

# Hudson & Harbor Educators Work Group

## Minutes

### September 1, 2021

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

#### Attendees

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## Breakout Discussions

### Working with Data

- Chris Bowser opened by asking who is using data with students and how. Margie Turrin reported on an attempt to do some qualitative data aggregation with students that turned out to be way too complicated and failed. Chris offered a suggestion to check out a project as an example of a successful project - but not with students.
- Eli Caref's reported on seining data use with students:
  - In her lesson, 4 different ways that data are illustrated; Use of visual data in various forms is important for this
  - Used 2019 seining charts; students looked at the data in small groups and determined what they could garner (#s and a pie graph) and relate in narrative
  - Students reported on their findings and answered questions for each other
  - Overlap of science and history
  - Recommendation to looking at CURB's online data. It is a great model for everyone and BBPC built their data collection protocol from methods inspired by CURB.
- Brooklyn Bridge Park Conservancy's comparing data from various sites:
  - Received a grant to build out a database of the East River from environmental education organizations doing seining and rod/reel programs. The idea is to pull the data from multiple locations.
  - A challenge is finding statistically significant data so that it's consistent from one site to another.
  - Goal is to develop lesson plans out of the data and hoping this year to create a counterpart for younger grades than college. How to have students involved in the data aggregation is a challenge (a lot of room for error in community science data collection, not enough data and making false assumptions, and other issues complicate it.)
- Chris Bowser asked the group whether anyone knew what HRECOS was, no one did.
  - HREOCS is a network of continuous water quality monitors that collect water quality data every 15 minutes. Data is displayed on a USGS-based platform and there is some access issues.
  - Need to understand who is using HRECOS and how the data is utilized.

- Eli Caref noted that this is one resource to compare limited data, seining and water quality for instance. It's a lot of data but helps to illustrate how abiotic factors are impacting biotic for instance.
- Toland Kister shared working with a group to revamp their televised data into classrooms; making it more accessible for people seeing it for the first time.
- Christina Tobitsch indicated that at BBPC, data is underutilized because of the lack of training and access. Christina also noted that the lack of a station in the East River within HRECOS is a limiting factor for use.

## New Teaching Tools

- There are a variety of platforms used to facilitate virtual learning.
  - Zoom is intuitive, has good closed-captions capabilities, and is good for young audiences and interactive activities, such as a puppet show.
  - Facebook Live is useful for outward facing content.
  - Similarly, Instagram Live is useful to reach a varied audience and increase interaction.
  - Google Meet is most often used by schools, and is familiar to students.
  - Google Jamboard is helpful for small collaborative work.
  - Youtube has capability for closed captions and translations of content. Hired translation services can supplement this.
  - ArcGIS has story maps, and is a useful skill for students to learn. Google Earth can be utilized in place-based work.
  - FlipGrid allows students to answer with a video.
- In terms of what translates well in a virtual program, it is important to leave time for an open Q&A. Students connect with their own experience, and teachers can answer questions using online resources. Live animals, trap checking, and microscope work translate well to virtual programs.
- There are also plans in place for virtual programming that teachers stream into classrooms. Hybrid models for remote students limit field trip opportunities, so yes, more programs will be projected into classrooms. It is important to listen to what schools and groups need. We can support them with virtual programs or by assisting their travel to us.
  - With DOE no longer offering bussing for field trips there are many complications. These present issues with equity and access. We should look into setting up programs in outdoor areas of schools if possible.
- Regarding going into schools for programs, focus more on workshops that are not tied to a specific location so that they can be done near a school rather than focusing on only virtual. We can follow protocols that the school/group has already established.
  - Chalkbeat is a great resource for keeping up with updates from schools.
- Some additional considerations include:
  - The ecology center is being displaced by East River Park construction, and is currently in Seward park, but the space is not big enough.
  - Flexibility is vital -- be prepared for in-person and virtual. Check in with regulations and comfort of staff, students, etc.

## Social-Emotional Support of Students

- It is easy to forget that there is a pandemic happening as we organize meetings and work on projects. It is important that we get in touch with our emotions and also be empathetic for our participants.
- Collaborative for Academic, Social, and Emotional Learning (CASEL) defines Social and Emotional Learning as the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. - [https://youtu.be/ouXhi\\_CfBVg](https://youtu.be/ouXhi_CfBVg)
  - Five competences of SEL: <https://casel.org/wp-content/uploads/2020/12/CASEL-SEL-Framework-11.2020.pdf>
- It is also important for us to talk about culturally responsive SEL and being aware of systems of oppression. For example, the phrase ‘boys don’t cry’ or ‘women are too emotional.’ What can we do to ensure that we are incorporating culturally responsive SEL in our programs?
  - Very important to check our own implicit biases and continue to do the work. Take as many trainings, videos, readings as you can to keep educating yourself and breaking down your own biases/putting yourself on check.
  - Celebrating the cultures that students bring to the program – connections between food, fish species, and asking ‘what does this remind you of’?
- How are you using SEL or can incorporate SEL in your programs?
  - Giving an opportunity for students to be present in the space. This can be through a short introduction or longer activity to observe and reflect on your surroundings.
  - As the lead, not talking the entire time. Take a pause to allow participants to just be and take in their surroundings. Asking how does the river make you feel?
  - Group self-managing emotions together through a color wheel exercise. Colors don’t have a singular meaning, but everyone chooses a color and has the option to share what that color means to them at that moment.
  - Creating a social contract by asking students: how do you want me to treat you? How do you think I want to be treated by you? How do you want to be treated by one another? And how do you want to be treated by one another when there is a conflict?
- A lot of what was discussed really talks about the environmental literacy and creating positive environmental experiences to create stewards. SEL, and by calling it SEL, we can be more explicit in our programs and provide greater opportunities for participants to connect with nature.
- A significant number of resources are available on our google document here: [https://docs.google.com/document/d/1TXCH95q2\\_qgmsPM0L7NNwDTOpOG2tVIBY4X0AU7-XiY/edit?usp=sharing](https://docs.google.com/document/d/1TXCH95q2_qgmsPM0L7NNwDTOpOG2tVIBY4X0AU7-XiY/edit?usp=sharing)

