

Quality Plan for the Water Quality Restoration Program

**Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection**

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Signature Page

The undersigned have read and understood this Quality Plan, are charged with managing and improving the Quality System, and are responsible for ensuring that all staff properly execute the procedures discussed in the plan.

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Introduction

Within the Florida Department of Environmental Protection's (DEP) Division of Environmental Assessment and Restoration (DEAR), the Water Quality Restoration Program (WQRP) is responsible for developing and managing basin management action plans (BMAPs), which are a mechanism for the collaborative implementation of total maximum daily load (TMDL) restoration goals. This Quality Assurance Management Plan (QAMP) is designed to ensure that data collection, generation, interpretation, reporting, evaluation, and archiving are of sufficient quality to support DEP decision making, because BMAPs are adopted into rule by Secretarial Order. It details the process of planning, training, execution, assessment, and corrective action that DEP undertakes to ensure that environmental data meet WQRP established quality criteria.

The DEP Secretary is committed to the implementation of the quality assurance (QA) requirements in the QAMP and as authorized in Section 403.0623, Florida Statutes (F.S.), and Chapter 62-160, Florida Administrative Code (F.A.C.) (the DEP QA Rule). It is the Secretary's intent to carry out these obligations and requirements as detailed in the DEP QA Directive (Directive 972, Revision November 1, 2016).

All WQRP staff are to read, understand, and follow the procedures and criteria described in this plan, and to carry out their assigned responsibilities for the effective use of the WQRP Quality System.

The WQRP implements the following activities:

- Develops, adopts, and implements BMAPs (water quality restoration plans for the implementation of TMDLs).
- Conducts regular reviews of BMAP implementation progress.
- Adaptively manages and updates BMAP requirements.
- Supports local water quality initiatives through collaboration and technical assistance.
- Reviews and promotes state-of-the-art best management practices (BMPs) to improve water quality.
- Assists the Division of Water Restoration Assistance with reviewing and prioritizing water quality restoration projects.

Basic Elements of the QAMP

The QAMP explains both the process and criteria by which the Quality System is managed. The plan addresses data quality objectives, data review, and data usability for BMAPs. It discusses how specific QA duties are assigned to responsible staff and is used as an instrument of internal communication to inform staff of current and future QA activities.

The Quality Plan should be used as a training document for new staff and as a reference for experienced staff. The plan and its revisions also serve as an archival record of the formal Quality System.

It is important that all WQRP staff and consultants understand and follow the procedures and criteria described in this plan and carry out their assigned responsibilities for the effective use of the Quality System.

The elements of this plan are consistent with the DEP Quality Management Plan, QA Directive, and QA Rule (Chapter 62-160, F.A.C.). DEP will revise the WQRP Quality Plan as needed to ensure the consistent application of procedures and criteria for the generation or use of environmental data.

Policy Statement

WQRP policy is as follows:

- Use the best available, scientifically valid, and most legally defensible data for decisions affecting the protection of the environment.
- Have and implement the Quality System described in this document.
- Adaptively manage the Quality System to be consistent with provisions of the QAMP.
- Ensure that everyone in WQRP is properly trained to execute their assigned functions.
- Perform a yearly systematic assessment of QA activities, including any corrective actions, with the findings submitted to the [Aquatic Ecology and QA Section](#) (for inclusion in the Annual QA Report to the Secretary).

Ethics

All WQRP employees are held to high professional ethical standards in the performance of their duties. As part of the "New Employee Welcome Packet," all employees are required to read, understand, and sign an ethics statement attesting to their commitment to honesty and integrity in

the performance of their duties. In addition, all employees are required to complete an annual ethics training class online. Improper, unethical, or illegal actions will be dealt with according to the published DEP Administrative Directives.

Organization, Function, and Staff Responsibilities

Organization and Function

WQRP resides within DEAR. The function of WQRP is to develop collaborative water quality restoration plans with local stakeholders to implement TMDLs.

Staff Responsibilities

The Basin Coordinators develop BMAPs and maintain coordination with BMAP stakeholders. The coordinators ensure that the Quality System is fully operational within the program, designate a Quality Assurance Officer (QAO), and provide general oversight.

WQRP staff evaluate the Data Quality Indicators (DQIs) (**Appendix A**) and Data Quality Objectives (DQOs) (**Appendices B and C**) to ensure they meet the section's needs, and periodically evaluate the effectiveness of staff's data quality activities. Program staff provide feedback to the QAO for improving the program Quality System.

