$1,000	
Conferences and meetings		\$1,000	\$1,000	
Workshop (Attendee meal)		\$0	\$0	
Conference 1 (Attendee meal)		\$0	\$0	
Conference 2 (Attendee meal)		\$0	\$0	
Conference & Meeting Registration		\$0	\$0	
Telephone		\$500	\$500	
Advertising		\$750	\$750	
Computer Support		\$0	\$0	
Total Direct		\$464,187	\$464,187	
Indirect (18.00% of Total Direct less: subawards over \$100,000, equipment, rental space, and participant support costs)		\$65,194	\$65,194	
Total Costs		\$529,380	\$529,380	
Match Required (100%)		\$529,380	\$529,380	
Total Project		\$1,058,760	\$1,058,760	
FTE's		2.47	2.47	

Personnel: NEIWPCC does not provide annual salary and other confidential information.

Fringe Benefits: Costs for health and accident insurance, FICA, unemployment, worker's compensation and retirement are based on historical data and are calculated, annually, as a percentage of personnel costs. The fringe rates for NEIWPCC full time and part time staff in NY and MA are 38.5% and 39.0%, respectively, as of the date of submission. NEIWPCC cannot guarantee these rates beyond the base period.

Travel: Costs are charged on an actual cost basis, or on a per diem basis in lieu of actual costs incurred, or on a combination of the two, the method used is applied to an entire trip, and results in charges consistent with those normally allowed in like circumstances, per 2 CFR §200. NEIWPCC travel policies include actual mileage reimbursement at the federal IRS rate.

Indirect Cost: The Commission utilizes 2 CFR § 200 to determine its indirect rate and submits the appropriate paperwork to EPA HQs. The rate is approved annually by the NEIWPCC Executive Committee and Commission and EPA HQs. NEIWPCC's current approved indirect rate is 18.00% for FY 2020. NEIWPCC applies its approved indirect rate throughout the life of the grant and thus indirect charges may fluctuate. NEIWPCC does not charge indirect on individual contractual projects and subawards of \$100,000 or greater, office rent, participant support costs, or equipment. The indirect rate may change in subsequent fiscal years. NEIWPCC will charge its approved rate at the time that work occurs.



Peconic Estuary Partnership's Water Quality Monitoring Strategy

May 2020



Peconic Estuary
Partnership

PROTECTING AND RESTORING LONG ISLAND'S PECONIC BAYS



Peconic Estuary Partnership's Water Quality Monitoring Strategy

Background

The 2020 revision to the Comprehensive Conservation and Management Plan (CCMP) for the Peconic Estuary Partnership (PEP) sets goals to restore and maintain the chemical, physical, and biological integrity of the Peconic Estuary and surrounding study area (Figure 1). The Technical Advisory Committee, Citizen Advisory Committee, Management Committee and Policy Committee for PEP worked with partners and the public to develop Goals, Objectives and Actions to guide the Partnership over the next decade.

The PEP CCMP 2020 focuses on four Goals: Strong Partnerships and Engagement; Resilient Communities Prepared for Climate Change; Clean Water; and Healthy Ecosystem with Abundant, Diverse Wildlife. The Water Quality Monitoring Strategy (this document) addresses elements contained within three of the four Goals: Resilient Communities Prepared for Climate Change; Clean Water; and Healthy Ecosystem with Abundant, Diverse Wildlife.

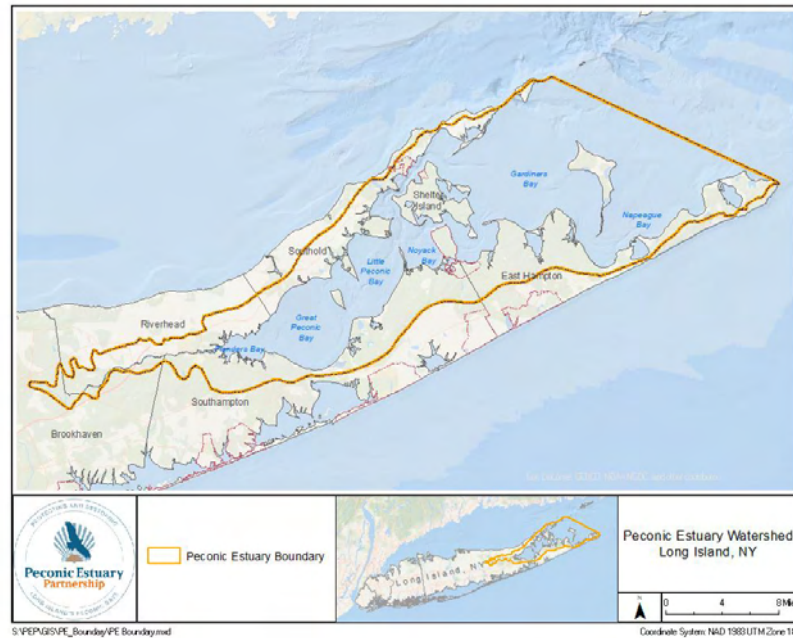


Figure 1. Peconic Estuary watershed and study area.

