Hudson-Harbor Educators Work Group
March 24, 2022
Minutes

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

Attendees:

1. Agata Poniatowski, Billion Oyster Project, aponiatowski@nyharbor.org
2. Akilah Lewis, NYCDEP Environmental Educator, Alewis@dep.nyc.gov
3. Allison Fitzgerald (she/her), New Jersey City University
4. Andy Snyder, he/him, NYSDEC, andrew.snyder@dec.ny.gov
5. Ann Fraioli, she/her, Billion Oyster Project
6. Anna Koskol, HRPK River Project (she/her), akoskol@hrpt.ny.gov
7. Annabel Posimato (she/her), NYS Parks, Annabel.posimato@parks.ny.gov
8. Anushka Anderson
9. Beth Behnken
10. Bibi Calderaro, The Graduate Center CUNY, PhD student, artist and educator, bibicalder@gmail.com
11. Chris Bowser, NYSDEC Hudson River, chris.bowser@dec.ny.gov
12. Ciara Scully, Shirley Chisholm State Park, Ciara.scully@parks.ny.gov
13. Eli Caref (she/her), Billion Oyster Project (!), ecaref@nyharbor.org
14. Emily Edmonds-Langham, Teatown Lake Reservation, eedmonds@teatown.org
15. Emma McCauley, she/her Jamaica Bay-Rockaway Parks Conservancy
16. Gely, DEC
17. Haley McClanahan, Brooklyn Bridge Park Conservancy, hmcclanahan@brooklynbridgepark.org
18. Henry Freundlich, E.A NYSDEC Fisheries henry.freundlich@dec.ny.gov
19. Isa Del Bello
20. Jake Madelone, Waterfront Alliance, jmadelone@waterfrontalliance.org
21. Jenna Otero (she/they), NY State Parks
22. Kathy Garofalo
23. Kristin Schreiber, Billion Oyster Project, kschreiber@nyharbor.org
24. Laurel Zaima, LDEO
25. Lisa Scheppke, American Littoral Society lisa@littoralsociety.org
26. Louis Kleinman (formerly Waterfront Alliance) All Home Services, louiskleinman@yahoo.com
27. Luis Gonzalez - City Parks Foundation lgonzalez@cityparksfoundation.org
28. Maggie Flanagan, she/her, Guardians of Flushing Bay
29. Marc Rogoff, Lead Educator, NJDEP marc.rogoff@dep.nj.gov
30. Margie Turrin, LDEO mkt@ldeo.columbia.edu
31. Marley Kern (she/her) Brooklyn Bridge Park, mkern@bbpc.net
32. MaryLynne Malone, Orange County Water Authority, ocwaeducators@gmail.com
33. Matt Mahoney (he/him) from Resilience Paddle Sports in Hoboken NJ, mattwmahoney@gmail.com
34. Melissa Cohen, NYSDEC Fisheries
35. Rosana Da Silva, Hudson River Foundation/NY-NJ Harbor & Estuary Program, Rosana@hudsonriver.org
36. Sarah Archbald, Orange County Water Authority Conservation Education, sarchelene@gmail.com

37. Shino Tanikawa, she/her, NYC Soil & Water Conservation District, shino@soilandwater.nyc
38. Tess Wenstrup (she, her), Newtown Creek Alliance, tess@newtowncreekaliiance.org
39. Tina Walsh, HRPK River Project (she/her) twalsh@hrpt.ny.gov
40. Toland Kister (he/him) HRPT, tkister@hrpt.ny.gov
41. Zoe Kim, HRPK River Project (she/her), zkim@hrpt.ny.gov

Peer to Peer Resource Sharing

CSO Oh No! By MaryLynne Malone

A google site created to follow a water droplet through the water cycle and sewer infrastructure. Student/Teacher makes a copy of the activity sheet (found here, but also found under the teacher resource tab of the site). The student randomly selects one of the droplets to copy and paste the images/story that you end up on in the activity sheet. At the end, the student is left with an activity sheet of where their water droplet travels and will notice the human impact on the water cycle. It is a beta site and meant for 5th grade and up.