Anita Stine acts as the WQRP QAO, coordinates and participates in the quality evaluation of program data, and provides oversight to ensure that staff perform their QA functions. The QAO may delegate some responsibilities to properly trained and qualified staff, when appropriate. The QAO relies on quality assurance/quality control (QA/QC) procedures of other programs both within and outside DEAR to ensure that data providers follow the QA Rule (Chapter 62-160, F.A.C.). The QAO also ensures that corrective actions are implemented for data nonconformance incidents, as determined by an evaluation of the data against the program's DQOs.

WQRP staff routinely carry out data interpretation and the generation of DEP work products in a manner that ensures scientific defensibility and adherence to DEP rules and policies. WQRP managers receive a copy of the QA Report to the Secretary, and as needed, discuss findings with the QAO. The QAO also documents all program QA activities to the DEP Aquatic Ecology and Quality Assurance Section on a periodic basis.

WQRP staff also manage updates to the BMAP projects list updated annually as part of the Statewide Annual Report. While this is not a water quality data repository, it does result in a list of load reduction estimates for BMAPs. The BMAP Project Portal was created with quality assurance and quality controls built in for certain fields, which improves the previous free-text approach. All verifications of project efficacy and credit calculations toward required reductions of TN and TP loading to BMAP waters is standardized. Cross training of staff on how to perform verifications is routine and as a result, at least 10 percent of newly verified project reductions added to the dataset annually are double-checked, by internal or external staff, for accuracy and

correct processing. The automated and documented processes in place enhance statewide data consistency, transparency and traceability, improve documentation, and reduce the risk of undetected errors and large-impact reporting changes.

WQRP staff are all responsible for coordinating BMAPs by engaging stakeholders to meet statutory requirements for the restoration of impaired waters and the implementation of TMDLs. Pursuant to 403.067 Florida Statutes (F.S.), BMAPs must include a water quality monitoring component sufficient to evaluate whether reasonable progress in pollutant load reductions is being achieved over time. Stakeholders participating in the BMAP monitoring plan must collect water quality data in a manner consistent with Chapter 62-160, F.A.C., and the DEP standard operating procedures (SOPs) for QA/QC required by rule. Coordinators must understand data gathering and assessment, and often data evaluations are done outside WQRP. Coordinators use these evaluations to continue progress toward meeting TMDLs.

Training for WQRP Staff

All staff are properly trained to perform their duties. WQRP staff do not perform tasks without proper knowledge of the material and oversight or approval from managers or other DEAR professionals. Supervisors periodically assess staff performance in comparison with the policies and procedures of the unit (WQRP).

Training procedures are as follows:

- All staff must take and pass the ethics course upon hire and must take and pass the ethics refresher course each year of employment.
- All WQRP staff will take the online course “DEP Intro to Quality Assurance” once every two years.
- Contract managers will take the “Contract managers: Quality Assurance for Contracts/Grants/Purchase Orders” once every two years, live participation or review of posted slides are both acceptable.
- Upon receiving a new task, staff are mentored by senior staff inside and outside of the section to ensure appropriate methodologies are followed and data quality requirements are met.
- Staff are reminded to review this QAP when it is updated or at least once every 2 years.
- The standard procedures for nutrients projects credits verification are available to the public and staff at this webpage, which is up to date.

<https://floridadep.gov/dear/water-quality-restoration/content/methods-calculating-project-reductions>

Water Quality Data Review – DQOs and DQIs

WQRP and contracted staff understand the need to evaluate the quality and usefulness of environmental data prior to making decisions. Staff conduct the following review procedures to determine whether data are usable for determination of compliance with rules (see **Appendix A** for descriptions). These procedures are based on established DQOs and DQIs, and incorporate the concepts and criteria found in the DEP document [*Process for Assessing Data Usability*](#), DEP-EA-001/07.¹ Staff use this document to evaluate data usability for BMAP needs.

In short, WQRP water quality DQOs are met if data providers follow DEP standard operating procedures (SOPs). WQRP water quality DQIs describe how to use data with data qualifiers as approved by each BMAP Coordinator. DQIs are documented by consultants (see **Appendix A**).