This Water Quality Monitoring Strategy focuses on water quality-related Objectives and Actions identified in the Goals (as stated in the January 2020 Draft Final CCMP), and includes the following:

GOAL: RESILIENT COMMUNITIES PREPARED FOR CLIMATE CHANGE

OBJECTIVE C: Help local communities to take meaningful, well-informed action to prepare for and adapt to climate change impacts in the Peconic Estuary

ACTION 13: Collaborate on coastal and ocean acidification monitoring and research

** Several Actions within the Climate Change Goal also note the importance of monitoring.*

GOAL: CLEAN WATERS

OBJECTIVE D: Protect areas with clean water from degradation

ACTION 16: Identify areas of clean water quality and deliver information that local governments and others can use to protect those areas

OBJECTIVE E: Increase understanding of nutrient pollution in groundwater and surface waters, and decrease negative impacts from legacy, current, and future nutrient inputs

ACTION 17: Plan science-based approaches for monitoring and reducing nitrogen pollution

ACTION 19: Collate results of harmful algal blooms (HABs) monitoring and deliver findings to support management decision making

OBJECTIVE F: Reduce current and future inputs of toxics, pathogens, and marine debris into groundwater and surface waters, and minimize their impacts

ACTION 20: Conduct analysis to understand the sources of toxic contaminants and implement measures to reduce their impacts

ACTION 21: Expand non-point source subwatershed management plans to all pathogen-impaired waterbodies and continue to use existing plans

GOAL: HEALTHY ECOSYSTEM WITH ABUNDANT, DIVERSE WILDLIFE

OBJECTIVE H: Restore and protect key habitats and species diversity in the Peconic Estuary and its watershed

ACTION 29: Maintain, restore, and enhance viable diadromous fish spawning and maturation habitat in the Peconic Estuary watershed

ACTION 30: Monitor and protect existing eelgrass beds; where appropriate, restore and expand eelgrass beds

Within the CCMP, the history, successes, issues, and plans for continuing forward momentum of the improvement of the Peconic Estuary ecosystem are described including background documentation relevant to this Monitoring Strategy.

The finalized Monitoring Strategy (after inclusion of monitoring for wildlife and habitats) will be provided as a technical supplement to the CCMP, and, as such, will focus on the technical aspects of monitoring data collection, reporting and uses. Please refer to the 2020 CCMP for full descriptions of the development of management strategies to meet adopted goals and targets, and actions needed to accomplish those strategies.

Acknowledgements

The project is funded by an agreement awarded by the U.S. Environmental Protection Agency to NEIWPCC in partnership with the Peconic Estuary Partnership. Although the information in this document has been funded wholly or in part by the United States Environmental Protection Agency under agreement CE97230303 to NEIWPCC, it has not undergone the Agency's publications review process and therefore, may not necessarily reflect the views of the Agency and no official endorsement should be inferred. The viewpoints expressed here do not necessarily represent those of Peconic Estuary Partnership, NEIWPCC, or EPA, nor does mention of trade names, commercial products, or causes constitute endorsement or recommendation for use.

We thank the many people who provided their time, energy, enthusiasm and expertise in preparing and holding the working sessions leading up to this final Strategy, including PEP staff (Joyce Novak, Sarah Schaefer, Elizabeth Hornstein and Lauren Scheer), TAC Chair Matt Sclafani (CCE) and program partners (Kyle Rabin with LIRPC; Susan Van Patten, Michele Golden, Kristin Kraseski, Gavin Lemley, Matt Richards, A.J. Smith and Julia Socrates with NYSDEC; Jeremy Campbell and Christie Pfoertner with NYSDOS; Doug Feldman, Susan Filipowich, Michael Jensen, Ron Paulsen, Nancy Pierson, Andrew Rapiejko, Camilo Salazar and Jon Sokol with Suffolk County; Shawn Fisher, Chris Schubert and Tristan Tagliaferi with USGS; Chris Gobler and Jennifer Goleski with SBU/SOMAS; Chris Clapp and Alex Novarro with TNC; Catherine Kent with the Town of Riverhead; Edward Bausman with the Town of Shelter Island; Julie Hargrave with the Central Pine Barrens Commission; Scott Curatolo-Wagemann with CCE; Lisa Liquori with Fine Arts & Sciences LLC; Pat Aitken with PEPC; Josh Halsey and Christina Badalamenti with PLT; George Bartunek with REAC; and Maureen Dunn with Seatuck).

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Overview

It is critical to assess whether the goals of the PEP CCMP are being met and if the CCMP actions are having their desired effects. For each CCMP water quality-related goal, objectives were developed to help evaluate progress towards meeting those goals and linked to one or more specific actions in the CCMP. Each element of this Water Quality Monitoring Strategy is linked to one or more of these Goals.

Measuring the effectiveness of CCMP actions in bringing about environmental change is accomplished with the monitoring of a suite of indicators. These indicators are used to report on progress toward meeting PEP's CCMP goals and objectives, and to assess the status and trends in the water quality and health and abundance of the Peconic Bays' habitats and living resources.

The purposes of the Water Quality Monitoring Strategy are to:

1. Provide the data necessary to routinely track water quality trends and assess the environmental health of the PEP study area.
2. Describe how the synthesis of data from ongoing water quality monitoring programs can assist in evaluation of the effectiveness of CCMP actions; and

In general, there are two types of monitoring, output and outcome, also called programmatic and environmental. Output monitoring measures programmatic progress and address implementation of the CCMP. Outcome monitoring focuses on the results of CCMP actions such as changes in ambient conditions, ecological functions, and biological populations. The PEP Monitoring Strategy focuses on outcome monitoring.

As noted, the Water Quality Monitoring Strategy (this document) focuses on water quality-related Objectives and Actions identified in the January 2020 Draft Final CCMP. This Strategy was developed from assessments and recommendations made by the Peconic Estuary Partnership's Technical Advisory Committee (TAC) in 2019, as summarized in the following documents prepared by CoastWise Partners:

2019a. ([link](#)) Summary of Existing Water Quality Monitoring Programs in the Peconic Estuary and Watershed

2019b. ([link](#)) Summary of May 29, 2019 TAC and Monitoring Partners Workshops on Existing Water Quality Monitoring Programs

2019c. ([link](#)) Summary of Methods Used to Report Results from Existing Water Quality-Related Monitoring Programs in the Peconic Estuary

2019d. ([link](#)) Developing an Updated Reporting Strategy for Water Quality Monitoring Information: Background for Dec. 4, 2019, TAC meeting

2019e. ([link](#)) TAC Workshop Summary, Recommended Water Quality Targets and Templates for Reporting Monitoring Results

All documents of these are available at <https://www.peconicestuary.org/>.