Kristin Schreiber noted that she liked that it is all housed online and the entire activity can be done without printing resources (or if they wanted to print, they could). Akilah Lewis asked how long does the lesson take with students? MaryLynne indicated it was designed for a period length. Shino Tanikawa suggested a supplement to the lesson could include the Sewer-In-A-Suitcase (http://welcometocup.org/Projects/Workshops/SewerInASuitcase). Toland Kister, Eli Caref, Chris Bowser thought the lesson was great. Chris added the topic is really important but sometimes tough to get across. For more resources by the Ocean County Water Authority Conservation Education team, please visit: https://sites.google.com/view/ocwa-conservation-education/home.

Newtown Creek StoryMaps by Tess Wenstrup

Adapted from Gowanus Canal Conservancy's curriculum, Newtown Creek Alliance has a number of free and downloadable STEM-based lessons which include resources for teachers and educators alike. When the pandemic hit, NCA did not have resources readily available for online learning and found that the teacher resources that were available had a lot of information to go through. Instead, NCA adapted the in-person resources into storymaps to be a more interactive way to learn the material. Each storymap can be found under exploring newtown creek tab on the main website, though Tess is questioning whether this is the right place to put it in. They include videos and photos from the creek, along with links to other sites for materials.

Akilah Lewis shared that she thought the pictures and videos were beautiful. Emma McCauley, Allison Fitzgerald, Bibi Calderaro, Emily Edmonds-Langham agreed. Kristin Schreiber liked how there are QR codes embedded on the storymaps for people to easily access data. Eli Caref shared open sewer atlas maps are the best. Maggie Flanagan asked what was the subscription needed for GIS? Tess indicated storymaps are all through esri ArcGIS and is a subscription you have to renew each year and if you miss it, all your storymaps get deleted. There is also a learning curb to use the tool. Louis Kleinman wondered if the material would be welcomed at the Newtown Creek CAG for a presentation. Although not from an educators' perspective, it would be great for the CAG as to the history of the Creek. It would be a great

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relief from the essentially dry and nerdy information that the CAG deals with regularly. Chris Bowser indicated his interest in the little stories of how curriculum works when used on the student-scale. Chris asked if Tess had any smaller stories or surprises on how this worked well with students, or challenges that you had not already anticipated? Tess indicated that these were just published a few months ago, so while they were sent to teachers, they haven't been able to get feedback from teachers. Next steps would be a survey, but they do not have much experience in surveying teachers. Any suggestions on getting feedback from teachers and schools would be very helpful.

Eli Caref suggested one way she has gotten feedback in the past is by including a bit of money for focus groups for teachers in grant applications, so that you can actually pay them for their time for reviewing materials/give us answers that may be more time consuming. In some cases, stipends for $100 for each teacher was given in a form of gift card. Kristen Schreiber shared that through an NSF grant, BOP has a group of teachers that meet every two weeks to collect feedback on storymaps they have been working on. Teachers get paid $55 per hour for up to 22 hours of Work. Ann Fraioli noted that $55 per hour for a session is the NYC rate per session. Shino Tanikawa indicated you can look up the per session rates here. Maggie Flanagan added it's so helpful to have the teachers' feedback digitally, but she also finds that if you have an in person program, putting a questionnaire in the teachers hands while you run the conclusion with the group is very reliable.

Becoming an Ecological Engineer: Research Waterfront Infrastructure by Jake Madelone

Using google maps, students create a neighborhood water budget to make assessments on how much pervious and impervious surfaces exist. Students prepare a simple outline making a grid and use a colored pencil to indicate pervious and impervious areas. Jake asked the group for feedback on how to make this lesson more accessible for younger students. Shino Tanikawa suggested starting with demonstrating what permeable and impermeable surfaces are. Eli Caref added if you're in person, can you show the difference when water hits something like a sponge versus a flat plastic surface? This would help smaller children understand the differences. Margie Turin added that for younger students, smaller grid lines work better and have kids color the blocks between gray and green. Percentages are hard for younger kids, but ratios are a bit easier. Maggie Flanagan suggested that for younger students, instead of an area, try just the block of the school. Kristin Schreiber suggested maybe having the map already printed and having colored squares cut out from construction paper. Have students decide if each grid is mostly permeable or mostly impermeable, then have them place the appropriate color square on top of the whole grid square. Akilah Lewis added or possibly give students paper with blocks already printed on them.