Staff also perform the following tasks:

- If data are deemed inappropriate for use based on failure to meet DQOs and follow state SOPs, coordinators do not use the data for BMAP purposes.
- If data deemed inappropriate for use for BMAP purposes are supplied by data providers who have committed to provide data for BMAP purposes:
 - Coordinators will call or email data providers to let them know their data are not usable and the reasons why.
 - Coordinators will ask data providers to implement corrective measures per DEP SOPs in order to improve and meet DQOs so coordinators can accept future data from these providers for BMAP purposes.
 - Coordinators also coordinate communication between data providers and DEAR sections that can further assist data providers in meeting DQOs as needed.
- Coordinators or their consultants use data for reports, handouts, or presentations prepared for the public to show the status of water quality in BMAP basins.
- Consultants are bound to the same DQOs as WQRP staff.

¹ https://www.flrules.org/gateway/readRefFile.asp?refId=2919&filename=usability_doc%5B1%5D.pdf

Water Quality Data Repositories

WQRP staff and contractors use data from the following repositories for BMAP development and milestone comparisons:

- DEP Florida STOrage and RETrieval (STORET) Database.
- DEP Florida Watershed Information Network (WIN).
- DEP Impaired Waters Rule (IWR)
- DEP OCULUS Electronic Document Management System.
- National Water Information System (NWIS) by USGS
- Data Basin Hydrologic (DBHYDRO) by SFWMD
- Enforcement and Compliance History Online (ECHO) by EPA
- National Atmospheric Deposition Program (NADP) by USGS
- Clean Air Status and Trends Network (CASTNET)
- National Water Information System (NWIS) by USGS
- NOAA National Centers for Environmental Information - Local Climatological

Documentation

Since accurate documentation is a key factor for determining the success of QA activities, WQRP staff carry out the following record-keeping procedures for data review to ensure appropriate documentation.

Contract Management

WQRP ensures that the DEP contracts administered through WQRP are properly managed to assure appropriate data quality in accordance with *Quality Assurance Process for Procurement of Sampling and Analytical Services* (**Appendix B**). Contract managers assure that the work is properly planned and executed, relevant to DEP environmental decision-making needs, and consistent with the DEP QA Rule, DEP SOPs, and by a certified laboratory that meets the certification and other requirements outlined in the SOPs. Staff managing contracts are Florida Certified Contract Manager (FCCM) certified. For sampling and analytical services, the WQRP staff ensure that contract development, scope of services, and review include the provisions of the QA rule and the Quality Assurance Process for Contracts instruction document (**Appendix**

C), *Quality Assurance Requirements for Contracts Standard Field and Lab Services* as appropriate per the tasks described in the contract. The most recent QA for DEP contracts can be found [here](#).

For example, WQRP manages a contract with consulting firms to do data analyses as needed per the tasks described above. When deliverables are provided, each staff member reviews the deliverable they requested for completion.

Audits and Corrective Actions

WQRP does not conduct audits of data providers but considers the audit results from other programs and entities where appropriate in determining data usability.

Purpose of WQRP Contribution to the QA Annual Report

The results of WQRP's assessment of QA efforts, including corrective actions, are relayed to the Aquatic Ecology and QA Section each year, and included in the Annual QA Report to the Secretary.

Appendices

Appendix A: Water Quality Data Processing and Analysis

Methodology Documentation by BMAP type

BMAP assessment is generally coordinated over five types: Fecal Indicator Bacteria (FIB), Northern Everglades and Estuaries Protection Program (NEEPP), Indian River Lagoon Protection Plan (IRLPP), Other Surface Waters, and Outstanding Florida Springs (OFS). QA plans for data and trend analyses for each type of BMAP will be provided here as they are developed.

Water Quality Trend Analysis Process for NEEPP BMAPs

(Caloosahatchee, Lake Okeechobee, and St. Lucie) as of Oct. 2022)

Trend analyses are conducted on available data from Tier 1 and Tier 2 stations in a Northern Everglades and Estuaries Protection Plan (NEEPP) BMAP network from an overall POR that includes five years before BMAP adoption up to the present date of analysis. WIN data for nutrient concentrations were processed using the methods described below, and only data that meet quality control objectives were used in the analyses. Nonparametric statistical techniques were used to identify monotonic trend analyses in a statistically rigorous way with the Seasonal Kendall trend test. Data are not required to conform to a particular distribution for nonparametric analyses. Nonparametric tests are also robust against outliers and large data gaps.