This Strategy provides a framework that builds on existing water quality monitoring programs within the PEP study area administered by organizations involved in the development and implementation of the CCMP. CCMP Actions addressed within the water quality monitoring plans, water type, monitoring entities, a summary of types of data they collect, sampling frequency, number of stations, and period of record are summarized in Table 1. Additional details on specific parameters collected by entity and sampling location maps can be found in Report 2019a [link](#).

The PEP monitoring partners will conduct an assessment of management decision making-based data needs and a re-evaluation of the Monitoring Strategy every five years to ensure data gaps are addressed. During this process, the field sampling and handling and laboratory analysis methods used, and data collected and analyzed will be checked for current relevance, applicability to emerging needs, and potential changes for protocols as necessitated by improvements in technology and quantitative advancements. If necessary, PEP will revise the Monitoring Strategy to reflect any updates.

Coordination, collaboration, and long-term support for monitoring are key elements to successful implementation of PEP’s CCMP (National Academy of Sciences 1990; 2017). PEP will need to continue to work with multiple agencies, institutions, organizations and partners to obtain, share, and evaluate monitoring data, and to communicate the resultant findings to the public, decision makers, and stakeholders.

Table 1. Summary of key water quality monitoring programs and CCMP Actions addressed in the Peconic Estuary study area. See Report 2019a ([link](#)) for more detailed descriptions and additional water quality monitoring program descriptions.

CCMP Actions addressed	Water Type	Monitoring Entity	Parameter types	Sampling Frequency	No. of Stations	Period of Record
16 17	Surface waters; estuarine/marine	Suffolk County Department of Health Services, Office of Ecology	Ambient water quality; pathogens; harmful algal blooms; physical/chemical measurements	Approximately Monthly	Numbers of stations vary from year to year: Min=10 Mean=31 Max=49	1976-present
16 17	Surface waters; freshwater and streams	Suffolk County Department of Health Services, Office of Ecology	Ambient water quality; physical/chemical measurements; streamflow	Approximately quarterly	Numbers of stations vary from year to year: Min=8 Mean=22 Max=39	1976-present
16 21	Surface waters: fresh/estuarine/marine bathing Beaches	Suffolk County Department of Health Services bathing beach monitoring program	<i>E. coli</i> (freshwater beaches) <i>Enterococcus</i> (estuarine/marine beaches)	Risk-based; twice per week at higher-risk beaches, less frequently at lower-risk beaches	30+ in Peconic system. Sampling performed mid-May through mid-September	2000 - present

CCMP Actions addressed	Water Type	Monitoring Entity	Parameter types	Sampling Frequency	No. of Stations	Period of Record
21 (potential)	Surface waters; estuarine/ Marine/ shellfish beds	New York State Department of Environmental Conservation, Division of Marine Resources, Shellfish Growing Area Classification Unit	Fecal coliforms; salinity; water temperature	Variable, depending on station requirements (typically 2-15+ per year)	Variable, based on potential pollution sources	Varies
30	Surface water estuarine/ marine eelgrass habitat	Cornell University, Cooperative Extension of Suffolk County	Eelgrass shoot density; water temperature; light availability (PAR) macroalgae cover (%)	Annually or every 3 years	Variable	1997 - present
19	Surface water fresh/estuarine /marine	Stony Brook University, School of Marine and Atmospheric Sciences	Minimum dissolved oxygen (mg/l); Secchi depth (m); site depth (m); fecal coliform (per 100ml); chlorophyll- <i>a</i> (ug/l); harmful algal blooms (cells/ml)	Weekly from the Monday after Memorial Day to the Monday before Labor Day	6 in Peconic system	2014 - present
17 29 13 (partial)	Surface water fresh/estuarine /marine	U.S. Geological Survey continuous monitoring stations	Water stage (ft.); water temperature; specific conductivity; salinity; dissolved oxygen; turbidity; nitrate; pH	Water quality monitoring at 6 to 30-minute intervals, depending on parameter	2 stations: Peconic River and Orient Harbor	2012 - present
20	Groundwater	Suffolk County Department of Health Services, Water Resources	Metals; various contaminants	variable	variable	variable

Several environmental monitoring programs are carried out by multiple entities in the Peconic Estuary study area. This Water Quality Monitoring Strategy does not intend to be an integrated monitoring plan that pulls all of those activities together. PEP is neither in a position nor has the resources to develop such a comprehensive unified plan for all of the Peconic Estuary and its watershed. Rather, this Water Quality Monitoring Strategy will help PEP and its partners measure the status and effectiveness of actions, establish performance criteria, and make use of

environmental indicators to assess status and trends in the Peconic Estuary study area. This is essential to evaluate the successful implementation of the 2020 PEP CCMP.

The distributed water quality monitoring system, with the shared responsibilities of multiple partners for project implementation, can be effective in forwarding science-based management for the PEP study area. Although PEP does not sample and generate data to a great extent, as a public program within the state of New York, PEP provides access to reports it creates and the datasets developed to support report findings, supports technical assessments and acts as a coordinator for collaborative decision making by the monitoring partners.