Emily Edmonds-Langham noted using stickers with younger students, so you could do gray and blue. Have then students count the stickers — a little easier to break down. Shino added that birds eye view maps can be difficult for younger students to comprehend. Consider using a photograph with grid lines may be easier. Allison Fitzgerald agreed with Shino. She has a 2nd grader and she would not understand this. Could you show the map, but then translate it into a bunch of geometric squares and make it more simplified? So they see that it's really just squares and trees? Jake added that he had moved it to just the school view rather than a few blocks, but does think that prep sessions would be helpful. Akilah Lewis shared two videos that may be helpful for students:

Maggie added that if there's more time available, students might go out exploring the site first to make it more understandable. Emma McCauley shared that maybe you could have students draw a map of their neighborhood, then help them translate it to the map. Google maps are not as intuitive as we'd think, but overall great activity!

DEC Fisheries Lessons: Form and Function and GoFish! By Henry Freundlich

Henry Freundlich shared that DEC's Fisheries has been working to adapt online lessons in response to COVID but also to help increase knowledge of fish and aquatic resources for everyone in the state. The lessons shared by Henry would typically be done in person, but adapted to online for 3rd-5th graders and they usually take a class period. One of the first lessons, the Lemon Fish Anatomy, lets kids draw a lemon, which is an easier way for students to draw, so that there is plenty of space to add the different body parts. Each body part is discussed about how they have been adapted for survival and their connections to NYS fish species. GoFish is a lesson where students group fish together and think like scientists to help identify them. CYOA,Catch YourOwn Adventure, is where students are taken on a virtual fishing trip. They learn about the rules, the types of hooks to use. While it is not the same as being in person, it is a nice way to simulate that experience. Henry and the team designed the fishing experience in PowerPoint, and while they haven't been able to share the powerpoint they are willing to share some of their lessons learned when creating a your own adventure style game.

Akilah Lewis shared she missed fishing with DEC region 2 at the Harlem Meer. Backyard Bass was her favorite non-water fishing activity. So cool to see the virtual adaptations to these lessons. MaryLynne Malone, Margie Turrin, Eli Caref, Toland Kister, Shino Tanikawa, Zoe Kim, Luis Gonzalez, Bibi Calderaro, and Kathy Garofalo all expressed that these lessons were great and loved the virtual fishing day adaptation. Akilah asked if each student needs their own device? Henry indicated that usually it is done through a smartboard, but if it is done virtually, they usually ask for a majority vote to advance. Chris Bowser asked if there were any surprises or stories with students in what has worked well or has not worked well? Henry indicated that the virtual platform is already challenging. Depending on what platform, google meets, webex, the audio seems to be an issue. At that point they ask students for a show of hands. Even though virtual fishing is less suitable, the kids do get really into it. Ciara Scully shared she really liked how the lessons have been adapted virtually.

Fishing Regulations by Andy Snyder

Andy Snyder shared a game that in person was usually done as tag, but in transitioning it to a virtual platform he has had students work individually using a worksheet. Andy demoed how the virtual game was created and indicated that the game is intended for 3rd to 5th graders. Using the worksheet, a dice and a pencil, students go through five rounds. Students roll the dice and tally to match each fish (dice numbers are marked on each fish). Each round has a limit for rolling the dice and discuss the regulations. Chris Bowser asked what the challenges are? Andy shared that what he found was that kids start to roll the dice like they would in a game, but then they want to catch more fish so they just drop the dice and

the number increases. There has also been some confusion with the tallying, students for some reason want to do multiplication and not sure why. The report out also becomes an issue with students wanting to outdo the other. One way to address that has been limiting time for each round. Shino Tanikawa indicated this would be a fascinating study on human behavior. Emma McCauley asked if it would be possible to not reveal the round names until after they finish rolling? Maybe there would be a little less anticipation. Andy agreed. Luis Gonzalez thought this was a great game.

