



A Program of the New York State Department of Environmental Conservation

## Hudson-Harbor Educators Work Group

June 16, 2022

### Minutes

Shared Google Folder: <https://drive.google.com/drive/folders/13SSRnA9UtYWNGbBbxGX-o0qyYZKRdIRE?usp=sharing>

#### Attendees:

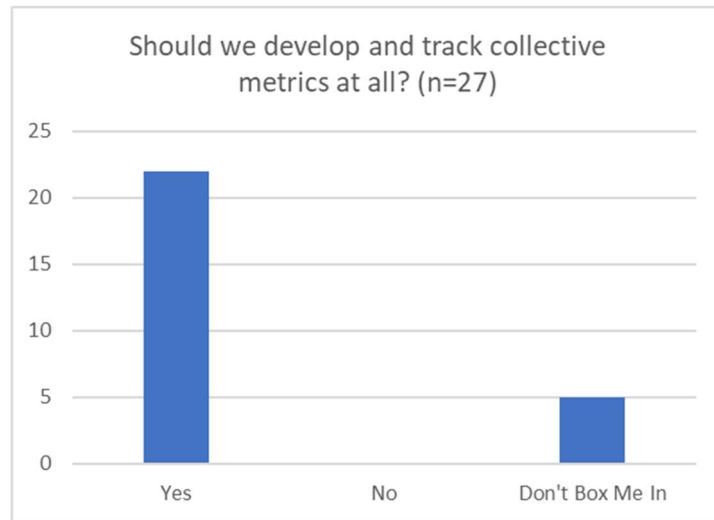
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5. Anna Koskol, HRPK River Project (she/her), [akoskol@hrpt.ny.gov](mailto:akoskol@hrpt.ny.gov)
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15. Kathy Garofalo
16. Kristin Schreiber, Billion Oyster Project, [kschreiber@nyharbor.org](mailto:kschreiber@nyharbor.org)
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18. Louis Kleinman, All Home Services, [louiskleinman@yahoo.com](mailto:louiskleinman@yahoo.com)
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20. Maggie Flanagan, (she/her) South Street Seaport Museum and NYS Marine Education Association
21. Marc Rogoff, Lead Educator, NJDEP [marc.rogoff@dep.nj.gov](mailto:marc.rogoff@dep.nj.gov)
22. Marieke, BPCA
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24. Paul Sieswerda, Gotham Whale Good Morning, [Paul@gothamwhale.org](mailto:Paul@gothamwhale.org)
25. Rosana Da Silva, Hudson River Foundation/NY-NJ Harbor & Estuary Program, [Rosana@hudsonriver.org](mailto:Rosana@hudsonriver.org)
26. Ruthie Gold, Clearwater
27. Shino Tanikawa (she/her) NYC Soil & Water Conservation District, [shino@soilandwater.nyc](mailto:shino@soilandwater.nyc)
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29. Tina Walsh, HRPK River Project (she/her) [twalsh@hrpt.ny.gov](mailto:twalsh@hrpt.ny.gov)
30. Toland Kister (he/him) Hudson River Park, [tkister@hrpt.ny.gov](mailto:tkister@hrpt.ny.gov)
31. Zoe Kim, Hudson River Park (she/her), [zkim@hrpt.ny.gov](mailto:zkim@hrpt.ny.gov)

Tina Walsh provided an overview of the agenda and welcomed Ann Fraioli who has rejoined the Work Group's leadership. Ann provided an overview of the connection between HEP's Management Committee and the series of documents that establish HEP's Comprehensive Conservation Management Plan (CCMP).

