

National Fish and Wildlife Foundation

LI Sound Futures Fund 2013 - Education and Mini-Grants - Submit Final Programmatic Report (New Metrics)

Grantee Organization: Rocking the Boat, Inc.

Project Title: Bronx River Eel Monitoring and General Fish Assessment (NY)

Project Period 1/01/2014 - 12/31/2014

Project Location Description (from Proposal) Hunts Point Riverside Park; near ABC Carpet & Home, at the 182nd Street and Twin Dams; near Soundview Park; at the mouth and near Baretto Point Park, outside the mouth of the Bronx River, NY.

Project Summary (from Proposal) Engage 125 students collaborating with scientists from the Wildlife Conservation Society to conduct a comprehensive assessment of American eel, river herring, and other Bronx River keystone fish.

Summary of Accomplishments A total of 691 middle and high school students from the South Bronx were involved in the implementation of this Bronx River American Eel and General Fish Assessment Project. Environmental Job Skills Apprentices—juniors and seniors in high school—worked in partnership with scientists from the Wildlife Conservation Society to collect 34 sets of eel monitoring data and 36 sets of fish monitoring data, observing a total of 12 eels and a wide variety of fish species, including blueback herring, alewife, and juvenile striped bass in the process. At the same time, On-Water students and On-Water Classroom participants had the opportunity to get their hands dirty and their feet wet and see firsthand the many different types of fish that live in the Bronx River. For almost all these young people, who live in a neighborhood that is better known for heavy industry than natural beauty, putting on waders and going fishing in the river was a transformative experience, and many were very surprised to learn that any fish live in the Bronx River at all. Rocking the Boat participants also shared the knowledge they gained about protecting the river and its native species with attendees at numerous public events, including a free Community Rowing Program, which served 1,300 local residents in 2014.

Lessons Learned As a result of losing five eels mops shortly after they were placed in the Bronx River—likely due to changing tides—Rocking the Boat learned about the importance of constructing extra eels mops prior to the start of the monitoring season. Through this is a time consuming process, it will prevent the loss of opportunities to collect data should anything happen to mops that have been placed in the water.

Eels were observed at three of the four mop locations, but none were found in the array placed near the mouth of the river. As a result, the educational value of monitoring this particular set of mops was not very high. Rocking the Boat will be altering its sampling strategy for the 2015 eel monitoring season by focusing its efforts upstream where the water is shallower and it is not necessary to pull mops up from deep water or sample from a boat, thereby increasing the likelihood that participants will encounter American eels.

Rocking the Boat's first experience conducting a general fish assessment revealed that seining is not a very effective method of fishing in Hunts Point Riverside Park, where there is a channel just a few feet off the shore. Similarly, while trawling did produce some interesting catches, it was difficult to keep the net clear of plastic garbage, so Rocking the Boat would not recommend this method of fishing be used at Hunts Point Riverside Park in the future.

Activities and Outcomes

Funding Strategy: Capacity, Outreach, Incentives

Activity / Outcome: LISFF - Outreach/ Education/ Technical Assistance - # people reached

Description: Enter the number of people reached by outreach, training, or technical assistance activities

Required: Recommended

people reached - Current: 9.00

people reached - Grant Completion: 691

Notes:

Funding Strategy: Capacity, Outreach, Incentives

Activity / Outcome: LISFF - Outreach/ Education/ Technical Assistance - # people with knowledge

Description: Enter the number of people demonstrating a minimum level of knowledge, attitudes, or skills

Required: Recommended

people with knowledge - Current: 9.0

people with knowledge - Grant Completion: 691

Notes:

Funding Strategy: Capacity, Outreach, Incentives

Activity / Outcome: LISFF - Outreach/ Education/ Technical Assistance - # workshops, webinars, meetings

Description: Enter the number of workshops, webinars, and meetings held to address project activity

Required: Recommended

workshops, webinars, meetings - Current: 1.00

workshops, webinars, meetings - Grant Completion: 8.00

Notes:

The following pages contain the uploaded documents, in the order shown below, as provided by the grantee:

Other Documents

Photos - Jpeg

Photos - Jpeg

Photos - Jpeg

Photos - Jpeg

Final Report Narrative - Standard

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.