Numeric Water Quality Targets

The establishment and tracking of measurable water quality targets to support critical living resources in the Peconic Estuary is crucial for assessing whether the goals of the PEP CCMP are being met and if the CCMP actions are having their desired effects. During its December 4, 2019 water quality monitoring workshop, the PEP TAC recommended the following numeric water quality targets (Report 2019e [link](#)), which were approved by the PEP Policy and Management Committees on February 5, 2020:

- Adopt provisional targets for water clarity (Secchi disk depth), chlorophyll-*a*, and dissolved oxygen (DO) as proposed in the Suffolk County (2019) Subwatersheds Wastewater Plan (SWP):
 - Median Secchi disk depths should be 2 meters (m) or greater during the April 1 through October 31 growing season;
 - Median chlorophyll-*a* concentrations should be no greater than 5.5 ug/l during the April 1 through October 31 growing season; and
 - Dissolved oxygen concentrations should comply with New York State’s acute (never less than 3 mg/l) and chronic (> 4.8 mg/l as daily average in 90% of samples) dissolved oxygen criteria.
- As an initial target for pathogens, adopt the existing threshold for fecal indicator bacteria (*Enterococcus*) that is used by Suffolk County to determine swimming beach closures: *Enterococcus* counts at estuarine/marine swimming beaches should not exceed 104 colony forming units per 100 milliliter water sample (104 cfu/100ml). New *Enterococcus* standards are currently in review. Once these standards are in place, revise the target to reflect the new standards going forward.
- Adopt three estuary segments—west, central and east illustrated in Figure 2—as the reporting/management units, based on chlorophyll-*a* concentrations and Secchi depths observed at Suffolk County Department of Health Services monitoring stations in each segment.
- Use ‘stoplight graphics’—green = target met; red = target not met—for public-facing documents, collating data by estuary segment. Update annually as soon as monitoring data are available from the previous year. Where possible, also include a yellow (intermediate) category in each stoplight graphic to reflect small-magnitude and/or short-duration failures to

meet targets. Approaches for doing so with the Secchi depth, chlorophyll-*a* and *Enterococcus* targets are outlined in the *Sharing, Reporting, and Use of Data* section below.

- Track and report water temperature, salinity, pH and harmful algal blooms on an annual basis as the adoption of numerical targets are not currently anticipated for these parameters.
- Finalize and adopt PEP water quality targets for pathogens, water clarity (Secchi depth), and chlorophyll-*a* and dissolved oxygen concentrations in time for the 2021 PEP Conference.



Figure 2. Water quality management and reporting zones for the Peconic Estuary.

Monitoring Questions and Data Gaps

In addition to describing current monitoring efforts within the PEP study area, this Water Quality Monitoring Strategy includes recommendations for expanding existing programs or establishing new ones to address gaps and needs, as identified by the TAC (Report 2019b [link](#)). Data gaps were generally focused on whether existing water quality monitoring programs could answer the following monitoring questions:

1. Is coastal acidification in the Peconic Estuary increasing, decreasing or remaining stable?
2. Are phytoplankton biomass levels (as indicated by chlorophyll-*a* concentrations) above, below, or consistent with recommended provisional targets?
3. Is water clarity above, below, or consistent with adopted provisional targets?
4. Are the dissolved oxygen concentrations above, below or consistent with New York State's water quality standards?

5. Are the concentrations of fecal indicator bacteria above, below or consistent with Suffolk County thresholds?
6. Are nutrient concentrations increasing, decreasing or remaining stable?
7. Are nutrient loads delivered to the Peconic Estuary increasing, decreasing or remaining stable?
8. Are the frequency and spatial distribution of harmful algal blooms (HABs) increasing, decreasing, or remaining stable?
9. Are toxins delivered to the Peconic Estuary increasing, decreasing or remaining the same?

On May 29, 2019, the PEP TAC and Monitoring Partners provided input on data needs and gaps for each of the water quality-related actions from the spring 2019 draft CCMP (Report 2019b). The following is a summary of the TAC's input organized around water quality-related Goals and Objectives as identified in the January 2020 CCMP. Please refer to Report 2019b ([link](#)) for additional detail.

On May 4, 2020, the PEP TAC and Monitoring Partners recommended Management Committee approval of the Peconic Estuary Partnership's Water Quality Monitoring Strategy (this document).

Peconic Estuary Monitoring Collaborative

To ensure effective and cost-efficient implementation of the Water Quality Monitoring Strategy, the PEP-Suffolk County Annual Workplan will include an action to Implement the PEP Water Quality Monitoring Strategy. The Peconic Estuary monitoring partners will develop a collaborative monitoring framework, outlining individual partner's responsibilities; and shared responsibilities for decision making on data collection, analysis, interpretation and reporting of the results of the monitoring programs. This framework will establish the Peconic Estuary Monitoring Collaborative. The Monitoring Collaborative will commit to share data and report annually, one tool that could be potentially used is The Long Island Quality of Water Integrated Data System (LIQWIDS). LIQWIDS is a multifaceted system, designed by the USGS, in coordination with the New York State Department of Environmental Conservation (NYSDEC) and the Long Island Regional Planning Council (LIRPC), which provides a custom, map-based user interface for sharing ambient water quality data in a format that allows local stakeholders to visualize their data along with all other available data.

It is recognized that significant technical assistance will be required to support the efforts to be undertaken by the Monitoring Collaborative. The Collaborative will be supported by a Suffolk County water quality analyst beginning in October 2020.

GOAL: RESILIENT COMMUNITIES PREPARED FOR CLIMATE CHANGE

OBJECTIVE C: Help local communities to take meaningful, well-informed action to prepare for and adapt to climate change impacts in the Peconic Estuary

Current Status: The PEP study area currently does not have adequate monitoring in place to track ocean acidification metrics and cannot answer Monitoring Question 1 (coastal acidification trends). Current EPA guidelines recommend monitoring of pCO₂, pH, dissolved inorganic carbon and total alkalinity to track water column acidification processes and changes in the carbonate system. Several water quality monitoring programs are already sampling water temperature, an important indicator of climate change (Table 1).

Next Steps:

By January 2021, the Monitoring Collaborative will initiate work with the New York State Ocean Acidification Task Force to define how to enhance existing monitoring network to include parameters specific to ocean acidification.

By May 2021, the PEP TAC, working with the Monitoring Collaborative, will evaluate the feasibility of including climate change adaptation in water quality models and/or ecosystem models to identify potential areas of impact. USGS has data from long-term water quality grab samples and recent continuous data collection at two sites. Other parameters which are needed to support model development and management decision-making will need to be considered, which may include mid-estuary current velocities.

