

Title: **Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Revision Number: 2

Date: 29 Nov 2014

**Citizen Science QAPP Template #1**

**Title and Approval Page**

**Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Sparkill Creek Watershed Alliance

**Effective Date of Plan: 1 June 2014**

Project Leader:

\_\_\_\_\_  
Larry Vail

\_\_\_\_\_  
Signature/Date  
Name/Title

Project QA/QC Manager:

\_\_\_\_\_  
Brent Turrin

\_\_\_\_\_  
Signature/Date  
Name/Title

NEIWPC Project Officer:

\_\_\_\_\_  
Susy King

\_\_\_\_\_  
Signature/Date  
Name/Title

Lead Field Sampler:

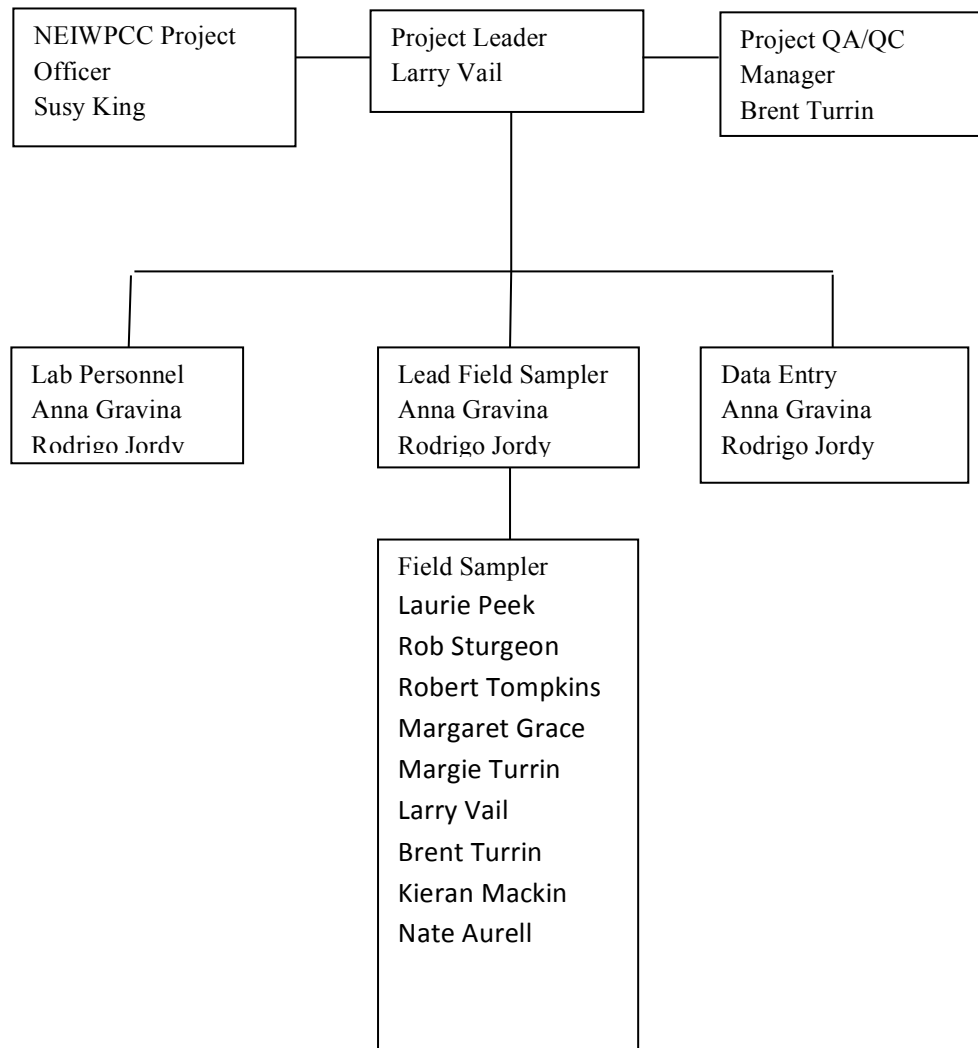
\_\_\_\_\_  
Anna Gravina / Rodrigo Jordy

\_\_\_\_\_  
Signature/Date  
Name/Title

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.