NFWF

Final Programmatic Report Narrative

Instructions: Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages; do not delete the text provided below. Once complete, upload this document into the on-line final programmatic report task as instructed.

1. Summary of Accomplishments

In four to five sentences, provide a brief summary of the project's key accomplishments and outcomes that were observed or measured.

With the support of the National Fish and Wildlife Foundation, a total of 17 Apprentices—high school juniors and seniors in Rocking the Boat's Environmental Job Skills Program—participated in a Bronx River Eel Monitoring and General Fish Assessment project in 2014. Over the course of the eel monitoring season, which ran from March through June, Apprentices collected 34 sets of data and observed nine “glass” eels and three elvers at four different sites in the Bronx River. General fish monitoring using both seine nets and trawl nets took place from April through November, and Apprentices collected 36 sets of data from two locations. Rocking the Boat's data will be shared with scientific partners at the Wildlife Conservation Society (WCS) who will then use it to inform a diadromous fish management plan for the Bronx River. In addition to the Environmental Job Skills Apprentices who were responsible for ensuring that data was collected according to established protocols, 46 students in Rocking the Boat's On-Water Youth Development Program and 628 middle and high school students who participated in daytime On-Water Classroom Programs learned about the history and ecology of the Bronx River and the many species of fish that inhabit its waters.

2. Project Activities & Outcomes

Activities

- Describe and quantify (using the approved metrics referenced in your grant agreement) the primary activities conducted during this grant.

American Eel (*Anguilla rostrata*) Monitoring

In preparation for the start of the eel monitoring season On-Water students, Environmental Job Skills Apprentices, and On-Water Program Assistants (Rocking the Boat alumni who work part-time for the organization while attending college locally) worked together to assemble eel mops from frayed polypropylene rope and plastic plant saucers. The mops, which resemble eel grass, were designed to attract glass eels as they journey upstream through the mouth of the Bronx River. In February, the mops were placed in the river to be “seasoned” for approximately one month in order to eliminate artificial odors and allow the ropes to accumulate algae. Apprentices participated in an eel monitoring training led by their Program Director and, after receiving EPA approval of the Quality Assurance Project Plan (QAPP) on March 4, 2014, moved the mops to their designated locations: (1) Concrete Plant Park, (2) near the 10,000 square foot wetland built by Rocking the Boat at its Bronx River neighbor, ABC Carpet & Home, (3) Hunts Point Riverside Park, and (4) the mouth of the river near Soundview Park. Over the course of Rocking the Boat's spring semester, Apprentices rowed to each site on a weekly basis to check for the presence of glass eels, which involved the following: pulling the eel mops up from the bottom of the river, rinsing them by dunking and shaking them in a large plastic tub, holding a fine mesh net out over the river and then pouring the contents of the tub through it. Whatever remained in the net was observed and, if eels were present, they were counted along with other species such as snails, crabs, pipefish, white perch, and mummichogs. Water quality data (dissolved oxygen, nitrates, and salinity), weather, tides, and moon phase were also recorded during each sampling trip, and all information was tracked using data collection sheets designed by WCS. Throughout the season a total of 34 sets of monitoring data were collected and nine glass eels and three elvers were observed. Rocking the Boat alerted WCS to any eels observed downriver and the complete eel monitoring data set will be given to WCS to help inform the creation of a diadromous fish management plan going forward. As a formal wrap-up to the project Jake Labelle came to Rocking the Boat and gave a presentation that put the Apprentices' work in a larger context of ongoing conservation efforts by addressing the effectiveness of the sampling methodology, the difficulty of sampling in a deep,

wide, tidal river, the importance of this work on the lower Bronx River, and the overall importance of the project at a time when the American eel is in precipitous decline.