## BOP’s Species ID Guide

Agata Poniatowski shared BOP’s latest publication – a [Species ID Guide](#). The book provides information about the estuary. The species selected for this book thrive in brackish water and shallow salt water. They are commonly found and accessible from NYC. The guide includes 70 species, 75 illustrations to help identify morphology, 2 full habitat illustrations, and 1 life cycle illustration. Topics range from identification and morphology, diet, predation, fun facts, habitat, and conservation status (bringing in

more local information about the species). Creation of the guide went through four stages: scientific writing, scientific illustrations, photographs, and graphic design. This guide can easily be used for identification in the field (fish, mobile invertebrates, and sessile species), as well as green picture reference pages, size guides, and many other features. The guide is divided by fish, mobile invertebrates, and sessile and organized alphabetically by the species' scientific name. Agata indicated interest in receiving any feedback on the species profiles so that BOP can work on keeping it as accurate as possible. The guide is available online as a PDF, hard copies will be available and provided during BOP's professional development and events, and are currently not waterproof. Bowser indicated that as funding was provided by NYSDEC, the guide is not for sale but DEC is interested in getting these into the hands of people and are looking at printing solutions to further make them accessible.

## Cornell Water Resource Institute Research Project

Chris Bowser introduced Dr. Jerel Ezel's project through the WRI which focuses on Waterways: NYC Youths Water Behaviors and Perspectives. The research team is interested in working with informal educators such as this group and welcomed Bianca Garcia to discuss the project further. Bianca Garcia introduced herself and the new lab at Cornell called ReLateral -- a new lab with projects in Flint, Ithaca, and NYC looking to connect with the communities they serve with the purpose of water literacy. The project is still being designed, but hopes to examine how the environment shapes health behaviors as related to water drinking, waterways, proximity to water, and availability of water. The NYC project is focused on bringing Black and Latinx youth voices into the environmental conversation; specifically focusing on how and why water consumption is different between these communities and their white counterparts.

Bianca wanted to crowd source questions on what we are most interested in learning about our youth. The group plan to conduct the project through stakeholder interviews and partnerships to establish youth focus groups. This summer, the team has defined their interview guides and are getting ready to start. Bianca asked the group what do we want to know about how the environment affects these youth? Why do youth have a negative perception of waterways? How much is generational vs. youth to youth?

Maggie Flanagan indicated it would be interesting to drill down and understand where youths' perceptions are coming from – is it learned or generational? We work hard to encourage uses of the estuary and how much cleaner it has gotten, but youth still consider the river dirty. Rosana Da Silva added in addition to generational or conspiracy, the perceptions through migrant pathways would be an additional angle to consider. Amelia Zaino indicated interest in learning how to communicate with youth and their families utilizing the data that a number of these groups collect. In addition, Amelia shared that in addition to perceptions, access is also a big part of it – seeing your local waterway closed off would imply its usability. Bianca added that a photo journal could be one way to understand how youth regard their environment and water resources which could provide some indication on how we communication.

Margie Turrin added interested in understanding social media and how it could be the avenue of perceived concepts vs. generational. Bianca added social media is a great way to connect people through art but also a place where misconceptions can be shared. Christina Tobitsch added that communication strategies have to be different for different groups where you have people misusing the estuary and then those not even aware of the estuary. Haley McClanahan added that there are also conflicting messages, for example, their recent fishing program they are explaining the diversity of species and the connection to improved water quality, but this also varies throughout the estuary which makes it harder to communication. Bianca

indicated this would fall in to the need for mapping knowledge levels and the representation of the different cultural groups. Maggie added, for using art to empower more community input, she recently partnered with Brooklyn Art Incubator's [Art for Community Transformation](#) program led by Carl Musa Hixon. Rosana added interest in understanding how youth use scientific data and whether they trust this information or are skeptical and why. Chrissy Word is interested in how to empower local communities and their youth in advocacy through a network of social media tools. For example, the Coney Island Creek ferry is coming and local groups long fought against this. The community did not want this and youth seemed to be missing from those advocating. How do we engage youth in the community?