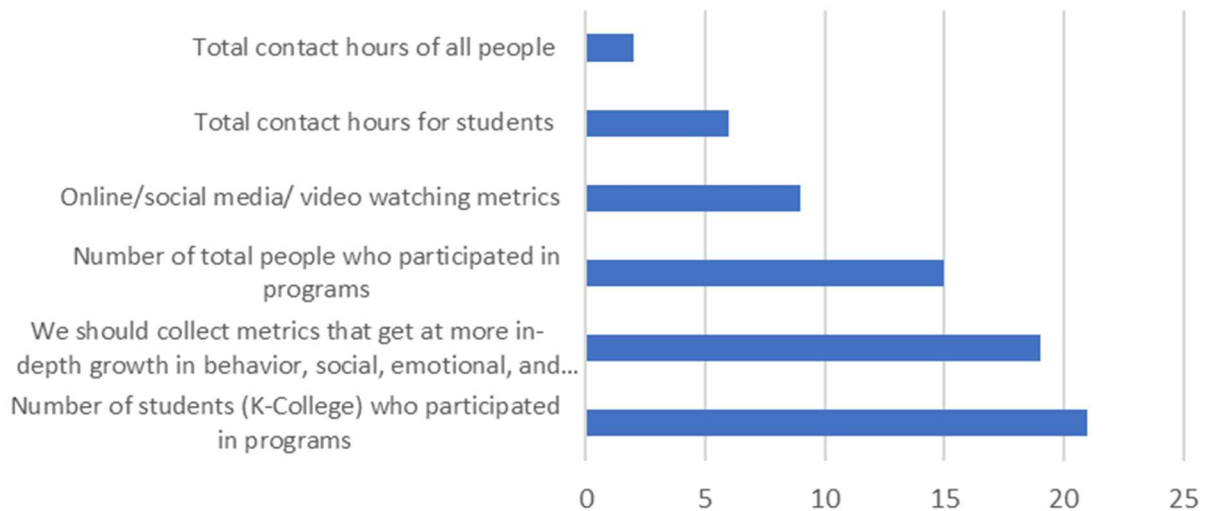
### Collective Impacts and Indicators

Tina Walsh reflected on the group's [Collective Impact](#) discussions around the challenges and barriers. Last year, the work group submitted a proposal to the Pisces Foundation that was not awarded, but during a proposal review call the Foundation had indicated that they did not believe we had a large network or reach. Tina shared she believed that if we did have some of these metrics to share that it would have made our proposal more attractive and would aid the group in advancing collective goals.

Chris Bowser picked up the conversation on our goal today to outline the metrics we want to collect so that we may be in a better position to advance shared goals/projects that would strengthen our joint proposals moving forward. A poll was launched, and the following results were shared:



## Annual Metrics Woth Tracking & Willing to Track (n=27)



## Should we build funding support for a professional researcher to look at these more in-depth? (n=27)



Chris opened the discussion. Christina Tobitsch indicated that things that are worth tracking are not always the same as willing/easy to track. Eli Caref agreed. Amelia Zaino shared that she would love to track future career choices of trip participants but that is a heavy ask. Going deeper, Amelia asked if we are asking whether students stay within the environmental career? This may be a researcher request for future tracking, though unclear as to how we would do that. Paul Sieswerda asked if there is a big issue or something that brings us together, to which Paul suggested whales. It has been clear to him and his team that whales and the expansion of marine animals coming back is due to the Hudson River. Environmental and ecological indicators are important, but Chris noted that for the purpose of this group we are focusing our metrics on education, participation, and social indicators. Rosana Da Silva added that

HEP is interested in those environmental and ecological indicators and those do drive HEP's CCMP, however, to Chris's point we want to improve upon the educational and social indicators for this group. Christina Tobitsch shared that they have thought about indicators, and the deep dive information is what they want but realize that it is the most difficult and time consuming. If possible, BBP would offload it to someone else to help them with this metric and would require funding to advance. Isa Del Bello added the behavioral change piece for them really has been the white whale of data collection at the park. Maggie Flanagan added it is not just the researcher where money is needed. Funds for the staff time to distribute, remind, and collate, and even an honorarium for the participants to encourage them to fill out evals or surveys. Audrey Van Genechten shared their luck conducting a follow-up survey, small return rate, but it adds up over time. And clarified that this is a survey that self-reports behavior changes based on initial interaction with staff about risk reductions.

