Citizen Science QAPP Template #1
The Third River Pathogen Study

Friends of Bonsal Preserve

Effective Date of Plan: June 1, 2014

Project Leader: JONATHAN GRUPPER 5/30/2014

Signature/Date

Jonathan Grupper/Friends of Bonsal Preserve

Project QA/QC Manager: 5/30/14

Signature/Date

Meiyin Wu/Montclair State University

NEIWPCC Project Officer: 6/2/14

Signature/Date

Susannah L. King/NY-NJ HEP

Lead Field Sampler: 5/30/14

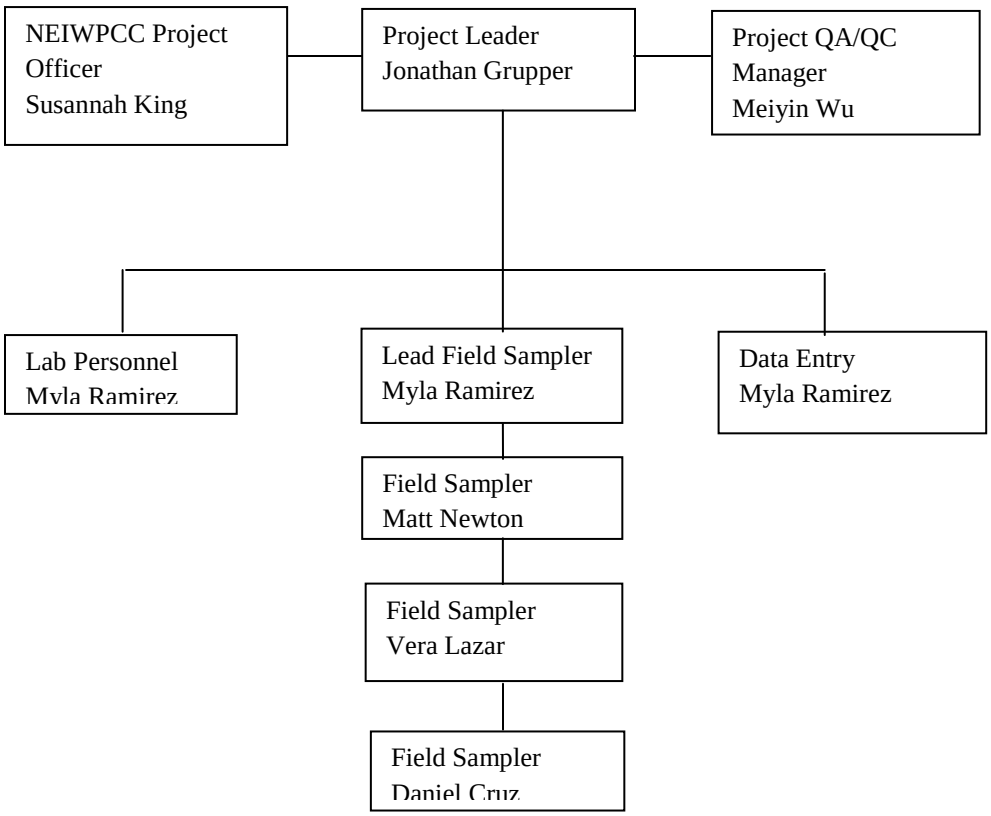
Signature/Date

Myla Ramirez/Montclair State University

Add additional signatures lines as needed. At a minimum, include the personnel listed above.

Citizen Science QAPP Template #2A
Project Organization Chart

The organization chart shows the lines of communication and reporting for the project, similar to a chain of command. Fill in the names of the individuals and their titles (where applicable). If necessary add more boxes to accurately reflect the communication and reporting structure of the project.



Citizen Science QAPP Template #2B
Project Distribution List

The distribution list ensures everyone involved with the project receives a copy of the QAPP and is aware/clear about the work being conducted. It also provides the contact information for those involved with the project. For this table, input the names and contact information for all individuals who will need to get a copy of the QAPP.

Name/Title	Contact Information
Jonathan Grupper Project Leader	Email: JGrupper@verizon.net Phone: 973-902-2454
Meiyin Wu Project Quality Assurance/Quality Control Manager	Email: wum@mail.montclair.edu Phone: 973-655-7117
Susy King NEIWPCC Project Officer	Email: sking@neiwpcc.org Phone: 978-349-2506
Myla Ramirez Field Sampler, Data Entry and Lab Personnel	Email: ramirezmyla@gmail.com Phone: 201-568-7644
Daniel Cruz Field Sampler	Email: caucayaa@gmail.com Phone:862-596-0613
Vera Lazar Field Sampler	Email: lazarv@aol.com Phone:973-779-8157
Matt Newton Field Sampler	Email: mjn800@optonline.net Phone:973-986-7763
Danielle Donkersloot NJDEP Volunteer Monitoring Program Coordinator	Email: Danielle.Donkersloot@dep.nj.gov Phone: 609-633-9241

Citizen Science QAPP Template #3
Project/Task Organization

Fill in the name, title, organization affiliation and responsibilities sections of the table below. For the responsibilities section, state what work/task each individual will be doing throughout the project. The responsibilities section provides an outline of the work that will be done for the project. Project specific details will be addressed in later sections of the QAPP. **NOTE**: The names and titles should be consistent in Templates #1, #2A, #2B, and #3.