GOAL: CLEAN WATERS

OBJECTIVE D: Protect areas with clean water from degradation

Current Status: Data collected by the current monitoring programs are capable of addressing Monitoring Questions 2 (chlorophyll-*a* concentration), 3 (water clarity), 4 (dissolved oxygen), 5 (fecal indicators) and 6 (nutrient concentration) for the three estuarine management zones of the Peconic Estuary, but not for all sub-watersheds or embayments within the Peconic Estuary.

Next Steps:

The PEP TAC identified several next steps needed to identify and assess areas with clean water, including the following:

For 2020 annual reporting, use the provisional targets for open water segments.

A number of statistical and methodological issues remain to be addressed prior to finalization of ambient water quality targets (see Report 2019d [link](#)). By Sept 2021, priority statistical issues will be evaluated by the Monitoring Collaborative (supported by the PEP Suffolk County data analyst).

By 2021, the TAC and the Collaborative will evaluate whether the provisional targets (e.g., for Secchi depth and chlorophyll-*a* concentration) are appropriate for all three estuary management zones. If zone-specific targets are necessary, the Monitoring Collaborative will work through the PEP TAC to develop and recommend adoption of these revised targets to the Management Committee by May 2022.

In 2021, the Monitoring Collaborative will work with the PEP TAC to explore the development of a tiered reporting system, summarizing water quality conditions on a broad scale (e.g., for the three proposed estuary segments) and also identifying problem areas in individual sub-watersheds or embayments.

New *Enterococcus* standards are currently in review. Once these standards are in place, the PEP TAC will revise the target to reflect the new standards going forward.

By May 2021, the Monitoring Collaborative will identify feasible and cost-effective methods for monitoring diel variations in dissolved oxygen at multiple locations within the estuary. Deployable continuous monitoring instruments have become more affordable in recent years and may be an option. It may also be possible to use statistical methods (such as regression analyses) to estimate daily minimum dissolved oxygen concentrations based on values observed at the SCDHS stations, which are measured during daylight hours, typically between mid-morning and mid-afternoon. The Collaborative will also evaluate the feasibility of including continuous near-bottom dissolved oxygen measurements.

Pathogen-related parameters were not included among the water quality indicators used by Suffolk County (2019) for the Subwatersheds Wastewater Plan development; some of these waters are classified as impaired by NYDSEC due to closures of shellfish harvesting areas. The Monitoring Collaborative will work with all parties on issues related to shellfish bed closures and pathogen-related TMDLs at the state and federal levels.

By May 2022, the Monitoring Collaborative will examine potential elements of an ‘early warning system’ (e.g., using hydrographic parameters such as salinity, dissolved oxygen, water temperature, pH), which could be used to alert decision-makers and the public to anticipated water quality issues such as fish kills and HABs. The Monitoring Collaborative will define metrics and potential budget requirements for development of an early warning system, for inclusion in a future PEP Annual Workplan.

By 2022, the Monitoring Collaborative will define additional indicators that may need to be tracked and reported to assess progress toward CCMP Objectives, such as the spatial distribution of nuisance macroalgae blooms, suitability of water quality for spawning and development of diadromous fish, and tissue levels of mercury and other potential toxins in river otters and other wildlife.

GOAL: CLEAN WATERS

OBJECTIVE E. Increase understanding of nutrient pollution in groundwater and surface waters, and decrease negative impacts from legacy, current and future nutrient inputs.

OBJECTIVE F: Reduce current and future inputs of toxics, pathogens, and marine debris into groundwater and surface waters, and minimize their impacts

Current Status: Data from the current water quality monitoring programs are capable of addressing Monitoring Question 6 (nutrient concentration) for the surface waters in the three estuarine management zones. Ambient freshwater water quality monitoring programs in some streams and rivers discharging to the Peconic Estuary are capable of partially addressing Monitoring Questions 6 (nutrient concentrations), but not for all. Groundwater monitoring programs are also capable of partially addressing Question 6, but not in all key locations.

Understanding impacts from legacy, current and future nutrient inputs will require estimating nutrient loadings over time, which requires both ambient monitoring data and an estimate of rate and volume of water flow from both surface water and groundwater sources. Existing monitoring programs are capable of partially addressing Monitoring Question 7 (nutrient loading).

Existing water quality monitoring programs conducted and reported by Stony Brook University and The Nature Conservancy are capable of addressing Monitoring Question 8 (tracking and reporting algal blooms) in the Peconic Estuary.

Additional work is needed for freshwater bodies within the watershed. The NYSDEC currently tracks freshwater cyanobacteria HABS in waterbodies throughout the state (<http://www.dec.ny.gov/chemical/83310.html>) and maintains a Suspicious Algae Report Form page at <https://survey123.arcgis.com/share/66337b887ccd465ab7645c0a9c1bc5c0>.

Current monitoring programs are generally not capable of addressing Monitoring Question 9 (toxins delivered to the Peconic Estuary). Current groundwater monitoring programs conducted by Suffolk County and the USGS include the monitoring and analysis of various toxins which include herbicides and pesticides and the degradants of those products in some locations. Suffolk County and the USGS groundwater monitoring programs work collaboratively to monitor and analyze various compounds in groundwater; however, an improved understanding of all of the compounds and locations of monitoring by the Monitoring Collaborative could be helpful in determining additional compounds that should be monitored and expansion of the monitoring network. The NYSDEC, Suffolk County and Cornell Cooperative Extension currently monitor and analyze concentrations in groundwater wells to detect agriculture-based pesticide (the term pesticide includes herbicides, miticides, insecticides, etc.) constituents, in support of implementing BMPs and pesticide monitoring strategies included in the NYSDEC's Long Island Pesticide Pollution Prevention Strategy (<http://ccesuffolk.org/resources/long-island-pesticide-pollution-prevention-strategy>).

