

Title of Project: Woonasquatucket Watershed Restoration Education

NEI Job Code: 315-001

Project Code: 2015-015

Contractor: Woonasquatucket River Watershed Council (WRWC)

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Project Period: 06/09/2015 to 06/30/2016

Draft Final Report

- **Synopsis of overall project: goals, approaches, timetable:**

This project is an educational program aimed at reducing direct storm water inputs to and restoring the urban sections of the Woonasquatucket River and then Narragansett Bay. Our program has three components: 1) **In Schools:** Working with teachers and students in their classrooms and in the field to demonstrate how using low impact development / green infrastructure practices can improve water and habitat quality and allow us to safely and enjoyably use the resources of the Woonasquatucket River and Narragansett Bay, 2) **Public Awareness:** Creating public art, attending public meetings and engaging the press on how effective storm water treatment can improve our quality of life and restore our waters, 3) **Developing Leaders:** Using a learn one, do one, teach one model with students at the Met School (a charter high school in Providence) to develop environmental leaders who will assist in mentoring and teaching others how to restore river resources through storm water management.

- **Task List and Status**

- Task 1 - Project planning, coordinating with partners, confirming timeline; Quarterly Report 1 Completed. (completed)
- Task 2 - Met School Watershed Restoration Education & Leadership Training – Part I Learn One; Quarterly Report 2 Completed (completed)
- Task 3- Assist Met School students on independent research – Part II Do One; Quarterly Report 3 Completed (completed)
- Task 4 - North Providence High School Watershed Restoration Education and Public Art Program – Classroom Portion (completed)
- Task 5 - Met Part III Teach One (could be as assistants for Fish in the Classroom or in some other venue); Fish in the Classroom Centredale Elementary School; Fish in the Classroom Paul Cuffee School (completed)
- Task 6 - Mural at Lee Romano Field Completed; Paul Cuffee storm drain paintings installed; North Providence storm drain paintings installed; Press Event (completed)
- Task 7 - North Providence Public Meetings—1, 2 and 3; Final Report Completed (addressed)

- **Summary of Project Activity**

- **Task 1** –WRWC coordinated with partners, including ESS Group, Inc., North Providence City and School Leaders, Fish in the Classroom Teachers, Met School Curriculum Director

and RI Department of Environmental Management Trout in the Classroom Coordinator. We submitted our first quarterly report on time.

- **Task 2** – Kassi Archambault, WRWC’s Education Director, prepared for the “Developing Leaders” portion of our project. Ms. Archambault prepared an information session including a power point presentation, a syllabus and lessons in collaboration with a Met School advisory teacher, Andrew Coburn. Ms. Archambault taught watershed and stormwater education to a cohort of 15 with the newly developed materials. Ms. Archambault successfully completed curriculum development, lesson plans and the “Learn One” portion of the Developing Leaders program. We submitted our second quarterly report on time.
- **Task 3** –Ms. Archambault and Mr. Coburn worked with the students to develop a written plan for “Part II Do One” of the “Developing Leaders” program. This involved identifying strengths and interests of each of the students to assist and direct them in choosing projects and team roles. Ms. Archambault and Mr. Coburn worked with the students to develop project proposals using standard Met school project rubrics. Students broke into project groups and completed the research portion of the program. The WRWC submitted our third quarterly report on time.
- **Task 4** –Ms. Archambault coordinated with two teachers from North Providence High School. She taught three classes on stormwater education during the final school quarter in spring 2016. Students worked with Ms. Archambault and Brent Bachelder, a local artist we hired to work with the students on the watershed art portions of this project, to create images for the mural to go up at Lee Romano Field, the local little league field, and storm drain paintings. The WRWC invited the public to assist with mural painting through local press in the Providence Journal and the North Providence Breeze as well as through WRWC email blasts. Altogether, 154 people helped to paint the mural and storm drains including high school students, adult volunteers, little leaguers and their families. Many of the families joined in during Saturday games. They also observed and asked questions. In North Providence, we completed four storm drain paintings and one 7’ x 10’ mural (see attached photos).
- **Task 5** –For this task, Ms. Archambault coordinated “Part III Teach One” for “Developing Leaders” and “Fish in the Classroom.” For “Developing Leaders Part III Teach One,” student teams planned and executed projects. These included teaching Paul Cuffee “Fish in the Classroom” students, presenting an educational video through social media and by distributing a brochure to family and the community. All of these student projects were successful. One particularly great success was the video. Within 6 weeks, this stormwater video reached 2,667 people and had 903 views.