Forty-six students in Rocking the Boat's On-Water Youth Development Program learned about American eels and shadowed their peers in the Job Skills Program to see how the mops were monitored for the presence of eels. Another 120 students from the New York Harbor School participated in a daytime On-Water Classroom Program (supported by the Harbor Estuary Program) focused on the species. During their time at Rocking the Boat, five groups of 22 to 27 Harbor School students learned about the lifecycle and migratory patterns of the American eel, participated in a migration mapping exercise which challenged them to read a map and plot coordinates for the eels' journey to the Bronx River, and rowed up to Concrete Plant Park to monitor one of Rocking the Boat's four eel mop arrays. And while glass eels are very elusive, one Harbor School group was lucky enough to observe two in one day!

General Fish Assessment

Environmental Job Skills Apprentices participated in a three-hour fish monitoring training led by their Program Director in late March and began their general fish assessment work early in April. The group used a large seine net to catch fish at two locations—the shores of Barretto Park and Hunts Point Riverside Park—once a week from May through November 2014. The intended method of sampling involved wading in the water, and while this worked well at Barretto Park, due to the incline of the shore at Hunts Point Riverside Park and the size of the net they were working with, Apprentices had to alter the sampling method and devise a way of seining from boats instead. During each sampling trip Apprentices recorded the names and number of all species observed, and measured both the smallest and largest example caught before returning the fish safely to the water. As was the case with eel mop monitoring, relevant environmental data was recorded during each seining event. In order to ensure the accuracy of their fish identification work, the Apprentices took photographs while in the field, and used reference guides to confirm their observations. They also trawled for fish once a month from April to October by dragging a trawl net behind one of Rocking the Boat's powerboats. 36 surveys were completed, and during this time the species most commonly observed were silversides, mummichogs, striped killifish, juvenile herring (blueback), juvenile striped bass, bay anchovy, and weakfish. Other species of note included pipefish, striped searobin, fourspine stickleback, and both summer flounder and Atlantic menhaden that measured over 30 centimeters each. At the conclusion of the project Jake LaBelle from WCS gave a presentation on acoustic monitoring data (please see the description in the next section of this report) that was collected in the East River and Long Island Sound as part of this project. The presentation included a series of maps produced using the “pings” resulting from any animal with a compatible transmitter swimming by the buoys, and highlighted adult striped bass and juvenile shark migration in the area. Apprentices were excited to hear about the presence of adult bass after observing juvenile bass while seining, and were very surprised to learn that there are sharks so close to home. The presentation demonstrated to the group how their work contributes to a much larger effort to understand the current status aquatic life in local waters.

With the support of seven On-Water Program Assistants who were trained to teach younger program participants about native fish species in the Bronx River, students in the afterschool Youth Development Program learned how to fish using seine and dip nets, and practiced identifying the most commonly observed species. Another four Program Assistants introduced 628 middle and high school students—participants in On-Water Classroom Programs—to fish habitats, anatomy, physiology, and adaptation, and using a dichotomous key to identify the fish they observed while seining in the Bronx River. During the course of the year 105 middle schoolers (29 from St. Ignatius School and 76 from Graham Windham, an afterschool program serving MS 424 and Hyde Leadership Charter School) and 212 high schoolers (21 students from Manhattan Academy for Language Arts, 139 from Pelham Lab High School, 52 from Renaissance Charter High School) participated in fish-focused programming at Rocking the Boat. During the summer, 191 local youth who participated in two-week sessions of Bronx River Camp, a program funded by the J.E. and Z.B. Butler Foundation, learned about native fish species and went seining in Hunts Point Riverside Park.

- Briefly explain discrepancies between the activities conducted during the grant and the activities agreed upon in your grant agreement.

In directly involving 691 middle and high school students in this project, Rocking the Boat exceeded its goal of introducing 125 young people to the diadromous fish species that are fundamental to the riverine, estuarine, and marine ecosystems of the Long Island Sound, and increasing their knowledge of the interconnectedness of all the bodies of water that flow into the Sound. However, not all aspects of the project were implemented according to the original workplan, and all discrepancies between the activities conducted and the activities laid out in the proposal to the National Fish and Wildlife Foundation are described below.

