

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER MONITORING AND STANDARDS ELEMENT
BUREAU OF FRESHWATER AND BIOLOGICAL MONITORING
P.O. Box 420; Mail Code 35-01
TRENTON, NEW JERSEY

Quality Assurance Project Plan
2021 Summer Ambient Surface Water Bacterial Monitoring Program

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1.0 Project Name: 2021 New Jersey Summer Ambient Surface Water Bacterial Monitoring Program

2.0 Requesting Agencies: United States Environmental Protection Agency (USEPA), and New Jersey Department of Environmental Protection (NJDEP)

3.0 Date of Project: May-September, 2021

4.0 Project Fiscal Information: Job Number 7W106CXX, Activity Code V38A

5.0 Project Oversight:

Project Officer: Anna Signor (AnnaMarie.Signor@dep.nj.gov), NJDEP-BFBM
Project Supervisor: Dean Bryson (Dean.Bryson@dep.nj.gov), NJDEP-BFBM
Project Data Manager: Leigh Lager (Leigh.Lager@dep.nj.gov), NJDEP-BFBM

6.0 Quality Assurance Officer

Melissa Hornsby (Melisaa.Hornsby@dep.nj.gov), NJDEP-Office of Quality Assurance (OQA)

7.0 Project Background

The monitoring design aligns with current Surface Water Quality Standards (SWQS) and the current primary contact recreational use assessment approach, with monitoring in one Water Region for two consecutive years. This sampling in 2021, is the second of the two years in the Atlantic Water Region. Collection of samples in two consecutive years and the regional sampling approach is consistent with the rotating basin approach as described in the 2016 New Jersey Integrated Water Quality Methods Document (http://www.nj.gov/dep/wms/bears/docs/2016_methods.pdf).

8.0 Project Description

This project collects ambient bacterial water quality data at freshwater rivers and streams of New Jersey to assess the primary contact recreational use standard. The current primary contact recreational use standard for freshwater in New Jersey is based on *Escherichia coli* (*E. coli*) levels. *E. coli* counts shall not exceed a geometric mean of 126 per 100 ml. To assess this criterion, at least 5 samples will be collected over a 30-day period.

9.0 Project Objectives

The objective of the ambient bacterial monitoring program is to (1) assess whether primary contact recreation standards are being met, as defined in New Jersey's Surface Water Quality Standards (SWQS), N.J.A.C. 7:9B, re-adopted October, 2016, last amended April, 2020, (2) evaluate status of bacterial concentrations, as specified in the NJDEP/USEPA Performance Partnership Agreement (PPA), (3) expand our ambient *E. coli* database, and (4) supplement NJDEP's database of ambient stream water temperatures.

This data will be used to report water quality conditions in the biennial "Integrated Water Quality Monitoring and Assessment Report", pursuant to sections 305(b) and 303(d) of the federal Clean Water Act, specifically to assess the fresh (FW2) waters, which are designated for primary contact recreational use, and to focus watershed management initiatives in areas with violations of surface water quality criteria.

10.0 Monitoring Network Design

The targeted site list is based on data needs provided by NJDEP's Bureau of Environmental Analysis, Restoration, and Standards (BEARS). Data is needed at these sites to assess the respective HUC14, where data is lacking or existing data is insufficient to determine recreational use attainment, or where additional data is needed for listing or delisting purposes. Data can also be utilized to update and inform current fecal coliform TMDLs. The complete site list, which includes GPS coordinates, can be found in Appendix A, Table 1.

To conform to SWQS and the Integrated Report methods document, each site will be sampled five (5) times over thirty (30) days. SWQS has adopted *E. coli* as the public health sanitary indicator for all freshwaters (FW1, FW2, PL) in New Jersey. Because this is an ambient monitoring program, no attempt will be made to target or avoid rainfall impacted conditions. Ambient water temperature of the stream will be recorded concurrent with sample collection.