Data Download

Station concentration data were retrieved from WIN for the designated POR of May 1, 2008, through April 30, 2022, for Tier 1 and 2 basin stations.

Data Processing (in order of operation)

Nutrient Characteristic Selection:

- TP: Phosphorus.
- TN: TN or Total Kjeldahl Nitrogen + (Nitrate + Nitrite), whichever was available.

Sample Depth:

- Samples were not filtered by sample depth as only surface water samples were used in this analysis.

Data Qualifiers:

- Data with result qualifiers of "A," "F," "G," "H," "K," "L," "N," "O," "T," "V," "Y," or "?" were not used in the analysis, as per Table 1, Data Qualifier Codes, in Rule 62-160.700, F.A.C., Quality Assurance.
- Data with a result qualifier of "I" were only used if a corresponding minimum detection level (MDL) was listed:
 - Data with qualifier of "I" with corresponding comment "*Present<QL" were not used in the analysis.
- Data with a result qualifier of "U" were reviewed:
 - If not already present, a result qualifier of "U" was assigned to any data with a result value of "*Non-Detect."
 - Data with a result value of "*Not Reported" were deleted unless they also had a value qualifier of "U."
 - Data with a result value or qualifier that indicated values were below the MDL were reviewed within the dataset's POR. If it was determined that the analytical methods were changed during the POR resulting in differences in the MDL, the highest MDL value was used as the uniform MDL for the entire POR.
 - Data with a result qualifier of "U" were processed in accordance with subsection 62-303.320(12), F.A.C., Aquatic Life-Based Water Quality Criteria Assessment. Results

reported by a laboratory with the "U" data qualifier code were assessed as half the reported result or half the criterion (whichever was lower).

Basin Data:

- Station data were combined by basin (parameters kept separate) for processing and analysis.
 - Additional analyses were run on individual stations with more than 50% data coverage and 5 continuous years of data.

Temporal Processing:

- Monthly time series: If multiple data points existed within a month, the monthly median was calculated for each month.

Processing for Statistical Tests:

- Data were processed according to the needs of each statistical test and formatted for use in the R statistical program or USGS Fortran executable.
- Sampling Frequency:
 - Monthly data series were used for analysis.
 - Missing data entries were removed.
- Data Gap Filling:
 - If a series did not have at least 5 years of continuous data, it was not used for trend analysis.

Statistical Analyses

Trend Analysis:

- Autocorrelation Function:
 - Autocorrelation was conducted to evaluate seasonal patterns and/or serial correlation (monthly seasons).
 - Autocorrelation was conducted in R on monthly, non-gap-filled series to determine seasonality.
 - For purposes of Seasonal Kendall analysis, statistically significant correlation on the 12-month lag was considered representative of serial correlation.
- Seasonal Kendall Tau Test:
 - Statistical Test Description: A nonparametric statistical test that does not require data to conform to a specific distribution and is not sensitive to outliers or data gaps:
 - Identifies monotonic trends in the datasets.
 - Yields statistical significance value and direction of trend (increasing or decreasing).
 - Accounts for seasonal data patterns (using months as seasons).
 - Use in Trend Analysis:
 - Serial correlation was identified with autocorrelations prior to trend analysis.
 - USGS Fortran code for Seasonal Kendall Tau Test was used to produce tau, p-value, adjusted p-value, and Sen slope.
 - Raw P-value used for series with no serial correlation detected.
 - Adjusted p-value used if serial correlation was identified

Hot Spot Analysis

The method for finding hot spots in BMAP areas was developed to identify areas where nutrient concentrations are consistently elevated relative to other areas within the BMAP. The hot spot areas highlight where targeted restoration activities are needed, and thus areas where funding for projects should be prioritized. It may also highlight areas where existing or ongoing restoration projects are having relatively stronger impacts. This analysis is not used to determine regulatory compliance with BMAPs, TMDLs, or other permitting activities.

The methodology outlined below is being used across all of the surface water nutrient BMAPs.