American Eel Monitoring

Students and Apprentices did not participate in eel monitoring at the 182nd Street Dam as proposed because WCS decided not to do fyke net monitoring at this site. However, Environmental Apprentices did visit the Bronx Zoo to observe WCS scientists electrofishing for eels—a technique used to temporarily still the fish before they are caught—in the portion of the river that runs through the zoo. The Apprentices helped measure, tag, and release the eels to help determine how many are able to pass over the multiple dams in the river.

General Fish Assessment:

Two of Rocking the Boat's scientific partners, Dr. John Walden and graduate student George Jackman, both of Queens College, did not participate in this project as originally planned due to Dr. Walden's unforeseen health issues. As a result, Amanda Moser, a graduate level intern who was working with Rocking the Boat at the time, developed the data collection tool that Apprentices used to record their observations. Seining was scheduled to start in March, 2014, but due to an unseasonably cold winter and the delayed delivery of the net—which was ordered expressly for this project—the first observations were not made until May. However, the Apprentices continued seining through November to make up for the days missed days earlier in the season.

Students and Apprentices were not involved in acoustic monitoring activities as proposed because the process of deploying the monitors took longer than Rocking the Boat's afterschool program (which runs for three hours per day during the spring semester) allowed. Instead, the Environmental Job Skills Program Director worked with WCS scientists to place the receivers (VEMCO VR2W) on navigational buoys and collect the resulting data. The receivers passively collected data as animals fitted with compatible transmitters swim by, and because the data could be downloaded in large doses, it did not make sense programmatically to involve students and Apprentices in this aspect of the project. As described above, Jake LaBelle did visit Rocking the Boat during the fall semester to give a presentation using the results of the acoustic monitoring.

Outcomes

- Describe and quantify progress towards achieving the project outcomes described in your grant agreement. (Quantify using the approved metrics referenced in your grant agreement or by using more relevant metrics not included in the application.)

Goal 1: Young people from the South Bronx learn about the ecology and management of various fish species that call the Bronx River home, and are trained in in field techniques, data collection, and basic data analysis.

Outcome 1: A total of 691 middle and high school students—17 Environmental Job Skills Apprentices, 46 On-Water Youth Development students, and 628 middle and high school aged participants in Rocking the Boat's daytime On-Water Classroom Programs—were involved in the implementation of this project, which was supported by 11 On-Water Program Assistants.

- Apprentices were trained in the EPA approved techniques for eel mop construction, monitoring and data collection, developed a method for seining and trawling at two sites (one on the Bronx River and one on the East River), learned how to properly identify the fish they observed, and entered the data collected into Excel spreadsheets that will be given to the Wildlife Conservation Society. In the process of conducting both eel and general fish monitoring, Apprentices learned the distinction between catadromous fish, which migrate from fresh water to salt water to spawn, and anadromous fish, which migrate in reverse. As a catadromous species, the American eel spends most of its life in fresh water, migrating south to the Sargasso Sea to spawn once it becomes a sexually mature silver eel. Participating in this project and seeing juvenile glass eels in the Bronx River demonstrated to Apprentices that the Bronx River ecosystem, which includes the Long Island Sound, is healthy enough to support these fish during the most vulnerable stage of their lives. Conducting a general fish assessment contemporaneously with eel monitoring enabled the Apprentices to see how the rivers that surround the South Bronx function as a nursery habitat for many anadromous species, including alewife, blueback herring, and striped bass, all of which they observed as juveniles. While these fish spend the majority of their lives outside of the Bronx and East Rivers, these protected bodies of water play an essential role in the reproductive process of many species which go on to spend their adult lives further afield in the open ocean. Observing juvenile alewife was particularly exciting for the Apprentices, whose predecessors in the Environmental Job Skills Program were involved in their reintroduction to the Bronx River from 2006 to 2008.
- Although they were not involved in official data collection, On-Water students visited the eel mop sites during monitoring sessions, and learned how to use seine nets, as well as rod and reel, to catch fish in Hunts Point Riverside

Park. Like the Apprentices (described above), students practiced identifying the fish they observed before releasing them back into the river. This activity exposed them to the diversity of fish species, both catadromous and anadromous, that spend a portion of their lives in the Bronx River, serving as a hands-on introduction to the lifecycle of diadromous fish species. Students also learned how the health of the Bronx River—the only fresh water river in New York City—and the species found in it are integral to preserving the biological diversity and ecological health of the Long Island Sound estuary.