11.0 Special Training Needs

All persons, including DEP staff or external partners, assisting in collecting samples for this project will be trained in the proper techniques. The training will entail safety measures, collection of a representative sample and temperature reading, sample labeling, completing paperwork, sample storage, and decontamination of sampling gear. The Project Officer or Project Manager will be responsible for all training. GIS maps showing the proper location of each sampling site and GPS coordinates, will be provided to the sampler.

Safety training and safety requirements will comply with Bureau of Freshwater and Biological Monitoring's Field Work Health and Safety Plan (HASP) Version #2, August 2019 and any amendments related to Covid safety.

12.0 Collection of Samples

12.1 Assistance of External Organizations

This project has previously used external partners such as county health departments to facilitate the collection of the samples and to ensure that the samples are received at the laboratory within the required 8-hour holding time. For 2021, due to the pandemic, BFBM staff will be collecting all samples.

12.2 Sampling Procedure

Collecting samples at the correct site locations is essential. Detailed aerial photography maps and GPS coordinates of each site location will be made available to all samplers. To obtain consistent data, samplers must collect samples at the correct and same site location for each of the five sampling events. To ensure the locational accuracy, GPS verification will be required.

Critical to the success of this project is that all sample collectors are properly trained to collect a representative grab sample, correctly label the sample, complete laboratory sample submittal form, take an accurate water temperature reading, and maintain the integrity of the sample by placing in a cooler of ice. Sample collection will follow guidance provided in NJDEP's Field Sampling Procedures Manual, 2005. Samples will be collected directly into a sterile, plastic single-use bacteriological containers. The samples will be collected as a center-of-flow grab sample by carefully wading into the stream to prevent disturbing the stream bottom upstream of the collection point. Containers will not be rinsed. Wearing protective gloves, the closure of the sample container is removed. Facing upstream, the sample container will be inverted to avoid any surface scum and submerged to a depth of 15 to 30 cm (6 to 12 inches) below the surface,

or mid-depth if stream is shallow. The opening of the sample container will then be turned into the current, allowing water to enter and air to exit. If the water body is slowly moving or stagnant, an artificial current can be created by moving the container horizontally in the upstream direction. An air space will be left in the container to enable the sample to be properly mixed before analysis. Containers will be filled to the shoulder, slightly above the 100ml line which will provide the minimum volume (101ml) required by the laboratory to analyze the sample at the required dilutions. The sample container will then be tightly closed, labeled, and placed in a cooler of ice for transport to the laboratory. If a stream cannot be safely waded due to steep or slippery stream banks or fast-flowing or deep water, collecting the sample from a bridge is allowable using a weighted sampler attached to a rope. Samples must be received at the NJDOH laboratory to allow for the initiation of analyses within eight (8) hours of collection.

NJDEP-BFBM will provide samplers a digital thermometer to obtain a water temperature at each site concurrent with each sample collection. Samplers will only use a NJDEP-supplied thermometer to take temperature measurements. The sample collection time and the time of temperature reading are the same unless otherwise noted.

12.3 Field Precautions for Aquatic Invasives

If more than one site is sampled on a given day, sampling gear, such as waders, will be decontaminated after each site to prevent possible transport of invasive aquatic species. A new set of disposable gloves will be used at each site. At a minimum, decontamination will consist of thoroughly rinsing gear (waders and weighted sampler, if used) with clean, fresh water.

13.0 Data Quality/ Quality Control Requirements

13.1 Field Measurements

NJDEP-BFBM (#11896) is certified by the Office of Quality Assurance (OQA) for measuring water temperature (N.J.A.C 7:18 “Regulations Governing the Certification of Laboratories and Environmental Measurements”). NJDEP-BFBM will obtain and provide each sampler with a digital thermometer which has an accuracy of at least $\pm 1^{\circ}\text{C}$. These thermometers will be calibrated against a NIST-certified thermometer prior to distribution and again at the end of each five-week sampling period to ensure accuracy. Records of calibration will be maintained by BFBM in a bound logbook.