Next Steps:

The PEP TAC and monitoring partners identified several hundred ideas and concepts to address water quality monitoring necessary to be capable of supporting water quality-related CCMP Goals in May 2019 (see Report 2019b [link](#) for a complete list). The list below highlights several key elements specifically addressing identified water quality monitoring needed, grouped by topic.

Surface water:

By 2022 the Monitoring Collaborative will determine what additional monitoring is needed to more fully characterize water quality status and trends within embayments of the Peconic Estuary.

Monitoring at the USGS gage on the Peconic River currently includes continuous flow measurements but only quarterly sampling of water quality parameters. By 2021, the Monitoring Collaborative will assess the feasibility and budget needed to increase the frequency of water quality monitoring at this site, which will decrease uncertainty in loading estimates to the Peconic Estuary. The Peconic River is also groundwater-driven, so nutrient loads observed there will have a groundwater component.

By 2022 Annual Workplan, the Monitoring Collaborative will work with NYSDEC's Division of Water and Division of Marine Resources to develop additional monitoring elements which will support 303(d) listings or other regulatory requirements as well as track progress toward PEP CCMP Goals and Objectives. The Priority Waterbodies List (PWL) delineations, available from the state, will be evaluated as a potential basis for segmentation and assigning station locations. Integrating groundwater sub-basins with surface water segments will be assessed as a potential method used to help decide where monitoring stations should be located.

Harmful Algal Blooms:

For HABs, PEP should continue to use the annual maps prepared by Stony Brook University and The Nature Conservancy to track and report blooms in the estuary. Additional work will be needed to develop methods for reporting and tracking cyanobacterial HABs in freshwater bodies within the watershed. Monitoring questions and research needed to characterize HABs in freshwater bodies will be defined by the Monitoring Collaborative by 2022.

By 2022, the Collaborative will evaluate the feasibility of calculating the amount of total chlorophyll *a* measured which is due to harmful algal bloom species.

Groundwater:

The PEP TAC will evaluate how the Solute Transport Model can be used to run scenarios and use the tool to support decision making and make recommendations to the PEP Management Conference by 2021.

By 2022, the Monitoring Collaborative will assess needed elements to monitor the quality and quantity of groundwater more comprehensively and consistently in order to fully estimate nutrient loads to the estuary by establishing a baseline groundwater monitoring network for ecosystem objectives, and resources needed to and sustain it through time. Groundwater plumes can show up in surface water and may contain nutrients and other contaminants (household products, pesticides, etc.). Some emerging contaminants do not yet have standard analytical methods, and their impacts are not yet known. Additional understanding of degradants/breakdown products is also needed. The County has access

to hundreds of groundwater monitoring wells, but resources have not been available to sample them on a regular basis. The Monitoring Collaborative will define priority groundwater monitoring wells by 2022.

By 2022, the Monitoring Collaborative will evaluate how to measure nutrient/toxin concentrations/loads in the hyporheic discharge zone to improve understanding of loads in this ‘hand-off’ zone between the watershed and the estuarine system. This is critical information supporting model calibration and validation and to evaluating in situ loadings from submarine groundwater discharges (SGD) in the estuary. Effort should include detailed analysis of the dynamic nature of the offshore SGD zones to determine suitable long-term monitoring stations. The understanding of the spatial and temporal conditions will produce reliable data for model projection on fate and transport on contaminants in the estuary.

Groundwater wells are currently sampled twice a year at about 50 wells in the Peconic River watershed. By 2022, the Monitoring Collaborative will verify which of the wells are on the flow paths of contaminants to the estuary. The data from these groundwater wells can be coupled with the Solute Transport Model, using these data to support model validation. Through application of the validated Solute Transport Model, design a more comprehensive monitoring program which, coupled with analysis of a suite of nutrients and site-specific groundwater studies, will provide part of the data needed to answer Monitoring Questions 6, 7 and 8.

Flows:

The Monitoring Collaborative will determine whether annual freshwater inflows (‘hydrologic loads’) to the estuary should be an element of tracking and reporting, and perhaps used to ‘normalize’ estimates of annual nutrient loads with respect to annual freshwater inflows, by 2022.

Pathogens and Toxins

In 2021, the Monitoring Collaborative will evaluate information sources, such as the shoreline surveys conducted by NYSDEC’s shellfish monitoring program and microbial source tracking, as means to identify potential pathogen sources.

GOAL: HEALTHY ECOSYSTEM WITH ABUNDANT, DIVERSE WILDLIFE

OBJECTIVE H: Restore and protect key habitats and species diversity in the Peconic Estuary and its watershed (eelgrass habitat and diadromous fish spawning areas).

Current Status: Data from existing water quality monitoring programs are capable of addressing Monitoring Question 3 (water clarity) and temperature to support eelgrass habitat requirements in the open water estuarine segments. Dissolved oxygen and water temperature monitoring is not currently adequate to determine whether targets are being met in areas supporting fish spawning in rivers and streams.

Next Steps:

Groundwater discharge may be a cooling factor in some persistent eelgrass beds. Maps of these areas may help to identify sites where transplanting could be effective. In 2021, the Monitoring Collaborative will develop maps of water temperature in potential seagrass habitat areas, couple with results of the groundwater transport model to assist with identifying future areas for restoration, and map areas where PAR and water temperature could support eelgrass and focus restoration areas there.

Ongoing climate change may also necessitate changes in water clarity targets to support SAV growth. For example, research in a number of geographic areas (e.g., Chesapeake Bay, Denmark, South Korea) indicates that eelgrass requires higher irradiance levels, and thus greater water clarity, as water temperature rises. On the other hand, recent research in Chesapeake Bay and elsewhere suggests that the higher pCO₂ levels associated with ocean acidification may have a ‘fertilizing’ effect on eelgrass and several other SAV species by reducing carbon limitation. At present, the potential long-term impacts on SAV of these and other stressors associated with climate change are difficult to assess. The TAC and Monitoring Collaborative will periodically assess the current water quality targets as additional information becomes available.