1. Duration: Extract a 5-year period of record from your BMAPs
 - a. **Max 5 Years, at least 2 years of data.**
 - b. Data should be from the most recent available years.
2. Filter:
 - a. Check your datasets to ensure stations/regions have at least **4 samples per year**, preferably taken in the wet and dry season of the region.
 - i. Station/region/lake/zone/basin/subwatershed referred to as **sub-delineation** for this document.
 - b. Check your stations for outliers by looking at the data by station.
 - i. It is better to look at the data by-eye and determine what values are truly outside of typical ranges for the sub-delineation.
 - ii. Suggest starting with values that are more than 3x the interquartile range.
 1. If looking at sub-delineation with low data, be careful of percentile calculations.
 - iii. Strongly suggest consulting with other coordinators on outlier choice if determination is not easily made.
 - iv. Any outliers are then removed from the dataset before conducting the subsequent evaluation steps.
3. Calculate:
 - a. Calculate average, standard deviation (SD), and 90th percentile for the **whole BMAP** with remaining data (outliers removed). These are important for ranking sub-delineation averages against.
 - i. The BMAP-wide average, BMAP-wide SD, and BMAP-wide 90th percentile are defined as the “BMAP threshold” that the sub-delineation average, SD, and 90th percentile are compared against.
 - b. Create a “percent exceedance” for each sub-delineation using the number of exceedances (number of samples per sub-delineation over BMAP threshold) divided by the number of samples for the sub-delineation.
 - c. Determine meaningful ranking values for percent exceedances by BMAP.
 - i. Currently using > 50% is a rank of 2 and < 5% is a rank of 0. **These may need to be modified by BMAP.**
 - ii. Add BMAP average to 0.5 SD and 1 SD to calculate SD ranking values.
 - d. Determine BMAP threshold for values of no concern (TMDL, NNC, etc.) (see above table).
 - i. If a BMAP has multiple TMDLs two options are:
 1. Use the most stringent TMDL as threshold for values of no concern for BMAP as a whole.
 2. Split areas by TMDL and run comparisons multiple times.
 - e. Rank the sub-delineation against the above values and threshold.
 - i. Average Rank:
 1. Rank 0: sub-delineation average below BMAP threshold.
 2. Rank 1: sub-delineation average above threshold but below BMAP average.
 3. Rank 2: sub-delineation average 2x above average (depending on BMAP).

- ii. Percentiles Rank:
 1. Rank 0: sub-delineation average below BMAP threshold.
 2. Rank 1: sub-delineation average above threshold but below 90th percentile.
 3. Rank 2: sub-delineation average above 90th percentile.
- iii. Standard Deviation Rank:
 1. Rank 0: sub-delineation average below BMAP average + 0.5 SD.
 2. Rank 1: sub-delineation average at or above average + 0.5 SD but less than BMAP average + 1 SD.
 3. Rank 2: sub-delineation average at or above BMAP average + 1SD.
- iv. Frequency Rank:
 1. Rank 0: sub-delineation percent exceedance below 5%.
 - a. Exceedance thresholds are likely dependent on BMAP.
 2. Rank 1: sub-delineation exceedances between 5% and 49% of samples.
 3. Rank 2: sub-delineation exceedances over 50% of samples.
- f. Add 4 ranks together to create Hot Spot Rank at each sub-delineation. **High rank value = high concern.**

Additional documentation regarding the hot spot analysis can be found here:

- <https://dep-file-portal.dep.state.fl.us/public/folder/d6y9werwp0a1iipff8magg/Quality%20Assurance>
- Password: WQRP_QA!

Targeted Restoration Area (TRA) Approach

To better prioritize and focus resources to most efficiently achieve restoration in the BMAPs, DEP developed the TRA approach. This approach uses measured data collected throughout the watershed to evaluate TN and TP concentrations in each of a BMAP's basins. The TRA approach does not currently include an assessment of water quantity since a flow evaluation has not yet been completed. The measured nutrient concentrations were compared with selected benchmarks to identify those basins that should be the highest priority for restoration. This advisory process is not intended to be a management strategy under Chapter 403.067, F.S. The benchmarks are not intended to measure progress towards restoration; they were only used to prioritize resources.