13.2 Sample Analysis

Samples will be analyzed by the New Jersey Department of Health’s (NJDOH) Public Health and Environmental Laboratory (#11036) using method SM 9223B (Colilert) for *E. coli*. Quality control procedures (including required calibrations and quality control procedures required by regulation or by the method) shall be defined in the laboratory’s Quality Manual for Sanitary Bacteriology (QM), or Standard Operating Procedures (SOPs). The QM and SOPs must be approved by the NJDEP-OQA.

To sufficiently quantify the range for all streams, the suggested dilutions are as follows. Using *E. coli* method SM 9223 B (Colilert), no dilution is required to quantify the range $<1\text{-}2419.6$ MPN/100 ml. A 1:100 dilution is required to quantify the range $2,419.6\text{-}241,960$ MPN/100 ml. These dilutions will allow for the quantification of *E. coli* at concentrations typically found in New Jersey streams. Also, as per the laboratory’s QM, a 290 ml sample will be provided for internal laboratory quality control procedures for 5% of samples submitted (1 for every 20 samples, or weekly, if less than 20 samples are collected during a given week).

14.0 Data Analysis

Final data tabulation will occur at the end of the sampling season. In addition, a copy of the laboratory results will be provided to the participating external organizations for review. The data will also be made available to NJDEP-BEARS for inclusion in the biennial Integrated Water Quality Monitoring and Assessment Report.

15.0 Sampling Schedule

Five (5) samples, collected over a 30-day period, are needed to calculate the geometric mean. Most, 53 of the 67 sites, were also sampled in 2020. Due to the Covid pandemic, the sampling schedule for 2020 was shortened, and all planned sampling could not be performed.

16.0 Resource Needs: BFBM will utilize hourly staff to complete this project.

17.0 Quality Assurance

17.1 Laboratory

NJDOH's Public Health and Environmental Laboratory- Sanitary Bacteriology will use method SM 9223-B (Colilert) for *E.coli*. The NJDOH laboratory (#11036) is certified by NJDEP-OQA for this method for the analysis of ambient freshwater samples. The NJDOH laboratory is located at 3 Schwarzkopf Drive, Ewing, NJ.

17.2 Sample Containers, Preservation, and Holding Times

Sterile 150 ml single-use plastic sampling containers will be provided by NJDOH laboratory. Immediately after collection, samples will be placed in a cooler of ice and kept below 10°C. Samples will be delivered to the laboratory to allow for initiation of analyses within the eight-hour holding time. Larger volume (290 ml) sterile single-use plastic bottles will be utilized in providing additional sample volume for 5% of the samples submitted, per the laboratory's internal quality control procedures.

17.3 Sample Custody Procedures

All persons collecting, handling, or transporting the samples to the NJDOH laboratory will complete the appropriate section at the bottom of the Bact-44 form, prior to relinquishing the samples, with name, signature, and date/time of sample transfer.

18.0 Data Validation

The NJDEP Project Officer is responsible for all data validation. If apparent anomalous data is suspected, the Project Officer will review the sampling procedures with the field sampler to make sure the proper collection and preservation procedures were followed. If the data is still suspect, the NJDOH laboratory will be contacted. An internal review of the laboratory analytical procedures and/or calculations used in the analysis of the suspect sample, with special emphasis on transcription of data to assure that no transposition of figures occurred, will be conducted. If no problems are found in the analytical laboratory procedures, the data may then be compared to any historical data that might have been collected at the same site prior to the most recent sampling event to see if similar anomalies might have been found previously. The suspect data may also be compared to literature values or standard analytical treatises to verify whether the results are within the limits of accuracy of the test method.

If no obvious problems are found after these reviews, the complete data set will be reported with the suspect data identified as such. The BFBM will then conduct its own review of the data, as it relates to the objectives(s) and data accuracy required in this project.