- 120 students from the New York Harbor School spent five sessions at Rocking the Boat learning about the lifecycle and migratory patterns of the American eel—by participating in a mapping activities that clearly illustrated how eels pass through many different bodies of water on their way north from the Sargasso Sea—and were involved in monitoring the eel mops located at Concrete Plant Park. 628 On-Water Classroom participants—a combination of middle and high school students—learned how to seine and use a dichotomous key to identify fish based on their morphology. Fish commonly observed included mummichogs, striped killifish, silversides, yellow perch, juvenile blueback herring, and juvenile striped bass. Within these On-Water Classroom programs, fishing served as a starting point for teaching young people from the South Bronx about the river that borders their community and has been so negatively impacted by water pollution in the past. While many participants were reluctant to get in the water because of its dirty appearance, their experience fishing showed them that the river is thriving, and helped them form connections between the Bronx River and larger bodies of water, including the Long Island Sound and Atlantic Ocean.

Goal 2: Local community members gain a greater appreciation for the Bronx River and the animals that inhabit its waters, inspiring a greater sense of responsibility among residents to protect and restore living resources and their habitats.

Outcome 2: Roughly 3,000 people learned about this project at Rocking the Boat's annual public events: the End-of-Semester Community Boat Launch Celebration held on June 6, 2014, two Family Nights (one each during the spring and fall semesters), and weekly Community Rowing, held every Saturday afternoon from Memorial Day through Labor Day in Hunts Point Riverside Park. During both Family Nights Apprentices spoke about their Bronx River fish assessment and eel monitoring work, and at the End-of-Semester Celebration they demonstrated to attendees how an eel mop functions. At Community Rowing, Program Assistants had ample opportunities to speak to community members of all ages about the importance of protecting the river so native species can continue to make a strong comeback in this area.

Furthermore, all Rocking the Boat participants are local community members themselves, so their involvement in this project prepares them to educate their friends and family members and eventually their own children about the Bronx River, and both practice and pass on behaviors that serve to protect the local natural environment.

Goal 3: Data is collected to help scientists better understand the migration patterns and population size of the American eel and other Bronx River keystone fish species in order to facilitate the development of a long-term restoration plan and monitoring practices.

Outcome 3: Environmental Job Skills Apprentices collected 34 sets of eel monitoring data and 36 sets of general fish assessment data, observing 12 eels (nine glass eels and three elvers), and a number of Bronx River keystone fish, including juvenile striped bass, blueback herring, and alewife in the process. Collecting water and weather related data along with eel and fish data allowed the Apprentices to make a direct link between the work they do on the Bronx River—water quality monitoring has been an ongoing project at Rocking the Boat since 2004—and the species that are directly affected by the state of the river. Adding moon phase and tides to this project helped them think about how remarkable it is that something as tiny as a glass eel gets upriver against all odds, giving them a newfound respect for the immensity of the migration process. Rocking the Boat's data collection in 2014 was part of a larger multi-year project, involving a number of Bronx River partners (Queens College, New York City Department of Parks and Recreation, Bronx River Alliance). As described by Dr. Merry Camhi, the Director of New York Seascape at the Wildlife Conservation Society, the data collected in 2014 and 2015 will serve as a baseline indicator of the species' ability to pass over the multiple dams in the Bronx River, and will be used to support the construction of an eel-specific pass at the 182nd Street Dam in 2016. By monitoring glass eel abundances before and after the pass is constructed it will be possible to determine both how much of a hindrance the dam is to upstream passage, as well as to evaluate the effectiveness of the completed eel pass. These data sets, along with environmental and habitat correlates, will improve current understanding of American eel population dynamics in the Bronx River, and will become part of a coast-wide effort, spearheaded by the Atlantic States Marine Fisheries Commission, to assess the status of this unique species in the United States. Along with mop monitoring

data, a PIT tag study of juvenile and adult eels, conducted by WCS and Queens College with the support of Rocking the Boat and the New York State Department of Environmental Conservation, will inform the management plan that WCS is currently drafting to guide the development of additional eel passes at barriers farther upstream, as well as increase up- and down-stream monitoring, with the overarching goal that this highly urbanized river system will serve as a model for eel restoration.