Shino Tanikawa is pleased to see this project focusing on black and latinx youth and is curious about the relationship and perceptions youth have on their local waterbodies. In addition, it would be interesting to see the disparity between the black/latinx community versus their more affluent white counterparts – is it more access, more information or something else? Shino also added that language access is a huge issue in NYC. Eli Caref shared an organization called [CLEA - coalicion Latina de educadores ambientales](#) has been focused on bringing environmental education to Spanish-speaking communities. Eli is also interested in the difference between drinking water and water conservation, particularly the connection between CSOs. Christina added that most students don't understand that drinking water is a totally separate system than the local waterbodies.

Audrey Van Genechten shared that water quality and chemical build up in fish is very different. NYSDOH does offer brochures in different languages and are always looking for recommendations in how best to revise the information. They rely on community organizations to spread the word which is why the materials are available for free. Christina shared the problem is the general public does not differentiate between chemicals, pathogens, and other pollutants that either make the fish and/or water unsafe for one reason or another. Audrey agreed that chemicals in fish versus bacteria in the water is a huge source of confusing for the public. Audrey shared the “[Good Sanitary Practices](#)” brochure. Many cultures also believe that they can tell whether the fish are safe to eat by either looking at the water or by how the fish look, so it's a delicate balance trying to educate anglers while also empowering them to make healthy choices. All DOH materials are free and we are happy to mail them out. Kathy Garofalo added knowing where people can and cannot fish is important as well as adding information about lead sinkers, ethical fishing techniques, and bending back barbs for catch and release. Christina added this ties back to the earlier breakout group on data, storytelling and data illustration is so important to truly engage general public. Can't wait to see this come together!

Bianca thanked the group for the opportunity. If anyone can offer an interview or have additional thoughts, please feel free to reach out to via email at [byg5@cornell.edu](mailto:byg5@cornell.edu).

## HEP Waterway Stories Brainstorming

Rosana Da Silva shared the Water Quality Work Group recently published the Harbor-Wide Water Quality Monitoring Report and building on this effort, are beginning to work on action D-2, Waterway Stories. Based on feedback received from the Public Access Work Group and the Water Quality Work Group, there is an interest to utilize a non-static, online platform such as a StoryMap, app, or website, and suggested not to focus on water quality data as it is in continuous flux. In addition, Rosana shared that the 2021 HEP conference will also be focused on waterway stories, public access, and communications where we are looking to collect/display these stories. An RfP is now out to start collecting these stories for the HEP

November conference. This could become the foundation for which the Water Quality Work Group may be able to utilize in their development. Rosana clarified that for the RfP, it does not have to be about water quality data and that it can be about public access, fishing, community struggles, and the RfP also enables you to choose the best delivery method whether through art, video, a formal presentation or panel, or another suggestion that you may have. Everyone is welcomed to submit stories: [https://docs.google.com/forms/d/e/1FAIpQLSe\\_e2Og\\_QWxj\\_5T9OC1XuupJwMsJgAuheOhcaFC62PeX2m9Ng/viewform](https://docs.google.com/forms/d/e/1FAIpQLSe_e2Og_QWxj_5T9OC1XuupJwMsJgAuheOhcaFC62PeX2m9Ng/viewform).

## Professional Development and Updates

- Hugh Carola shared the ANJEE Outdoor (COVID-safe) EE Conference will be held Saturday, 9/24 and for more information visit <http://anjee.org/autumn-conference.html>
- Chris Bowser shared Day in the Life of the Hudson and Harbor will be held Thursday, October 14<sup>th</sup> on the waterfront or at a screen. The next training will be held on Sunday, September 19<sup>th</sup> from 10am-3pm at CURB in Yonkers. Visitors will be required to show proof of vaccination, but may be virtual again. Margie Turrin indicated that the training is currently full but if you are interested, do sign up to be on the wait list as things are always in flux.
- Kristin Schreiber shared BOP will be hosting trainings online and in-person. The first set will be a professional development training for educators to be comfortable with using ArcGIS to identify oyster restoration sites in October. An interactive training will also be held at the end of October and November to identify oyster restoration sites. A two-day in-person training will also be held in September on the oyster tank.
- Akilah Lewis shared that NYCDEP is planning to do some virtual and in-person programs at Newtown Creek WWTP, the new nature walk trail, and they have also updated their guide which should be in print by this month. For more information, visit our website: [www.nyc.gov/dep/education](http://www.nyc.gov/dep/education). If you have questions, please contact DEP's Education Office: [educationoffice@dep.nyc.gov](mailto:educationoffice@dep.nyc.gov).
- Christina Tobitsch announced BBP will be opening their education center this September 25<sup>th</sup>! They will be offering options for schools to do in-door programming. If anyone is doing indoor programming, she would be interested in swapping ideas and strategies!
- Eli Caref shared NYSOEA (NY State Outdoor Education Association) conference will be this November 4-6. She is working on a couple of workshop/panels and it would be great to see some of you there! It'll be mostly virtual with one in-person opportunity <https://www.nysoea.org/annual-conference.html>.