19.0 Data Storage

Water quality data will be uploaded into New Jersey's Water Quality Data Exchange (WQDE) and USEPA's water quality data system, WQX, by June of the year following receipt from the analytical laboratory. All raw data records shall be maintained for a period of no less than five years.

20.0 Performance System Audits

20.1 Field Audits

The Project Officer will conduct random field audits of samplers. This field audit will focus on: (1) are the correct locations being sampled, (2) are the correct sample collection procedures being used and (3) is the field paperwork being completed correctly with all necessary information being entered. Also, samplers are subject to periodic, random audits by NJDEP-OQA personnel to ensure sampling is conducted per procedures listed in this QAPP.

20.2 Laboratory Audits

All New Jersey certified laboratories are subject to audits and to the requirements of the NJDEP-OQA's Laboratory Certification Program, as well as internal performance evaluations.

21.0 Data Reporting

21.1 Preliminary Reports

Preliminary analytical data will be made available to BFBM by the NJDOH laboratory in electronic format within 21 calendar days from receipt of sample. Samples which yield results considered anomalous by the Project Officer and/or Project Manager will be validated as specified in section 18.0, Data Validation.

21.2 Final Reports

Final analytical data will be made available to NJDEP-BFBM by NJDOH in electronic format within 40 calendar days of receipt of the sample. All data shall be reported in a complete and concise fashion and shall meet the reporting requirements of N.J.A.C. 7:18. Routine quality control results must be retained on file by NJDOH for possible review by the NJDEP-BFBM and the NJDEP-OQA.

22.0 Corrective Action

The Project Officer will be responsible for the oversight of all activities related to this project. The Project Officer will assess field collection functions and make corrections when necessary to maintain the data accuracy as defined in this plan. If any changes or modifications are made to this plan regarding data collection, as it relates to the objective(s) and data accuracy required in this project, all original signees of the QAPP will be notified.

Appendix A Data Management Tables

For Data Management purpose, Water Chemistry is defined as parameters analyzed by a laboratory; Field measurements are defined as analyze-immediately parameters.

Table 1 Site List

Station ID (WQDE compliant and referenced)	Waterbody/ Location	County	Latitude	Longitude	Site exists in WQDE already?	Location Type
AN0626	Penny Pot Stm at Eighth St in Folsom	ATLANTIC	39.580055	-74.817388	Yes	River/Stream
01411071	Hospitality Br on RR track near Rt 54 in Folsom	ATLANTIC	39.588219	-74.858155	Yes	River/Stream
01411000	Great Egg Harbor R at Folsom	ATLANTIC	39.5946	-74.8518	Yes	River/Stream
AN0648	Tuckahoe R near Estelle Manor	ATLANTIC	39.372222	-74.853444	Yes	River/Stream
AN0646	Stephens Ck on Rt 50 in Estell Manor	ATLANTIC	39.393833	-74.748194	Yes	River/Stream
AN0591	Elliot's Ck at Bremen Ave in Galloway	ATLANTIC	39.544722	-74.606361	Yes	River/Stream
AN0592	Landing Ck at Indian Cabin Rd in Egg Harbor City	ATLANTIC	39.556806	-74.602861	Yes	River/Stream
01409410	Albertson Bk at US HWY 206	ATLANTIC	39.694694	-74.743972	Yes	River/Stream
AN0568G	Gun Br at US Hwy 206	ATLANTIC	39.698744	-74.753187	Yes	River/Stream
AN0639	Watering Race at Rt 50 in Hamilton	ATLANTIC	39.472750	-74.715278	Yes	River/Stream
01411140	Deep Run on Rt 559 Hamilton in Weymouth	ATLANTIC	39.507222	-74.781944	Yes	River/Stream
01411110	Great Egg Harbor R at Weymouth	ATLANTIC	39.513870	-74.779660	Yes	River/Stream
AN0634	Three Pond Bk at Rt 54 in Buena Vista	ATLANTIC	39.581083	-74.867250	Yes	River/Stream
AN0632	Marsh Lake Br (Collings Br) at Blue Anchor Rd in Buena Vista	ATLANTIC	39.589833	-74.881472	Yes	River/Stream