<b>Name/Title</b>	<b>Contact Information</b>
Larry Vail Project Leader	Email: <a href="mailto:Lawrencedvail@gmail.com">Lawrencedvail@gmail.com</a> Phone: 845 642 5044
Brent Turrin Project Quality Assurance/Quality Control Manager	Email: <a href="mailto:bturrin@rci.rutgers.edu">bturrin@rci.rutgers.edu</a> Phone: (732) 445-3177
Susy King NEIWPC Project Officer	Email: <a href="mailto:sking@neiwpc.org">sking@neiwpc.org</a> Phone: 978-349-2506
Robert Tompkins Safety Coordinator	Email: <a href="mailto:roberttompkins@earthlink.net">roberttompkins@earthlink.net</a> Phone: (845) 735-7655
Margie Turrin Field Sampler	Email: <a href="mailto:mkt@ldeo.columbia.edu">mkt@ldeo.columbia.edu</a> Phone: (845) 365-8494
Rodrigo Jordy Data, Field, Lab	Email: <a href="mailto:75roddy75@gmail.com">75roddy75@gmail.com</a> Phone: (732) 299-4505
Anna Gravina Data, Field, Lab	Email: <a href="mailto:gravinas@juno.com">gravinas@juno.com</a> Phone: (609) 310-2560

Title: **Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Revision Number: 2

Date: 29 Nov 2014

**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.

<b>Name</b>	<b>Title</b>	<b>Organizational Affiliation</b>	<b>Responsibilities (specific to this project)</b>
Larry Vail	Project Leader	Sparkill Creek Watershed Alliance	Coordinate sampling; write reports, review data,
Brent Turrin	Project Quality Assurance/Quality Control Manager	Rutgers Univ./SCWA	Oversee student(s), review data and test quality; review equipment.
Robert Tompkins	Safety Coordination	Sparkill Creek Watershed Alliance	Review safety training and plan; coordinate with other safety responsible team members
Anna Gravina/Rodrigo Jordy et al	Field Personnel	Rutgers Univ and SCWA	Sample collection, chem-phys data reading and recording
Anna Gravina/Rodrigo Jordy	Data Entry	Rutgers Univ	Data entry, data compilation.
Anna Gravina/Rodrigo Jordy/Brent Turrin	Laboratory Personnel	Rutgers Univ	Transport sample to lab, initiate and finalize test
Laurie Peek Rob Sturgeon Robert Tompkins Margaret Grace Margie Turrin Larry Vail Brent Turrin Kieran Mackin Nate Aurell	Field Sampler	Sparkill Creek Watershed Alliance	Field Sampling including back-up

## **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.

Sample site selection:

#### Background

For several years the Sparkill Creek Watershed Alliance has collected samples during warmer months of the year at sixteen sites along and near the main stem of the Sparkill Creek for Riverkeeper Inc. Their analysis shows that the enterococcus is frequently present at unacceptable levels especially after rain events. The enterococcus counts are frequently above “normal”, at least two orders of magnitude above the acceptable limit. These results agree with prior sampling and testing at a few sites during prior years. The results to date are surprising in that 1) no point sources are evident – high counts appear at every one of the 16 sample locations; 2) trends are similar, though not identical, at locations on different reaches of the stream, in different natural area types and in different levels of manmade development.

Selection of sampling sites for the current project seeks to widen the scope of testing sites and to attempt to isolate and identify possible entero sources. Sixteen sites were chosen to:

- 1 Correlate to previous test sites – six of the project sample are at sites previously sampled. These samples will also provide data for comparison to data collected at new sampling sites.
- 2 Headwaters - Exploration of areas further from development than previously tested
- 3 Storm and surface water – collection of surface water and small tributaries before it enters the stream
- 4 Above the Sparkill basin – Sampling of tributaries at higher elevation than the immediate basin at the main stem which contains multiple sewer main lines.
- 5 Septic only – a few areas in the watershed are served only by septic fields, not sewers.
- 6 New Jersey – more testing in New Jersey where little data were previously collected. This tributary of the Sparkill is also served by a different sewer district.