Eli Caref agreed that while quantitative data is difficult, it is possible. She expressed collecting results from a survey sent to the teacher before the students interact with the field trip and then the same survey taken at the end of the field trip does provide insight to behavioral change. A one-time field trip may be more difficult, but if you do have a longer program, it is possible since you are creating connections with those students. Time, money, and follow through is key. Christina Tobitsch added the teacher evaluations and our own educator self-reflections from each class is another piece of tracking/data collection in addition to just numbers/hours. A brief discussion on IRB was held indicating that if no names or personal information is collected, IRB is not needed, but to track pre-post, some sort of ID numbering or something to identify that it is the same person is necessary. Laurel Zaima suggested creating usernames that are unlinked to student's identities is one way to get around IRBs. Luis Gonzalez shared at City Parks Foundation all their education teams have Pre and Post Test Surveys. Some items in the survey are attitudinal but most are measuring learning outcomes. They have used the Likert scale, but recently moved to implementing the surveys digitally to avoid manual data entry after collecting 1500 pre and 1500 post surveys. Audrey Van Genechten suggested the use of percentages to avoid tracking one for one answer on a pre and post... 10% were interested in \_\_\_ before the program, 45% were interested after.

Akilah Lewis shared that she sailed on the clearwater when she was 12 years old (Young Women at the Helm) and was called in 2019(?) for a follow up survey. Laurel Zaima added splitting up - students vs. teachers vs. public - to have different brackets. Even past interns who you have relationships with, once they go off to college, they lose contact with you and then there is the IRB challenge. Also consider connections with teachers to do a follow up survey two months after. Ann Fraioli suggested starting with easier numbers - what is our short term plan? Christine Petro agreed that starting to differentiate is important and there will be different outcomes expanded depending on the program model. Shino Tanikawa agreed, but also said that we need long term goals. Behavior change is important and worth thinking about. Another angle to think about this is that teachers have indicated that they became teachers because of the environmental-thon. We should contract with a researcher to interview those already in the environmental science field and education to see if we can pull a pattern of teachers that went into science that can inform our programs. Kristin Schreiber agreed with Shino's approach of tracking backwards. She asked if the question is "did this student pursue a science career or science major?" and if the answer is "no," does it mean that our programs were unsuccessful? Eli Caref cautioned that focusing

on a career really shoehorns in a direction that is not fair. This is NOT a viable career for so many people - we do not pay enough, we require schooling, etc. We need to be open to environmentally aware community members in general, not just scientists. Zoe Kim agreed. Ruthie Gold indicated an outside professional may be useful as there are various approaches. Louis Kleinman added that there is value in having common tracking info among all participants, (in addition to info specific to any one organization) and to compare the general tracking over a period of years to be able to look for trends in attitudes.

Chris Bowser refocused the conversation to a question Louis posed which was “would you be in favor of having your tracking publicly available”? What we do not want to do is collect metrics to compare against one another, but it does put into question how we want to collect those metrics and how the pooling takes place. Chris asked if we try to look at 2021 - number of students served and number of total served - as these are more straightforward to go through the exercise of collecting metrics before we get in depth. We can also reach out to researchers to start thinking about how we get to the next level. Louis asked why collect metrics - are you trying to inform how to do better or are you trying to compare trends in changing attitudes? Chris indicated that everyone has different answers to that, but when we thought about this it is the connections between funding opportunities and engaging various areas in the education field. Maggie Flanagan indicated for a simple metric, how about program attendees? For one time programs that's attendance, and for multiple touch-point programs, count each session as an individual program so the same participant counts multiple times for receiving multiple sessions. Marley Kern and Christina Tobitsch added that they would be interested to see collectively the difference in our impact/numbers between 2019 and 2021 (pre and post COVID). Chris asked if anyone is interested in being part of a small group to talk through these collective impacts, to send Chris a message. Ann Fraioli indicated her interest.

**Action:** Hudson-Harbor Educators will begin to collect metrics through a small subcommittee. Those interested in shaping this effort and joining the subcommittee, please contact Chris at [chris.bowser@dec.ny.gov](mailto:chris.bowser@dec.ny.gov).

## Sharing Evaluation Tools

Rosana Da Silva opened the next topic of discussion, evaluations - critical for how we may adapt our programs down to our lessons. This part of the session will highlight work that Kristin Schreiber and Eli Caref work through BOP followed by an open discussion amongst partners for peer to peer learning.