AN0610	West Branch Bass R near New Gretna	BURLINGTON	39.624167	-74.446111	Yes	River/Stream
AN0609A	Ives Branch at Rt. 542	BURLINGTON	39.613701	-74.488305	Yes	River/Stream
AN0607A	Beaver Branch at Rt. 679 (Chatsworth Rd.)	BURLINGTON	39.648647	-74.506897	Yes	River/Stream
AN0586	Batsto R on Rt 542 (Quaker Bridge Rd) in Washington Twp	BURLINGTON	39.709639	-74.666333	Yes	River/Stream
AN0563	Wesickaman Ck at Atsion-Quakerbridge Rd in Shamong	BURLINGTON	39.741083	-74.723361	Yes	River/Stream
01409455	Springers Bk on Hampton Rd in Shamong Twp	BURLINGTON	39.755409	-74.696220	Yes	River/Stream
AN0586A	Batsto R at Hampton Furnace	BURLINGTON	39.770951	-74.679601	Yes	River/Stream
AN0561	Mullica R at Indian Mills	BURLINGTON	39.776278	-74.798750	Yes	River/Stream
AN0582	Indian Mills Bk at Indian Mills	BURLINGTON	39.793056	-74.746389	Yes	River/Stream
AN0579	Batsto R at Carranza Rd in Shamong	BURLINGTON	39.800667	-74.672444	Yes	River/Stream
0140940480	Clark Br near Atsion	CAMDEN	39.714722	-74.773333	Yes	River/Stream
AN0565	Hays Mill Ck near Chesilhurst	CAMDEN	39.750667	-74.840983	Yes	River/Stream
01410784	Great Egg Harbor R on Williamstown-New Freedom Rd (Rt 536 spur) in Sicklersville	CAMDEN	39.733800	-74.951300	Yes	River/Stream
AN0652	Mill Ck at Rt 557 in Upper	CAPE MAY	39.284333	-74.792000	Yes	River/Stream
01411299	Tarkiln Bk near Head of R	CAPE MAY	39.305278	-74.832222	Yes	River/Stream
AN0630	White Oak Br at Jackson Rd in Monroe	GLOUCESTER	39.596389	-74.918111	Yes	River/Stream

AN0629	Faraway Br at Jackson Rd in Monroe	GLOUCESTER	39.616222	-74.936028	Yes	River/Stream
01410820	Great Egg Harbor R on Rte 723 (Williamstown-Winslow Rd) in Monroe Twp	GLOUCESTER	39.669170	-74.913330	Yes	River/Stream
BFBM000158	Waackaack Ck On Middle Road	MONMOUTH	40.423220	-74.135442	Yes	River/Stream
01407821	Manasquan R at Georgia Road near Georgia	MONMOUTH	40.211667	-74.295833	Yes	River/Stream
AN0459	Flat Ck at Middle Rd in Hazlet	MONMOUTH	40.427056	-74.174889	Yes	River/Stream
AN0536A	Tice Van Horn Branch at Congasia Rd, Manchester Twp	OCEAN	39.949782	-74.333063	Yes	River/Stream
AN0536	Wrangel Bk at Congasia Rd in Manchester	OCEAN	39.972806	-74.324028	Yes	River/Stream
01408460	Manapaqua Br at Lakehurst	OCEAN	40.012320	-74.302500	Yes	River/Stream
BFBM000086	Ridgeway Branch Tributary On Route 547	OCEAN	40.032669	-74.306646	Yes	River/Stream
AN0603	Oswego R on Rt 539 near Brookville in Warren Grove	OCEAN	39.775889	-74.367401	Yes	River/Stream
BFBM000084	Oyster Ck Tributary On Route 532	OCEAN	39.798402	-74.250711	Yes	River/Stream
AN0550	Long Br of NB Forked River	OCEAN	39.817250	-74.292833	Yes	River/Stream
BT06a	Cedar Ck at Lanoka Harbor	OCEAN	39.871111	-74.173889	Yes	River/Stream
AN0547	Factory Br at Whiting Lacey Rd in Lacey	OCEAN	39.881167	-74.275194	Yes	River/Stream
AN0540	Davenport Br at Lacey Rd in Lacey	OCEAN	39.926667	-74.338333	Yes	River/Stream