- Briefly explain discrepancies between what actually happened compared to what was anticipated to happen.

Due to staff turnover in Rocking the Boat's On-Water Program Director position, Youth Development students did not participate in this program to the degree that was originally expected. This was largely because the main expertise of the person who was hired at the start of the 2014 spring semester was as a sailing instructor and he dedicated significantly more time to teaching his students the fundamentals of sailing—also an organizational priority—than implementing Rocking the Boat's environmental monitoring and restoration projects, which included eel monitoring and the general fish assessment. Fortunately, just three weeks into the spring semester Rocking the Boat hired a highly experienced environmental educator as its new Director of Public Programs and Community Partnerships. Nina Sander has taught for the Ocean Classroom Foundation, Living Classrooms Foundation, and Hudson River Sloop Clearwater, and served as the Director of Education for Sustainable South Bronx, coordinating their Fab Lab after school program. She is currently a master's candidate in Environmental Conservation Education at NYU. Nina quickly recognized that this project provided an excellent opportunity for hundreds of On-Water Classroom students who were not included in the original grant proposal but are from the same South Bronx neighborhoods as Rocking the Boat's afterschool program participations, to learn about the fish that inhabit the Bronx River by putting on waders, getting in the water, fishing with seine nets and dips nets, and identifying the fish they caught. In total, Nina introduced 628 middle and high school students from six schools to American eels and other Bronx River fish species, and significantly expanded the scope of the project without expanding the budget.

- Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.

For the Environmental Job Skills Apprentices who monitored the eel mops on a weekly basis and observed a total of 12 eels over the course of 12 weeks, this project offered an important lesson in the realities of conducting fieldwork. While it was somewhat disappointing to the Apprentices that so few eels were seen in the mops, they learned the important lesson that zero is still a data point, and that both seeing an eel and not seeing one produces equally valuable data. In learning about the endangerment of the species and how deeply it is impacted by poor water quality, the group came to understand the importance of observing *any* glass eels in Bronx River. Presentations given by WCS scientists also allowed them to place their work within a much larger context, and see themselves as part of a scientific community that is working together to achieve the shared goal of making the Bronx River a habitable place for this unique species.

Having the opportunity to get their “hands dirty and their feet wet” and see firsthand the many different types of fish that live in the Bronx River was a transformative experience for the On-Water Classroom participants who went fishing in Hunts Point Riverside Park. For almost all of these middle and high school students, their experience at Rocking the Boat was their first exposure to hands-on environmental education, and many were very surprised to learn that any fish live in the Bronx River at all! While some students initially believed that the water was too dirty to be inhabited by fish, putting on waders and stepping in enabled them to see the river in a new light.

3. Lessons Learned

Describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project's methods, monitoring, or results. How could other conservation organizations adapt their projects to build upon some of these key lessons about what worked best and what did not?

In addition to the very positive outcomes of this project (described above), Rocking the Boat learned a number of lessons that will inform future involvement in similar fish monitoring projects.

Five of Rocking the Boat's 12 original eel mops were mysteriously destroyed in March, 2014, just shortly after they were moved to their monitoring locations. Though it is not possible to determine exactly what happened, it is likely that changing tides dislodged the mops. Some data sets were missed as a result of losing the mops, but Apprentices got right to work making replacements. This experience illustrates the importance of making extra eel mops prior to starting data

collection (something Rocking the Boat is doing right now in preparation for the 2015 eel monitoring season!). Though making eel mops is a very time consuming process, having them available will prevent the loss of data collection opportunities should anything happen to the ones that have been placed in the water.