### **BOP's Curriculum Pilot Programs, Eli Caref & Kristin Schreiber**

Eli Caref and Kristin Schreiber shared that BOP has developed and evaluated a curriculum with a group of teachers. Stipends were provided, \$55/hour - just above the DOE per-session rate, for each teacher who participated in the two cohorts. The first cohort evaluated 20 lessons and the BOP team learned that teachers needed more time to get through the curriculum but were expected to teach all 20 lessons. Comments were made by teachers for each lesson in an essay format. The second cohort was a smaller group of teachers but led to richer conversations and more peer-to-peer engagement. During meetings, rather than a presentation where teachers agreed (first cohort), this group was able to troubleshoot

together and present on what they did. After both pilot sessions ended, BOP incorporated the recommended changes. Challenges included receiving invoices from the teachers to pay for their time. Benefits included receiving feedback on the lessons from a classroom, improved the overall lessons, how they would be taught, and improved on curriculum flow. Curriculum will go live soon and will be made available here: <https://bopuiprod.azurewebsites.net/education/curriculum-units>.

Rosana Da Silva opened the discussion for all to ask questions or share their own experiences. Chris Bowser shared that they have hired teachers to review curriculum and went through various models. From large groups to smaller groups but he finds that there are always a few teachers who will get into the finer details that you want and tend to go to. Toland Kister shared that they have been focused on basic content learning for students, pre and post questions to get a baseline (type of water in the estuary, what is plankton, etc.) of what students know and get out of the program. They are working on modifying surveys to get student attitudes on science and future careers in science. The surveys are short for students and are considering how to get feedback from teachers. Audrey Van Genechten shared that they had worked with Cary Institute on a similar model to pay a group of teachers that were interested in developing lesson plans for their students. We had MS and HS lessons, the MS lesson plans were used in HS and the HS design lessons ended up in AP classes or college. Still popular, but the teacher workshops were useful to get feedback and that led to the development of the MS lessons. Plug and play seemed to work best. Laurel Zaima shared in a much less formal way; they have rolled out curriculum that they have written into classrooms that they frequently work with. The teacher primarily observed and took notes on ways to improve and shared that feedback at the end of the lesson.

Christina Tobitsch expressed difficulty in receiving teacher feedback on our pre and post lesson plans. Their lessons are designed for varying ages and are unable to get a few people to test/review those lessons nor does it seem worth it to pay one lesson per teacher. Toland added that they send post-visit surveys to teachers via their booking platform as they have more downloadable lessons, they are asking teachers if they are using materials. One general recommendation is talk to the teacher at the end of the field visit asking for feedback usually helps to remind them. Eli Caref shared that at CURB, they had these little forms that after each field trip to get direct feedback and self-evaluate the program. Christina agreed, and that this has helped, but they struggle to get feedback from teachers who are using their lessons regardless of the direct engagement.

Ann Fraioli asked if anyone observed teachers use activities you have created in the classroom? Andy Snyder shared his team started asking is this your first time doing BLANK (ex. fishing, bird walk, pitching a tent) because they are interested in providing first-time outdoor rec experiences. Chris Bowser indicated they are asking this question. Sometimes that happens because they have an educator in the classroom facilitating that lesson plan used, and sometimes its teachers using lesson plans without their facilitation. Hard to have generalized observations, but he frequently sees teachers using lesson plans with students older than they had written the plans for. Part of that is a bias on our part to write lessons like every student and teacher is dedicated to the leading edge of science for their grade range. The best lessons they have done have had a basic framework with a few optional advanced pieces to add or not.

Anna Koskol shared that for teacher feedback they have used a "post-visit" JotForm that is sent out automatically after their program. They ask questions like how effective were our educators in.... or how would you rate the quality of our program/educators, what resources did you use/were useful? They

then assess results each week. Chris Bowser added when teachers register for Day in the Life, they frequently have questions about what tools they use (if any) as pre- or post-classes around the Day in the Life event. Ruthie Gold added having more multiple choice/Likert scale questions as opposed to free response often feels like a lower lift for teachers, too. And then asking if they would be willing for us to reach out helps them be able to decide how much time they are able to commit to feedback, too.

## **BOP Market Analysis Survey**

Ann Fraioli shared that BOP will be embarking on a market analysis and contracted the founder of Harbor School, Nate, to work on best practices to engage informal educators with formal educators. Coming this fall, members of this work group may be getting a call from Nate with an invitation to participate in an interview. The results from this research will be shared with the work group later. Tina Walsh added that she is excited for the results and great that BOP can invest in this. Chris Bowser added that the project sounds impressive, and he would love to hear more.