AN0557	Westecunk Ck at Forge Rd in Eagleswood	OCEAN	39.666556	-74.320250	Yes	River/Stream
AN0556	Cedar Run at Rt 9 in Stafford	OCEAN	39.680278	-74.270833	Yes	River/Stream
BFBM000081	Four Mile Branch On Littleworth Mill road	OCEAN	39.707465	-74.266885	Yes	River/Stream
01409150	Mill Ck on Rt 72 in Manahawkin	OCEAN	39.715000	-74.282222	Yes	River/Stream
BFBM000104	Long Swamp Ck at Toms R	OCEAN	39.953889	-74.166111	Yes	River/Stream
01409305	Mill Br on Nugentown Rd in Nugentown	OCEAN	39.610417	-74.349954	Yes	River/Stream
AN0559A	Tuckerton Ck at Poor Mans Pkwy in Little Egg Harbor	OCEAN	39.642341	-74.362923	Yes	River/Stream
AN0548	Cedar Ck at Double Trouble St Pk in Berkeley	OCEAN	39.894056	-74.225194	Yes	River/Stream
AN0615	Mattix Run on Old Port Republic Rd in Galloway Twp	ATLANTIC	39.494278	-74.479250	YES	River/Stream
AN0618	Mill Br on Spruce Av in Egg Harbor Twp	ATLANTIC	39.395722	-74.593194	YES	River/Stream
AN0642	Miry Run at Thelma Ave in Egg Harbor	ATLANTIC	39.405639	-74.691444	YES	River/Stream
AN0648	Tuckahoe R near Estelle Manor	ATLANTIC	39.372222	-74.853444	YES	River/Stream
AN0560A	Alquatka Br at off Jackson Rd., Wharton St Forest	BURLINGTON	39.784211	-74.807137	YES	River/Stream

AN0586	Batsto R on Rt 542 (Quaker Bridge Rd) in Washington Twp	BURLINGTON	39.709639	-74.666333	YES	River/Stream
AN0588	Batsto R at Batsto	BURLINGTON	39.642014	-74.649883	YES	River/Stream
AN0595	Wading R W Br at Chatsworth	BURLINGTON	39.814444	-74.547028	YES	River/Stream
AN0597	Shoal Br at Jones Mill Rd in Woodland	BURLINGTON	39.776472	-74.508556	YES	River/Stream
AN0597A	Shoal Br at off Rt. 532 in Woodland	BURLINGTON	39.814563	-74.478484	YES	River/Stream
AN0600	Tulpehocken Ck near Jenkins	BURLINGTON	39.714389	-74.565889	YES	River/Stream
BFBM000297	Alberta Lake Outlet at Taylor Ave	MONMOUTH	40.073444	-74.114806	YES	River/Stream
AN0513	Beaverdam Ck at Rt 88 in Brick	OCEAN	40.073444	-74.114806	YES	River/Stream
BT09	Forked River, S Br	OCEAN	39.820379	-74.203128	YES	River/Stream

Table 2 Sample Types

STATION ID	Field Msr/Obs	Flow	Water Chemistry	Continuous Monitoring	Biological Sampling	Sediment Collection	Bacteria Collection	Habitat	Metrics	Indices
All Sites	Yes	No	No	No	No	No	Yes	No	No	No