For “Fish in the Classroom” Ms. Archambault and Kelly Barr, a Paul Cuffee School 4th grade teacher, planned learning activities using the curriculum and adding in storm drain painting to the program. Ms. Archambault also recruited Greystone Elementary School in North Providence to participate in the “Fish in the Classroom” program. She did so by presenting the program to several elementary school principals and teachers. Greystone showed the strongest interest and was therefore selected to participate in the program. Ms. Archambault worked with all “Fish in the Classroom” teachers to prepare for the program, installed fish tanks and completed the program in both elementary schools.

- **Task 6** –WRWC hired artist Brent Bachelder as a subcontractor to work with students in all watershed art portions of this project. Mr. Bachelder researched appropriate paint and methodology for street murals. North Providence high school students designed and assisting with painting all stormdrain paintings and the Lee Romano Field mural. As described above, other volunteers, youth and families assisted in the mural painting as well. Paul Cuffee students designed and painted all five stormdrains around their school. Mr. Bachelder led the design process, and worked with the students and volunteers to install them. As noted above,

local press featured all North Providence mural projects, including the Providence Journal, Channel 10 News and two articles by The Valley Breeze of North Providence. Eco RI News may feature Paul Cuffee's trout release field trip on June 20th and their stormdrain paintings in an article on our "Fish in the Classroom" program.

- **Task 7** –Draft final report submitted.

- **Problems Encountered, Opportunities Created:**

- The Mandatory Fish in the Classroom teacher training by Rhode Island Department of Environmental Management had schedule changes. Teachers from Centredale Elementary school were unable to participate with the Fish in the Classroom Program. Ms. Archambault used this as the opportunity to recruit Greystone Elementary school, where 6 teachers volunteered to participate. Many North Providence elementary schools were interested.
- North Providence's Stormwater Office did not end up scheduling any public meetings regarding stormwater. Although we were ready and able to participate, the timing did not work out during the project period.
- We did not originally allocate enough hours for our artist to complete all project activities. Therefore, we found some private sponsors to help fund his time and pay for additional art supplies.

Expected Outputs/Deliverables:

1. One (1) mural designed and installed at Lee Romano Field
2. Four (4) storm drains painted around Paul Cuffee School
3. Five (5) storm drains painted in strategic locations in North Providence
4. 40 elementary school students educated in "Fish in the Classroom"
5. Ten (10) North Providence High School students educated and involved in watershed art
6. Ten (10) Met School students complete youth leadership program
7. 40 adults educated 3 public meetings in North Providence
8. One (1) press event with at least one story published in local and/or regional media
9. 10 Met School students teach at least 40 other people

Actual Outputs/Deliverables:

10. One (1) mural designed and installed at Lee Romano Field
11. Four (4) storm drains painted around Paul Cuffee School
12. Five (5) storm drains painted in strategic locations in North Providence
13. **145** elementary school students educated in "Fish in the Classroom"
14. **65** North Providence High School students educated and involved in watershed art
15. **16** Met School students complete youth leadership program
16. **0** adults educated **0** public meetings in North Providence
17. **Three (3)** press events with three stories published in local and/or regional media
18. **15** Met School students taught **2,612** other people

Additional Evaluation of Program Successes:

1. **In-School Educational Program Successes:**

- Through this program, the WRWC developed a new high school curriculum. Having it, we were able us to apply for and receive a Providence After School Alliance high school Expanded Learning Opportunity grant, and can now use it in many other high school programs. The Met has requested that we come back for the 2016/2017 year and teach twice as many students because the program was so successful.
- Paul Cuffee before and after testing showed that all students learned through the Fish in the Classroom Program. One sample before and after test is attached here.
- The North Providence Fish in the Classroom program was enjoyed by both the students and teachers. Greystone Elementary has also requested that we return to teach the program again next year. Attached is a sample letter from a student who participated in this program.

2. Public Awareness Successes: Public Awareness efforts, including creating public art and engaging the press, reached children, parents, volunteers, little league game attendees, home depot employees, constant contact email recipients, facebook friends, and recipients of the North Providence Breeze, the Providence Journal, local NBC news on Channel 10 and potentially EcoRI News. Here is an initial breakdown people we know we reached through this program:

- Social Media Outlets: Email blasts – 3 blasts, 3500 people per blast, FaceBook and YouTube views and shares of Met student video – 3,567 views
- Stormwater Art: Little League (4 employees of little league field; 4 home depot workers) Parents , children, volunteers (28), game attendees during painting (115) –town officials (3),
- Press – 1,000s through Valley Breeze, Providence Journal, NBC 10 News, potentially EcoRI News readership and viewership.

3. Developing Leaders Successes:

- Participants: Met Teachers (1 +3 admin), Students (18),
- People taught through Met student projects: 3,567 through video, 127 through presentations
- Curriculum developed for future use and transfer to other programs: 1