## **Partner Updates**

- Christina Delfico shared that 6/20-6/26 is Pollinator Week and the waterways are great flyways for Monarch butterflies and others!
- Maggie Flanagan shared that the National Marine Education Conference will be held in Long Island - National Marine Education Conference at Hofstra - afternoon sessions, fun activities, virtual option - July 9-13, <https://www.marine-ed.org/conference/2022>. Includes Student Conference July 11, Digital Postcard - <https://1drv.ms/u/s!Am7hbUsobFStxb52apdHtA0dJBa?e=cF5BBm>
- Ann Fraioli shared BOP has a number of written resources and will be hosting a one hour webinar tomorrow - Get Involved with Billion Oyster Project: Intro Session for Educators - <https://www.eventbrite.com/e/get-involved-with-billion-oyster-project-intro-session-for-educators-tickets-244633855447?aff=ebdsoporgprofile>.
- Chris Bowser shared on October 13th the 20th Anniversary of the Day in the Life! To register for Day in the Life of the Hudson and Harbor 2022 please visit: [https://docs.google.com/forms/d/e/1FAIpQLScZsuplBjJaoUndIVlcp\\_WSExlS-NLSNEdiOnPGIE-7IRpniQg/viewform](https://docs.google.com/forms/d/e/1FAIpQLScZsuplBjJaoUndIVlcp_WSExlS-NLSNEdiOnPGIE-7IRpniQg/viewform)
- Rosana Da Silva reminded everyone that City Water Day is happening Saturday, July 16th! <https://www.hudsonriver.org/article/city-of-water-day-2022>. Be sure to sign up to host an In Your Neighborhood event and join hundreds of organizations in all five boroughs, Westchester and Rockland County, and New Jersey that have joined to host free safe or virtual community programs on and about our local waterfronts.
- Shino Tanikawa shared that the Urban Soils Institute is offering a free soil testing workshop on Saturday, June 18th on Governors Island! <https://urbansoils.org/new-events/free-soil-testing-day-at-governors-island-may-eaf4n>.
- Akilah Lewis shared New York City Department of Environmental Protection (DEP) is excited to announce the launch of our new WAIT...App. Wait... is a voluntary program that notifies participants when to use less water in their homes during heavy rain to help protect our waterways. To download to your Android or to your IOS, visit the App Store on your phone.

<https://www1.nyc.gov/site/dep/whats-new/wait.page>. Their next professional development opportunity in the watershed will happen in September, aimed at informal educators. Additional activity suggestions and resources that complement the WAIT initiative can be found in DEP's Understanding NYC's Water Story: A Curriculum Guide for the Classroom <https://www1.nyc.gov/assets/dep/downloads/pdf/environment/education/nyc-dep-education-curriculum-guide.pdf> (see Unit 4, Lesson 4 on page 70). Please contact [educationoffice@dep.nyc.gov](mailto:educationoffice@dep.nyc.gov) with any questions.

- Audrey Van Genechten shared If anyone needs NYSDOH fish advisory materials for the summer you can order them here: <https://www.surveymonkey.com/r/NYSfishorder>. They now have coloring books available in English, Spanish, and Simplified Chinese.
- Paul Sieswerda shared that Merryl Kafka will be connecting in the future with the group. Gotham Whale is developing a "teacher training"/shared experience program onboard the American Princess.
- Tina Walsh shared that the Wet lab is open! If you are interested in a tour or a special program, please reach out to the HRP team! Submerge will be going back to in person on Friday October 14 and Saturday October 15!

Tina Walsh closed the meeting and reminded the Work Group that the NYSDEC team has graciously agreed to host a fishing clinic on August 17th. Details regarding the fishing clinic and how to register will via email, so please be on the lookout for that. Our next meeting will be held on September 22nd and for the time being, it will be a zoom meeting. Harbor Educators are recommended to utilize the shared google folder to post open opportunities and upcoming events. Also feel free to use the contact list to share information with the group: [https://drive.google.com/drive/folders/1k620pvmqsWJiNRDC3QONNk79cVJIw5\\_P?usp=sharing](https://drive.google.com/drive/folders/1k620pvmqsWJiNRDC3QONNk79cVJIw5_P?usp=sharing)