Table 3 Partners

Station ID	Field Measurements/ Observations	Flow	Water Chemistry	Continuous Monitoring	Biological Sampling	Sediment Collection	Bacteria Collection
All Sites	NJDEP-BFBM	No	No	No	No	No	NJDEP-BFBM

Table 4 Field Measures

<u>Field Name</u>	<u>WQDE Name</u>	<u>Media</u>	<u>Units</u>
Water Temp	Temperature, Water	Water	deg C

Table 5 Chemical Parameter Table

Analysis (lab name)	EPA Characteristic Name	Method Speciation Name	Result Sample Fraction	Result Measure Unit	Result Value Type	Sample Collection Type	Sample Collection Equipment
E. Coli	Escherichia coli			#/100ml	Actual	Grab	Water Sampler (Other)

Table 6 Laboratory Worksheet

Parameter	Laboratory	Lab #	Method	Method ID Context	Lower Reporting Limit	Units	Method Detection Limit	Units	Upper Reporting Limit	Units	Holdin g Time	Preservative
E. coli	NJDOH	11036	9223-B	SM	1 MPN/100 ml	#/100 ml			241,960 MPN/ 100ml	#/100 ml	8 hours	Ice <10°C

Table 7 Data Inventory Supplement

Geographic Regions	River Basins- Great Egg Harbor, Mullica, Barnegat Bay, Monmouth, Cape May
Counties	Monmouth, Ocean, Burlington, Atlantic, Cape May, Gloucester, and Camden
Dates	May 1- September 30, 2021
Status	In progress- discrete
Sample Frequency	Periodic
Seasons Sampled	Spring; Summer; Fall;
Waterbody Type	River/Stream
Salinity Category	Fresh
Tidal Influence	Non-tidal;
Project Description	<p>This project collects ambient bacterial water quality data for freshwater rivers and streams of New Jersey. The current primary contact recreation use standard for freshwater in New Jersey is based on Escherichia coli (E. coli) levels. E. coli counts shall not exceed a geometric mean of 126 per 100 ml. To assess this criterion, at least 5 samples collected over a 30-day period, between the months of August and October, are needed to calculate the geometric mean.</p>
Parameters analyzed type	Microbiological/pathogenic

Table 8 Data Management Supplement

QAPP network path file location?	V:\LUM\BFBM\Bfbm\Quality Assurance Plans\Calendar Year 2021 QAPPS\
Where will data be recorded in field (media)	Paper
If on tablets or phones, will download at office occur or will you connect wirelessly?	N/A
If on tablets or phones, who will do the download?	N/A
If data collected electronically, where will it be stored?	N/A
Format to be received from Lab	Data Feed
Method of receipt from lab/s	Electronic
Personnel receiving outside lab data	BFBM
Is data expected to go to WQDE/WQX?	Yes
Data manager - (Bureau and Name)	BFBM, Leigh Lager

Appendix B- NJDOH Bacteriology Laboratory Sample Submittal Form

Field ID Number

New Jersey Department of Health
Sanitary Bacteriology Laboratory
PO Box 361, Trenton, NJ 08625-0361
Phone: 609-530-8395

Lab Sample Number
(For Lab Use Only)

BACTERIOLOGICAL SAMPLE SUBMITTAL

(See Instructions)

AGENCY INFORMATION

Submitting Agency	Send Results To	Agency No.	Project Name
Street Address	Final Report Option <input type="checkbox"/> Tier 1 <input type="checkbox"/> Tier 2	Would you like copies of the internal chain of custody forms sent with your report? <input type="checkbox"/> Yes <input type="checkbox"/> No	Project Code
	Electronic Report Option <input type="checkbox"/> EDD <input type="checkbox"/> E-2		Memo Number
City, State, Zip Code	Phone	Fax	Email