Name	Title	Organizational Affiliation	Responsibilities (specific to this project)
Jonathan Grupper	Project Leader	Friends of Bonsal Preserve	Overseeing and coordinating project components
Meiyin Wu	Project Quality Assurance/Quality Control Manager	Montclair State University	Project quality control and oversight
Vera Lazar	Field Personnel	Friends of Bonsal Preserve	Field sample and data collection
Myla Ramiraz	Data Entry & Laboratory Personnel	Montclair State University	Data entry, upload to database, & laboratory testing

Citizen Science QAPP Template #6
Project Location

Project Location

Provide a description of the site and sampling locations and how they were chosen. Provide the rationale for selecting sample locations, how the locations will be reached (wading, boat, bridge access, etc, and how the locations will be sampled (weighted sampler, rod and clamp, collection by field sampler, etc). Provide a map showing the location and any other relevant information for the project such as GPS coordinates of sampling locations. Tie this information back to the goals and objectives of the project.

The Third River, a tributary of the Passaic River, flows through the municipalities of Clifton, Montclair, Bloomfield, Belleville, and Nutley in both Passaic and Essex counties. In past years, the Third River was found to be moderately impaired with on serious environmental pollution. However, a summer 2013 monitoring of the Third River suggested an increase in pathogen indicators and nutrients. Since the results were based on one monitoring event, a frequent and repeated monitoring program over a longer period of time is in urgent need to gain a better understanding on the current status of the Third River water quality, particularly the pathogen indicators. This study will take water samples from ten sampling sites along the Third River. Sites were selected to signify important landscape changes and placed as equally spaced along the Third River as possible. Availabilities for safe access and owner's permission were also major criteria toward site selection.

There are a few possible sources of the high pathogen counts. First, it could indicate possible leakage from a sewer line within the Bonsal Preserve. The line has had ruptures in the past, and may be in poor condition. Other possible sources could be wildlife, dog waste, stormwater runoff, upstream sewage problems, etc. Canada geese are rarely seen at the Preserve, however, they may be found upstream. Repeated testing at multiple locations could determine whether the problem is originating upstream or within the preserve itself. Once the sources are determined, then the necessary action and appropriate management steps can be taken to correct the problem.

All ten sites are wadable; project personnel will collect water samples and data via wading into the river. From headwater to down stream, the ten sites are:

1. Notch Road, Clifton - N40°52.336' W074°11.446' (near headwaters)
Site is located off Valley Rd. and ramp to 46W, near border of Little Falls and Woodland Park
(river flows very close to Route 46 at this point)

2. Grove Street, Clifton – N40°51.337' W074°11.481'
Site is located upstream from Montclair Pool Club, near intersection of Grove & Chittenden,

situated between residential area and Budget Truck Rental
(note: Previous samplings at this site had very high readings of *E. coli*)

3. Bonsal Preserve (upstream), Montclair – N40°51.058' W074°11.396'
Site is located in upstream section of the Preserve, across a previously cleared /restored area. Site is downstream from the Pool Club; but upstream of Montclair tributary

4. Bonsal Preserve, Montclair (downstream) - N40°50.957' W074°11.279'
Site is located just as river bends in a northeasterly direction. Natural wooded area, wetlands
A small tributary from Montclair joins before river reaches this site. Also there is some inflow from a stormwater pipe

5. Clarks Pond Nature Preserve, Bloomfield N40°49.359' W074°10.930
Site is a natural, wooded area, along small footpath, between Bessida St. & Hobson St.
Two additional tributaries join before river passes through this site.

6. Brookside Park, Bloomfield N40°48.585' W074°11.542'
Site is located in maintained public park along Broad St., has grassy banks, lots of waterfowl present.
Another tributary joins before river passes through this park.

7. Booth Park, Nutley N40°48.762 W074°09.705' maintained town park, grass, trees, etc.
Site is located off Ravine Ave. near footbridge. River is channeled between rock embankments .

8. Kingsland Park N40°49.598' W074°08.499' located on the Clifton-Nutley border
Site is located in the park, near Kingsland Rd. bridge (below the dam). River is channeled between stone walls

9. Oak St., Clifton N40°49.723' W074°08.016' (near former Yantacaw Pond)
Site is located after river flows through highly developed commercial areas, before reaching River Rd bridge. Site is located back of School #8 (below Route 3).