Over 12 weeks of monitoring, eels were observed at three of the four mop locations (Hunts Point Riverside Park, Concrete Plant Park, ABC Carpet & Home), but none were found in the eel mops placed near the mouth of the river. Due to the width of the river in this area, this mop array collected only snails and large amounts of mud. This site is also located farthest from Rocking the Boat, so rowing out to these mops was not an effective or efficient use of time. As a result, the Environmental Job Skills Program Director is changing Rocking the Boat's sampling plan for the 2015 eel monitoring season, and is focusing on sites further north where monitoring does not have to be done from boats and mops do not have to be pulled up from deep water.

Seining was not a very effective method of fishing in Hunts Point Riverside Park, where there is a channel just a few feet off the shore. Though it worked well in Baretto Park, going forward, Rocking the Boat will take steps to ensure that sampling protocols work equally well at all sites. When trawling the group found it difficult to keep the net clear of plastic garbage, so while it did produce some interesting catches, including a flounder, Rocking the Boat would not recommend this method of fishing be used at Hunts Point Riverside Park in the future.

4. Dissemination

Briefly identify any dissemination of lessons learned or other project results to external audiences, such as the public or other conservation organizations.

Through 15 Saturdays of free Community Rowing—which was attended by 1,300 people in 2014—Rocking the Boat's End-of-Semester Community Boat Launch Celebration, two Family Nights, and On-Water Classroom Programs (those held in addition to the ones that were directly involved in the project) close to 3,000 community members were introduced to the history and ecology of the Bronx River, and learned about key species, such as the American eel, as indicators of the river's health. By collecting data on fish species diversity, seasonality, movements, and abundance and sharing it with the Wildlife Conservation Society, this project not only served to educate the over 300 young people who learned first-hand about the fish species in the Bronx River, and the 17 who collected formal data throughout the grant period, but will also benefit other individuals and organizations invested in improving the river's health through the reintroduction of native fish.

5. Project Documents

Include in your final programmatic report, via the Uploads section of this task, the following:

- 2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi and must be accompanied with a legend or caption describing the file name and content of the photos;

The following photos (uploaded as jpegs) were taken by Joaquin Cotten, Rocking the Boat's Communications Director. Six other photographs that are not available with a resolution of 300 dpi have been uploaded as an attachment under "other documents".

Photo 1: Rocking the Boat Program Assistants and Environmental Job Skills Apprentices work together to construct eel mops.

Photo 2: Environmental Job Skills Apprentices prepare to deploy eel mops in the Bronx River.

Photo 3: On-Water Classroom participants from Graham Windham learn how to fish using a large seine net (in the background) and dip nets (in the foreground).

Photo 4: A busy summer day in the Bronx River—Program Assistants help On-Water Classroom participants catch and identify fish off the shore in Hunts Point Riverside Park.

- report publications, GIS data, brochures, videos, outreach tools, press releases, media coverage;
- any project deliverables per the terms of your grant agreement.

POSTING OF FINAL REPORT: *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as “PROTECTED” and provide an explanation and complete citation to the statutory or regulatory source for such protection.*









Additional Bronx River Eel Monitoring and General Fish Assessment Photographs
(under dpi 300)



Environmental Job Skill Apprentices filter the contents of an eel mop near Hunts Point
Riverside Park.



An Environmental Job Skills Apprentices inspects a glass eel that was discovered in one of Rocking the Boat's four eel mop arrays.



Apprentices observe scientists from the Wildlife Conservation Society as they prepare to measure a yellow eel caught in the Bronx River near the Bronx Zoo.



An Environmental Job Skills Apprentice holds a juvenile striped bass.



Nina Sander, Director of Public Program and Community Partnerships, introduces On-Water Classroom participants to Houdini, Rocking the Boat's resident eel.



Nina Sander teaches On-Water Classroom participants about the many species of fish that live in the Bronx River.



On-Water students use a large seine net to catch fish in the Bronx River, just off the shore of Hunts Point Riverside Park.