Current river and stream monitoring is periodic in nature and only done in a few locations; these data are useful for long term trends but not for understanding more immediate impacts on spawning and nursery life stages. By 2023, the Monitoring Collaborative will develop a monitoring plan and initiate water quality monitoring in key rivers and streams.

Sharing, Reporting, and Use of Data

Monitoring data are shared by the PEP partners conducting the monitoring and can be found on the websites managed by the collecting entity, or upon request from the Peconic Estuary Partnership’s office.

The PEP partners use monitoring data in reports and presentations to provide information to technical and public audiences regarding progress towards CCMP implementation and to describe the State of the Estuary. In December 2019, the PEP TAC recommended using a simple ‘stoplight graphic’ to report on water quality targets in the three major management areas of the Peconic Estuary (Report 2019e [link](#)). An example of these graphics, based on attainment of the adopted chlorophyll-*a* and Secchi disk targets, is shown in Table 2. Growing season median values are shown for both parameters. Definitions of ‘green (meeting target values), yellow (cautionary) and red (failing to meet target values) are provided in Report 2019e [link](#).

Estuary Segment	YY	Median Chla (µg/L)	Median Secchi Depth (ft)	Estuary Segment	YY	Median Chla (µg/L)	Median Secchi Depth (ft)	Estuary Segment	YY	Median Chla (µg/L)	Median Secchi Depth (Fft)
West	1976	22.2	3.5	Central	1976	--	--	East	1976	--	--
West	1977	--	6.0	Central	1977	--	--	East	1977	--	--
West	1978	--	5.3	Central	1978	--	--	East	1978	--	--
West	1979	--	5.0	Central	1979	--	--	East	1979	--	--
West	1980	--	--	Central	1980	--	--	East	1980	--	--
West	1981	--	--	Central	1981	--	--	East	1981	--	--
West	1982	--	--	Central	1982	--	--	East	1982	--	--
West	1983	--	--	Central	1983	--	--	East	1983	--	--
West	1984	--	--	Central	1984	--	--	East	1984	--	--
West	1985	--	2.5	Central	1985	--	--	East	1985	--	--
West	1986	--	4.0	Central	1986	--	5.0	East	1986	--	6.5
West	1987	--	4.0	Central	1987	--	3.5	East	1987	--	5.0
West	1988	12.6	3.5	Central	1988	12.0	4.5	East	1988	7.5	6.0
West	1989	5.0	7.0	Central	1989	4.6	7.0	East	1989	4.5	8.5
West	1990	4.2	5.0	Central	1990	3.5	7.0	East	1990	3.0	8.5
West	1991	6.0	3.5	Central	1991	8.6	3.3	East	1991	5.0	6.0
West	1992	4.0	4.0	Central	1992	3.2	5.5	East	1992	2.5	7.5
West	1993	3.8	4.5	Central	1993	3.0	6.5	East	1993	2.8	7.5
West	1994	3.5	5.5	Central	1994	2.7	7.5	East	1994	2.4	9.0
West	1995	6.9	4.0	Central	1995	4.8	5.5	East	1995	2.9	7.0
West	1996	7.4	5.5	Central	1996	3.9	7.5	East	1996	3.0	10.0
West	1997	7.8	5.5	Central	1997	4.1	7.5	East	1997	3.2	10.0
West	1998	3.8	5.5	Central	1998	2.6	7.5	East	1998	2.1	12.0
West	1999	3.4	5.5	Central	1999	2.2	7.5	East	1999	1.6	11.0
West	2000	3.2	5.0	Central	2000	1.6	7.0	East	2000	1.2	9.0
West	2001	4.1	5.0	Central	2001	2.4	7.0	East	2001	1.9	10.0
West	2002	3.8	5.5	Central	2002	3.1	7.0	East	2002	2.5	8.5
West	2003	4.3	5.5	Central	2003	2.3	11.0	East	2003	2.4	12.0
West	2004	4.4	5.0	Central	2004	2.5	8.0	East	2004	2.8	9.5
West	2005	3.9	5.5	Central	2005	1.9	8.0	East	2005	1.5	11.0
West	2006	4.8	6.0	Central	2006	2.9	10.0	East	2006	2.7	10.0
West	2007	4.7	6.0	Central	2007	3.8	10.0	East	2007	3.3	10.0
West	2008	4.8	5.5	Central	2008	2.9	8.0	East	2008	2.4	10.0
West	2009	4.3	5.0	Central	2009	2.5	8.0	East	2009	2.2	11.0
West	2010	9.0	5.0	Central	2010	4.5	6.5	East	2010	2.8	12.0
West	2011	4.9	5.0	Central	2011	2.8	7.5	East	2011	2.4	10.0
West	2012	3.9	5.0	Central	2012	2.7	6.0	East	2012	2.1	8.0
West	2013	5.1	7.0	Central	2013	3.1	8.0	East	2013	2.4	11.0
West	2014	3.2	6.0	Central	2014	2.3	7.0	East	2014	1.9	9.0
West	2015	2.6	5.5	Central	2015	1.9	7.0	East	2015	1.5	10.0
West	2016	3.6	4.5	Central	2016	2.4	6.0	East	2016	2.2	8.0
West	2017	6.7	4.0	Central	2017	3.3	6.0	East	2017	2.1	8.0
West	2018	5.4	5.0	Central	2018	2.3	6.0	East	2018	2.9	8.0

Table 2. Stoplight graphic summarizing attainment of the proposed Secchi depth and chlorophyll-*a* targets in the three Peconic Estuary reporting zones for the years 1976 – 2018. Data source: SCDHS.