10. Riverwalk Way, Clifton (tidal influence) N40°49.388' W074°07.949'
Site is located .2 mile downstream of the River Rd. bridge, near the confluence with Passaic River.
Condominiums both sides of the river

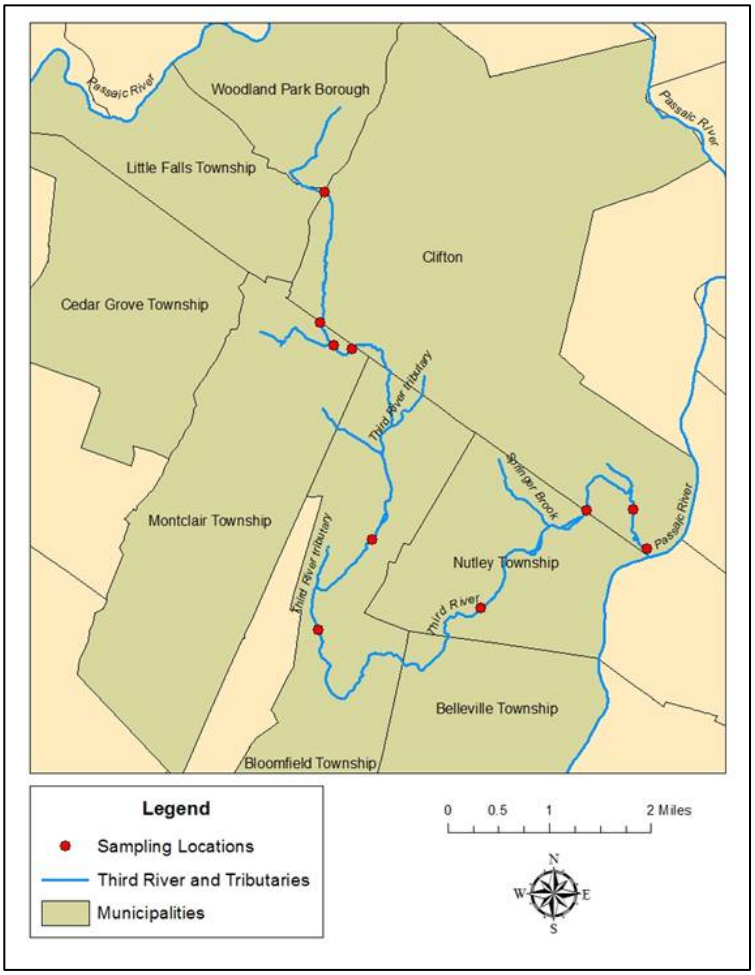


Figure 1: Third River Sampling Locations

Citizen Science QAPP Template #10B
Equipment List

Equipment List

Generate a list of all field equipment, supplies and personal protective equipment that will be supplied by the contractor for the project.

A camera
Chest waders
A cooler
Ice
Sharpies
Gloves
Sample labels

Citizen Science QAPP Template #13
Training and Specialized Experience

Training

In this section, state any required training that an individual involved with the project would need. Also include any refresher trainings that may be conducted.

- In the **Personnel/Group to Be Trained** section, state who will need the specific training and how many people will be trained.
- In the **Description of Training** section, state who will perform the training and what kind of information the trainee will learn.
- In the **Frequency of Training** section, state how many times the training will be conducted during the project.

Personnel/Group to be Trained	Description of Training	Frequency of Training
Meiyin Wu, Lee Lee, Myla Rameriz, Matt Newton, Daniel Cruz & Vera Laraz	Proper use of YSI 556 MPS, GPS unit and water sampling equipment. Instruction on lab analyses	Session at the beginning of the sampling season
Meiyin Wu, Myla Rameriz and Matt Newton	Data Management and upload of data to WQX/STORET	Session at the beginning of the sampling season, STORET upload training after data collection is complete

Specialized Experience

If any individuals have specialized experience that will be utilized by the project please complete the specialized experience table. State who the individual is, what specialized experience they have related to the project and their years of experience.

Person	Specialized Experience	# of Years of Experience

Citizen Science QAPP Template #16
Data Review and Usability Determination

Describe the process used to determine the usability of your project data. If your data review does not uncover any issues and all of your QC criteria are satisfied, then your data will be assumed to be usable for the intended project objective. However, this is not always the case and so you will need to lay out a process for determining data usability in the event that all QC criteria are not met.

Data generated from this project will be interpreted using the table below.

Category	Range	Description
Low	< 61 MPN/100 mL	61 is the lowest criteria for Freshwater Enterococcus WQS Single Sample Maximum Concentration (SSMC) for Primary Contact Designated Beach Site (using 1986 WQS Enterococcus)
Moderate	61 – 575 MPN/100 mL	61 is the SSMC for Freshwater Primary Contact Designated Beach Site. 575 is the SSMC for freshwater SSMC for Infrequently used Full Body Contact Recreation
High	575 & > MPN/100 mL	575 would not meet any SSMC for any full body contact in freshwater

All data issues identified by the Project QA Manager, including but not limited to the items stated in the Data Checks table above, will be discussed with the Project Leader to determine data usability on a case by case basis. All decisions to allow data that did not fully comply with QC criteria or QAPP requirements will be explained, and any resultant limitations on data use fully discussed in the final project report.