Title: **Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Revision Number: 2

Date: 29 Nov 2014

Location, access and estimated sample time requirements are in the following table:

	Site Name	Latitude	Longitude	Access	Sample time max (minutes)
1	Tweed	41.070922°	-73.928047°	Easy to sample directly from bank at culvert. parking close	15
2	Marsico	41.066367°	-73.940733°	Easy to sample directly from bank at culvert. parking close	15
3	Inertia Switch (main stem)	41.054469°	-73.945072°	Easy to sample directly from bank. parking close; Short walk upstream;	15
4	Blauvelt Arm	41.054333°	-73.945150°	as Inertia Switch; walk through stream to trib.	15
5	Blauvelt Arm at 303	41.055150°	-73.947250°	Permission pending to sample directly from bank.	25
6	Blauvelt Arm at upstream detention	41.059017°	-73.956067°	Short walk from Murphy St; easy sampling from bank;	25
7	Trib 9a at confluence	41.039033°	-73.937267°	Short walk through swampy forest. Precise location tbd; to be sampled from bank	30
8	Trib 9a at 340	41.039980°	-73.935170°	Down slope to stream; Easy to sample directly from bank at culvert. parking close	15
9	Trib 9a at Kings Hwy	41.041500°	-73.931010°	Easy to sample directly from bank at culvert. parking close	15
10	Sparkill Brook	41.007630°	-73.939970°	Short walk from road /parking. Easy to sample directly from bank at culvert.	15
11	Sparkill Brook at Paris Ave	41.003410°	-73.940650°	Easily from road; parking close	15
12	Closter Rd	41.008220°	-73.918650°	Easy to sample directly from bank at culvert. parking close	15
13	Rt. 340 Sparkill	41.025760°	-73.927160°	Easy to sample directly from bank at culvert. parking close	15
14	Graney Gardens Outfall	41.026830°	-73.927760°	Short walk from road. Sample from outfall pipe. May require boots in shallow water. Alternatively, short pole.	25
15	Skating Pond	41.029310°	-73.925410°	Easily from road; parking close	15
16	Ferdon Outfall	41.034290°	--73.919650°	Easily from road at surface runoff to catch basin; parking close.	15

Title: **Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Revision Number: 2

Date: 29 Nov 2014

These site selection criteria are summarized below:

	Site Name	Correlate Existing Tests	Extend to Headwaters	Storm and Surface Water	Above Sparkill Basin	Septic Only	New Jersey
1	Tweed						
2	Marsico						
3	Inertia Switch (main stem)						
4	Blauvelt Arm						
5	Blauvelt Arm at RR						
6	Blauvelt Arm at upstream detention						
7	Trib 9a at confluence						
8	Trib 9a at 340						
9	Trib 9a at Kings Hwy						
10	Sparkill Brook						
11	Sparkill Brook at Paris Ave						
12	Closter Rd						
13	Rt. 340 Sparkill						
14	Graney Gardens Outfall						
15	Skating Pond						
16	Ferdon Outfall						

Title: **Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Revision Number: 2

Date: 29 Nov 2014

**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.

Personal safety equipment; supplies
Sample collection equipment
Boots; gloves
YSI Pro Plus handheld instrument
Cables and probes for YSI instrument
Miscellaneous Supplies



**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.

<b>Personnel/Group to be Trained</b>	<b>Description of Training</b>	<b>Frequency of Training</b>
All	Proper use of YSI 556 MPS, GPS unit and water sampling equipment. Instruction on lab analyses	Session at the beginning of the sampling season
Project leader, QA manager, Lead samplers, Data entry and Lab personnel and selected Fiedl samplers	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.

<b>Person</b>	<b>Specialized Experience</b>	<b># of Years of Experience</b>

Title: **Sparkill Creek Citizen Science Pathogen Indicator Test Plan**

Revision Number: 2

Date: 29 Nov 2014

**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.

Our training for collection of these data and acceptability indicates when the integrity of the data may be in question. It is our intention to note any excursions from procedure at the time it is collected so its integrity can be subsequently evaluated. Should these criteria or other circumstances bring the data quality into doubt we will segregate the data in question and consult with out EPA and grant partners about its value for use. We expect to fully use only the data that is found acceptable by all of the involved partners.