SAMPLE INFORMATION

Facility ID/Sample Point/Station ID Number	Collection Date (YY/MM/DD) ___/___/___	Sample Type Non-Potable: <input type="checkbox"/> Stream/Surface <input type="checkbox"/> Ground Water <input type="checkbox"/> Private Well <input type="checkbox"/> Septic <input type="checkbox"/> Ocean/Saline <input type="checkbox"/> Sediment Potable: <input type="checkbox"/> Groundwater Rule <input type="checkbox"/> Source <input type="checkbox"/> Confirmation <input type="checkbox"/> Raw <input type="checkbox"/> Finished <input type="checkbox"/> Private Well Fraction: <input type="checkbox"/> Total <input type="checkbox"/> Dissolved Other: <input type="checkbox"/> _____ Priority: <input type="checkbox"/> Routine <input type="checkbox"/> Priority <input type="checkbox"/> Emergency
Sampling Point ID/Sampling Site/Facility/Supply/Location	Coll. Time (24h) Start Coll. Time (24h) End ____	
Waterbody Name	Sample Retention Retain? <input type="checkbox"/> No <input type="checkbox"/> Yes Duration _____	
Municipality/County	Type of Sampling Event <input type="checkbox"/> Regular <input type="checkbox"/> Compliance <input type="checkbox"/> Repeat <input type="checkbox"/> Non-Regulatory <input type="checkbox"/> Other	
Sampling Point Street Address	If Repeat or GWR, List Original Lab Sample No. _____ Sample Collector _____	
PWSID	Trip # _____	

FIELD INFORMATION

Air Temp °C	Water Temp °C	Stream Flow-CFS
Weather Conditions	Sample pH (Field)	Gage Height-Ft.
Preserved in: <input type="checkbox"/> Field <input type="checkbox"/> Lab Date: ___/___/___ Time: _____	DO (mg/l)	Spec.Cond. (µS/CM)
	DO% Sat	Salinity (ppm)
Rain Events Rain in the last 24 hours? <input type="checkbox"/> Yes <input type="checkbox"/> No Rain in the last 48 hours? <input type="checkbox"/> Yes <input type="checkbox"/> No	Sample Depth Ft.	Tide Stage
	Barometric Pressure (mmHg)	Turbidity (NTU)
Comments	Chlorine Residual	

ANALYSIS REQUESTS

Suggested Dilutions <input type="checkbox"/> Fecal Coliform/100 ml <input type="checkbox"/> MPN SM9221E <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6		Suggested Dilutions <input type="checkbox"/> Fecal Coliform by A1 <input type="checkbox"/> MPN SM9221E <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6	
<input type="checkbox"/> Fecal Streptococci/100 ml <input type="checkbox"/> MPN SM9230B <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6		<input type="checkbox"/> Enterococci / 100 ml <input type="checkbox"/> MPN SM9230B <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6	
<input type="checkbox"/> Total Coliform / 100 ml <input type="checkbox"/> MPN SM9221B <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6		<input type="checkbox"/> Enterococci / 100 mL <input type="checkbox"/> MF SM9230C <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6	
<input type="checkbox"/> Total Coliform E.Coli/ 100 mL <input type="checkbox"/> P/A (Colilert) SM9223B		<input type="checkbox"/> E.Coli / 100 mL <input type="checkbox"/> Enumeration (Colilert) (Non-Drinking Water) SM9223B <input type="checkbox"/> 10 <input type="checkbox"/> 1 <input type="checkbox"/> -1 <input type="checkbox"/> -2 <input type="checkbox"/> -3 <input type="checkbox"/> -4 <input type="checkbox"/> -5 <input type="checkbox"/> -6	
		<input type="checkbox"/> SPC/HPC/ml <input type="checkbox"/> SM9215B	

Relinquished By:	Affiliation:	Received By:	Affiliation:	Date/Time	Reason for Custody Change
Name (Print): _____	_____	Name (Print): _____	_____	_____	_____
Signature: _____	_____	Signature: _____	_____	_____	_____
Name (Print): _____	_____	Name (Print): _____	_____	_____	_____
Signature: _____	_____	Signature: _____	_____	_____	_____

Appendix C- Site Overview Map