Toland Kister shared he thought it could be really cool to extend this to a population of fish. For example, each student is an individual fisherperson harvesting from the same area/species to get at why restrictions like this are imposed. Margie Turin asked what the students seem to take away from the activity in terms of fishing management approaches? Andy indicated that it seems to vary, they sometimes understand the rules for fish protection, but some that point is lost. When it is done as a tag game, students usually understand the regulations more. Akilah Lewis recommended perhaps trying the activity as a whole class or in groups to cut down on rule breaking. MaryLynne Malone asked if Andy has tried different formats or changing from a dice to a colored dice to avoid the multiplication. In addition, there are widgets that will roll a die randomly. Andy shared he has tried other formats but has not tried a colored dice but thought that was a good idea. Akilah Lewis asked if Andy had tried frog crossing? Andy shared that he is hopeful to get back in person and play the tag game, but it is a good idea. Akilah suggested the tally sheets could be in groups. Andy indicated that they have tried displaying their own data, but students really enjoy the dice. Beth Behnken suggested adding a table which could help students visualize the trends and would help them remember to keep count. Toland added he appreciates the dice element, and thinks the chance element is super engaging for students and still ties in to the luck/chance element of fishing in general. Also, with the size limit restrictions, this could be a great way to talk about bycatch. Chris Bowser shared he is so impressed by all of the "higher concepts" of these lessons...CSOs, city planning, fishing regulations...I need these lessons and games for his own personal knowledge gains! Andy also noted that they use the term "angler" to describe someone who is fishing when leading this lesson.

DEIJ Subcommittee Update: Safe Space Commitment

Rosana Da Silva shared an update from the DEIJ Subcommittee regarding the launch of the Safe Space Commitment. Rosana previewed the webpage and each of the links found on the page, including the changes that were made after the November launch. Margie Turin shared that she really appreciated that the subcommittee added a new tier to accommodate the agencies and organizations that would not be able to sign on. Eli Caref shared that in the last meeting, Liz Balladares, Rosana, and herself worked on creating a mini training to give everyone tools in how to call in, take critique and apologize. If it is an interest to the group, we would be happy to share this at the next meeting.

Environmental Monitoring Plan Update

Rosana Da Silva outlined the process for updating our environmental monitoring plan and estuary indicators. A number of indicators were adopted from 2018 that preceded the last CCMP from 1996. This

update is an opportunity to review the indicator list and determine whether or not these indicators are still critical to answering estuarine health and that monitoring programs are collecting data on the indicator. Each indicator is organized across HEP's five goals and an additional list of suggested indicators are proposed for feedback. Rosana encouraged members to think about the collective impact as potential indicators as well as others that may be used by educators. Marley and Christina from Brooklyn Bridge Park asked how do organizations get on the list for having data. Rosana explained that through feedback on indicators is a great time to let HEP know what indicators you are collecting for. At a later date, we will be reaching out to you to get more information (or metadata) about your monitoring program to populate the environmental monitoring map. Margie Turn asked if the metadata is a way to add some type of QAPP of sorts or are their other tiers of data? Rosana noted that it is within the metadata that we would indicate whether or not a QAPP or some type of standard protocol is put in place. That information would be displayed on the map for the end user to decide whether or not to access the data.

> **Action:** Committee members are encouraged to provide comments on the shared word document to Rosana (rosana@hudsonriver.org) by April 15th.

Partner Updates

● April 13th NYCDEP will be hosting a professional learning in-person opportunity with the Queens Botanical Garden (QBG) from 4:30-6:30PM. For teachers, this will include a guided tour of the garden, including the farm and composting project. Learn about QBG's sustainable practices and innovative design features, which have earned the Visitor & Administration Building the Leadership in Energy and Environmental Design (LEED®) Platinum certification. Explore how composting and producing food work together to reduce waste in NYC, while participating in a hands-on activity about composting. NYS teachers are eligible to earn CTLE hours for participating. To register for the event please visit: https://outreached.wufoo.com/forms/w15l0x510izg1e5/

● June 3rd It's My Estuary Day at Coney Island Creek in Kaiser Park will be a day of service, learning and celebration. (Rain date June 4th.) The free event will include underwater robotics, oyster monitoring, diving demonstrations, water chemistry techniques, seining, microscope viewing of plankton, displays by environmental organizations, host talks, coastal clean up, lunch and networking.

● June 10th BOP will be hosting their Annual Student Symposium. BOP is looking for Guest Reviewers to provide thoughtful, substantive, and encouraging feedback to students about their work. In addition, Guest Reviewers will nominate projects to be celebrated and to articulate what makes those projects exemplary. If you are interested in being a guest review, please complete this form: https://forms.gle/Z3jZZZ2PF9Cun3PL9

● June 11st is the World Fish Migration Day: Lower Hudson and Harbor Fish Count! The lower Hudson and Harbor are celebrating WFMD through a family friendly Fish Count at various locations around New York. Each site is hosted by local environmental groups that will guide the public through fish collection via rod and reel, traps, or seine nets. Data will be collected and shared back. To participate email Margie Turin or Laurel Zaima at mkt@ldeo.columbia.edu.