For each basin, a priority is assigned based on the TN concentration, TP concentration, and flows (where available). These priorities were set to help focus resources and projects in the basins most in need of improvement. Stations are selected for each basin that best represent the nutrient concentration from that basin. In some basins where there are multiple branches of a tributary, multiple representative stations are selected and the data from those stations are averaged for the TRA evaluation. Each representative station must have at least one data point from each of the five years used in the TRA assessment to be considered sufficient for use. Basins are assessed and prioritized as follows:

1. Assess the 5-year average concentration at representative stations and compare with the benchmark:
 - a. Priority 1: Concentration is two times greater than the benchmark.
 - b. Priority 2: Concentration is greater than the benchmark but less than two times the benchmark.
 - c. Priority 3: Concentration is less than or equal to the benchmark.
2. Assess the 5-year average flow weighted mean (FWM) concentration and compare to the benchmark. This step is weighted above Step 1; therefore, the results for the FWM concentrations would supersede the priorities from Step 1.
 - a. Priority 1: FWM concentration is greater than twice benchmark.
 - b. Priority 2: FWM concentration is greater than benchmark, but less than twice benchmark.
 - c. Priority 3: FWM concentration is equal to or less than benchmark.
3. Assess the attenuated unit area load (UAL), which is the average load per acre in each basin from the HSPF model. Compare with the subwatershed UAL target calculated by summing all stakeholder allowable loads in each subwatershed and dividing the sum by the total acres in the subwatershed.
 - a. Priority increases: UAL is greater than 50% above the basin target UAL.
 - b. Priority decreases: UAL is less than the basin target UAL.
 - c. Priority remains unchanged: UAL is above the basin target UAL, but less than 50%.
4. Assess the water quality trends from the 5-Year Review water quality analysis for statistical significance (as described in the 5-Year Review). This step is weighted above Step 3 where data are available; therefore, results would increase or decrease the priority accordingly:
 - a. Priority increases: Trend is significantly increasing.
 - b. Priority decreases: Trend is significantly decreasing.
 - c. Priority remains unchanged: No significant trend detected.

Additional documentation regarding the hot spot analysis can be found here:

- <https://dep-file-portal.dep.state.fl.us/public/folder/d6y9werwp0a1iipff8mzg/Quality%20Assurance>
- Password: WQRP_QA!

Fecal Indicator Bacteria

Supporting documentation of the latest version of FIB BMAP analyses and methods can be accessed in the Statewide Annual Report under the BMAPs/FIB section. The STAR 2026 overview and links are provided here as an example.

Overview of the Fecal Indicator Bacteria Exceedance Comparisons.

In June 2026, DEP released an analysis, published in STAR 2025 and the BMAP StoryMaps, evaluating changes in fecal indicator bacteria (FIB) conditions in BMAP waterbodies by comparing exceedance frequencies across two monitoring periods. Florida's bacteriological criteria, which protect recreational uses, are based on *E. coli* (fresh water) and enterococci (marine), and historically fecal coliform and require that no more than 10% of samples exceed the criterion magnitude, with attainment assessed under the Impaired Waters Rule (Chapter 62-303, F.A.C.) using a 7.5year binomial hypothesis test to distinguish true water quality concerns from random variability. To determine whether conditions improved, worsened, or remained stable, DEP compared FIB exceedance rates from

2007– June 2014 (fecal coliform) and 2018 – June 2025 (*E. coli* or enterococci) using statistical methods aligned with the IWR’s binomial framework; each waterbody was categorized as showing reduced, increased, or unchanged exceedance frequency. The analysis used *prop.test* without Yates’ correction when both exceedance and non-exceedance counts exceeded five samples, and Fisher’s Exact Test otherwise, ensuring that both the number of exceedances and total sample size informed whether observed differences reflected meaningful change or normal variation. Two caveats to note, sampling sites in WBIDS might not be located independently from each other and some might be sampled more frequently than others.

All tests were run in R, with p-values above 0.05 indicating no change and statistically significant differences interpreted based on whether exceedance percentages increased or decreased. Data used for this evaluation, R code, and templates are available by following these links. Contact Anita.Stine@FloridaDEP.gov for more information.

For R

- [A 260316 Pvalue Instructions and Code - Sharable](#) contains the Evaluation instructions and R code.
- [Input.csv](#) template.
- [fib_summary_results_blank.csv](#) template.

Recent Data

- [B 2026 FIB BMAP WBIDs List Non-BeachesPH](#) – New period (Jan. 2018 through June 30, 2025) exceedances and total number of data points ratios.

Baseline Data

- [D BASELINE ratios](#) (Jan. 2007 through June 30, 2014) exceedances and total number of data points ratios.
- [E Anita Run66 fecoli vp 2007-2014](#) - Baseline individual fecal coliform sampling results.