As with the example above, information on frequency of *Enterococcus*-based beach closures can be summarized and tracked. An example of this approach is shown in Table 3, for the years 2010 through 2018. Numbers in the table cells represent the number of *Enterococcus*-related beach closures (due to exceedances of the 104 cfu/100 ml criterion) that occurred in a given year. Years with zero closures are shown as green, those with one closure are shown as yellow, and those with more than one closure are shown as red. In this data set the Founders Landing beach stands out as experiencing a substantially larger number of closures than the other locations sampled.

Beach Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	Subtotals
Alberts Landing Beach	0	0	0	0	0	0	0	0	1	1
Camp Blue Bay Beach	0	0	0	0	0	0	0	0	1	1
Camp Quinipet Beach	0	1	0	0	0	2	1	0	1	5
Clearwater Beach	0	0	0	0	0	0	0	0	1	1
Cornell Cooperative Extension Marine Center Beach	0	0	0	0	0	0	0	0	0	0
Crescent Beach - Shelter Island	0	0	0	0	0	0	0	1	0	1
Culloden Shores Beach	0	0	0	0	0	0	0	0	0	0
Devon Yacht Club Beach	0	0	0	0	0	0	1	0	1	2
East Lake Drive Beach	0	0	0	0	0	0	0	0	0	0
Fifth Street Park Beach	0	0	0	0	0	2	0	2	1	5
Fleets Neck Beach	0	1	0	0	0	0	0	0	0	1
Foster Memorial Beach	0	0	0	0	0	0	0	0	0	0
Founders Landing Beach	2	1	1	1	0	0	1	3	1	10
Goose Creek Beach	1	0	1	0	0	0	0	0	0	2
Havens Beach	2	1	0	0	0	0	0	0	0	3
Maidstone Beach	0	0	0	1	0	0	0	0	0	1
Meschutt Beach	0	0	1	0	0	0	1	0	1	3
Nassau Point Causeway Beach	0	1	0	0	0	0	0	1	1	3
New Suffolk Beach	0	1	0	0	0	0	0	0	0	1
Norman E. Klipp Park Beach	0	0	0	0	1	0	0	1	0	2
Perlman Music Camp Beach	0	0	0	0	0	0	1	0	1	2
Pridwin Hotel Beach	1	1	0	0	0	0	0	0	1	3
Shelter Island Heights Beach Club Beach	0	0	1	0	0	0	0	0	1	2
Silver Sands Motel Beach	0	1	0	1	0	0	0	0	2	4
South Jamesport Beach	1	0	1	0	0	0	0	0	2	4
Southampton Peconic Beach & Tennis Club Beach	0	0	0	1	0	0	0	0	0	1
Veteran's Memorial Park Beach	0	1	0	2	0	0	0	0	1	4
Wades Beach	0	0	0	0	0	0	0	1	0	1

Table 3. Frequencies of *Enterococcus*-related Peconic Estuary beach closures for the years 2010 through 2018. Data source: SCDHS.

To encourage the use of open-science methods throughout the National Estuary Programs, the Tampa Bay Estuary Program has offered to develop an open-science package using the Suffolk County surface water database. This package, using the statistical and graphics program R, is capable of providing almost real-time analyses and graphics (including the ‘stoplight’ graphics shown above). In 2020, interested members of the TAC and other PEP partners will evaluate the use of the Peconic R package to report annual water quality reports.

The PEP partners periodically convene a symposium to summarize status and trends in the Peconic Estuary’s environmental condition and provide the science and technical community an opportunity to share state-of-the-art research with each other and the public. The last State of the Estuary conference, held in September 2015, included participation from scientists, resource managers, PEP partners, Town supervisors, citizens, and students from the area. The conference included a presentation (along with a distribution of the Peconic Estuary Program 2015 Action Plan Executive Summary and Recent Accomplishments and Initiatives of the Peconic Estuary Program) from the PEP Program Director on the status of the Peconic Estuary health and partnerships, and presentations from PEP Mini-grant funded water quality improvement programs and the Riverhead Sewage Treatment Plant, which included a site tour. Presented posters included the Long Island Water Quality Impairments, summer 2015 produced by SUNY Stony Brook University and The Nature Conservancy.

Indicators and Measures

The creation, assessment, and reporting of succinct “indicators” for the health of the estuary (that combine information from multiple projects) provide opportunities to showcase improvements as well as recognize and address shortfalls (e.g., Bortone 2005). The monitoring programs and indicators presented in this document (see Table 1) attempt to gauge the cumulative effects of all of the suggested activities within each CCMP Action. An environmental indicator is only useful when supported by an active monitoring program. Not all of the environmental indicators in this Strategy have ongoing monitoring programs, and steps should be enacted to address these areas.

By reporting on the indicators described above within the *Numeric Water Quality Targets* section, PEP and the Monitoring Collaborative partners will continue the assessment to understand changes occurring in the Peconic Estuary and its watershed. The information created from these indicators will demonstrate progress towards the goals of the CCMP and aid in identification of new issues that become critical to the improvement and protection of the Peconic Estuary.

Conclusion

The activities described within this Water Quality Monitoring Strategy identify the data necessary to assess the effectiveness of CCMP actions and describe water quality status and trends. The environmental indicators used by the PEP are expected to be an effective mechanism for evaluating progress and identifying gaps regarding the achievement of significant improvements to the Peconic Estuary.

Decision-makers and the public will be kept informed about the condition of the Peconic Estuary as analyzed through this monitoring program. Also as previously stated, comprehensive sustained long-term sampling and monitoring using existing programs are essential for the continued success of the PEP. Stable funding and commitment from monitoring entities is necessary to ensure PEP’s CCMP is effectively implemented for the continued improvement of the Peconic Estuary and its watershed.

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