- [July 9-13th the NMEA 2022 Charting the Course with Perseverance Conference](#) will be taking place at Hofstra University in Hempstead, Long Island. The conference will kick off with the Sea Grant Educators meeting on Friday, July 8 and then kick-off the on July 9 event that evening for everyone, including field trips and remote sessions.
- October 13th will be [a Day in the Life of the Hudson and Harbor](#). This will be the 20th anniversary of a Day in the Life. Chris Bowser asked the group how we can best celebrate the event and what are some ways that we would want to tell the world or constituents about this event? Laurel Zaima added that a Day in the Life of the Hudson and Harbor engages schools from the Harbor all the way to the dam at Troy to learn about the Hudson on a very place-based field day! From elementary to high school, the data is collected and added into a database for teachers to use in the classroom. Eli Caref suggested in leading up to the celebration, we could be celebrating the rockstars that have been involved, spotlighting individuals, teachers and schools that have long been participating but also newly participated. Ciara Scully suggested adding art from all up and down the Hudson, and how students want to present their respective parts. Kathy Garofalo suggested a costume party with fish hats of catches found. Shino Tanikawa suggested some kind of infographics showing 20-year trends in the data (including participation). Akilah Lewis suggested candy fish goodie bags. Maggie Flanagan suggested doubling the use of the celebration, when we are working on the Day In the Life, simply getting kids to touch the water is just so difficult. Highlighting the different ways to get in connection with the water would be great. Connecting this to the HEP map would be ideal. Shino Tanikawa added that we have made a lot of progress in the last 20 years, anything that you can show on things we accomplished would be great. Eli Caref suggested that participation is probably one thing that can show a real increase with no question! Maggie added the celebration using some kind of graph or graphic to show how the number of sites hosting students is growing, emphasizing the number of sites along with other numbers.
- Ciara Scully shared that as part of my capstone thesis for my masters in Environmental Conservation Education, I'm conducting a survey about if and how urban based environmental organizations implement social-emotional learning strategies into their programs. Ciara is looking for participation from as many educators and organizations in NYC as possible, and I hope you all can find the time to contribute to this research. It should only take about 10-15 minutes to complete and any response- even if you are unfamiliar with SEL strategies- is helpful information! The purpose of this survey is to gather general data about the use and collective understanding of social-emotional learning within the context of NYC based environmental organizations, and hopefully identify groups or individuals who are doing this work and willing to share their experiences. Link to survey: https://nyu.qualtrics.com/jfe/form/SV_29NKM96dJMBj2Yu. For questions, feel free to reach out to Ciara directly at ccs9362@nyu.edu or 631-255-6061.
- Brooklyn Bridge Park is now accepting applications for their teen program. Please share the link with your students: https://www.brooklynbridgepark.org/education/teen-programs/
- NYCDEP is seeking an Environmental Educator as well as internship positions. The Environmental Educator would develop, facilitate, and evaluate education programs, including school visits, field trips to the Visitor Center at Newtown Creek and Newtown Creek Nature Walk, and professional

learning opportunities. The Environmental Educator would research and create resource materials (i.e. virtual tours, education modules, and teacher curriculum guides) and support annual programs, such as the Water Resources Art and Poetry Contest, Harbor Protectors, and Trout in the Classroom. To learn more and apply, please visit nyc.gov/jobs and search for Job ID: 522827, 515934, and 515935.

- City Parks Foundation is seeking two paid high school interns to work at their Coastal Classroom program on Mondays throughout the spring at the Conference House Park. If anyone has recommendations for outreach to teens in southern SI, please reach out to Chrissy Word.
- Billion Oyster Program is also hiring for interns, posting is found here: https://static1.squarespace.com/static/5c5604249b8fe80245a0d052/t/620b2ff965cca36cf634e5cd/1644900345316/2022_Research+Associate+Technician+Internship+posting.pdf.

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

2022 Meeting Themes

Tina Walsh wrapped up the meeting indicating that members are welcomed to let herself, Rosana Da Silva, and/or Chris Bowser regarding any topics that you would want to see at any upcoming meeting. The next meeting will be held on June 16th and a calendar invitation has been already sent. For now, our meeting will be virtual. We are also planning an excursion and thanks to NYSDEC we will be hosting a fishing trip on August 17th at the Harlem Meer. More information about this will be distributed at a later date.