Text source for experience builder

- [F STAR2025 FIB BMAP StatsSummary](#)

Appendix B: Quality Assurance Process for Procurement of Sampling and Analytical Services

1. Department contracts for sampling or analytical services, including research projects, must include quality assurance (QA) requirements.

- a. Sampling services include the collection of sample media (e.g., water, sediment, soils, chemical wastes) or biological organisms.
- b. Analytical services include analysis, observation or measurement activities conducted in the field or in a laboratory.
- c. QA requirements must be included in the Contracts as an attachment that is incorporated by reference in the Contract. Note: Additional QA requirements may be included in the Contract Scope of Services. Such additional QA requirements in the Scope of Services must be described in specific, numbered tasks and deliverables.
- d. Contact the Aquatic Ecology and Quality Assurance Section (AEQAS) for any questions about QA requirements.

2. Steps for inclusion of QA Requirements in a Department Contract

- a. Contract Initiation – If sampling or analytical services are included in the contract, a QA approval signature from the AEQAS is required on the Contract Initiation Form (CIF), Part 1. Prior to routing to AEQAS for a QA signature, make sure that all appropriate QA check boxes in Part 1 of the CIF are completed.
- b. Scope of Services Development – During consultation with the Contractor and during development of the Scope of Services, the DEP Contract manager should provide the appropriate QA Requirements Attachment to the Contractor (see 2.c., below).
 - i. Review the QA Requirements with the Contractor. Make sure that the Contractor understands the QA Requirements and can meet them for the proposed Scope of Services.
 - ii. Any changes to the QA Requirements negotiated with the Contractor must be reviewed and approved by the Department's Contract manager and AEQAS.
 - iii. For research projects, during the Scope of Services development and well before Contract execution, the Contractor must provide information for review by the Department's Contract

- manager and AEQAS about proposed methodology for sampling, analysis, quality control, and experimental data evaluation procedures.
- iv. The Scope of Services must include appropriate QA Deliverables. Template language for QA deliverables for both Standard and Research QA Requirements (see below) are in the attached QA Deliverables Template Language.
- c. QA Requirements Attachment – One of two documents for QA Requirements is used as an attachment for Department Contracts, depending on whether the Standard or Research QA check boxes are denoted in Part 1 of the CIF (or whether the grant will be funding a research project). Select the appropriate document per the following:
- i. Include the attached Standard QA Requirements as Attachment E if the sampling activities will be conducted according to the DEP Standard Operating Procedures (SOPs) and the laboratory analyses will be performed by a certified laboratory accredited by the Florida Department of Health (FDOH) Environmental Laboratory Certification Program. NOTE: For DEP Contracts, DEP SOPs and certified labs are utilized in most cases.
 - ii. Include the attached Research QA Requirements as Attachment E if sampling activities will NOT be conducted according to the DEP SOPs and laboratory analyses will NOT be performed by a certified laboratory. See 2.b.iii., above.
 - iii. Contact AEQAS for assistance with editing one of the above QA Requirements documents if the proposed Scope of Services for the sampling and/or analysis services to be provided by the Contractor does not appear to conform to either of the choices above (or seems to be a hybrid of the choices).
 - iv. NOTE: AEQAS review and approval is required for all edited QA Requirements documents.
- d. Quality Assurance Plan (QA Plan) – Contractors providing sampling and analytical services to the Department must submit a QA Plan upon execution of the Contract and obtain approval for the QA Plan from the Department's Contract manager before starting project work. The attached Standard QA Plan Template may be used if the Standard QA Requirements Attachment is included in the Contract, and the attached Research QA Plan Template may be used if the Research QA Requirements are included in the Contract. The Contract manager must review the QA Plan for conformance with the Contract Scope of Services and the Contract QA Requirements attachment (with review assistance from AEQAS staff, as needed). This submittal requirement is specified in the QA Requirements document attached to the Contract (see 2.c, above) and as part of the Deliverables in the Scope of Services (see 2.b.iv., above).
- e. Exception to QA Plan Requirement – The Contract manager may opt to not require a QA Plan for Contractors who will not be designing a sampling scheme or a research project and are only providing standard sampling and/or analytical services to the Department. In those cases, the Contract shall include the Standard QA Attachment, but state that the requirements of Section 6 of the Attachment are waived, and a QA Plan is not required.
- f. Contract Execution – Approval for the QA Requirements and QA Plan type for the contract requires a signature from the AEQAS on the Contract Initiation Form (CIF), Part2.

