FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

VIA EMAIL
Read receipt requested

August 25, 2025

Matthew Scripter, Chief Scientist/Lead Taxonomist
Ecological Associates, Inc.
3552 NE Candice Ave.
Jensen Beach, FL 34957

Re: Final Audit Report for Stream Condition Index Laboratory Records Audit of Ecological Associates, Inc.

Dear Mr. Scripter:

Thank you for responding to the preliminary audit report for this Stream Condition Index (SCI) Laboratory Records Audit. The Florida Department of Environmental Protection (department) has reviewed your response and determined that the taxonomic data produced by Ecological Associates, Inc. (EAI) meets the department's data quality objectives upon implementation of corrective actions from this audit.

Attached is the final audit report detailing the audit procedure, details of the department's review, and the department's recommendation for usability of the data. The final audit report will also be posted on the department's website at https://floridadep.gov/dear/florida-dep-laboratory/content/fdep-biological-and-audit-report-search. As noted in the report, the department's use of EAI's data for assessment and compliance purposes is contingent upon the implementation of the corrective actions outlined in the preliminary report. The Aquatic Ecology and Quality Assurance Section has determined that your invertebrate taxonomy analysis procedures after implementing the corrective actions from this audit meet the data quality objectives for SCI data and recommends that the data may be used for DEP related purposes and in support of the scope of projects covered in this audit. Data users should ensure they have the recalculated results from the audited period that includes May 2021 through August 2024. The usability of the audited data for other purposes must be determined separately according to applicable requirements in Rule 62-160.670, Florida Administrative Code (F.A.C).

Under Chapter 120 of the Florida Statutes, you and any other person whose substantial interests are affected by the department's agency action may challenge the attached final audit report, including the corrective actions and the data usability analysis. The process to challenge any portion of this agency action is described below in the Notice of Rights section.

If you have any questions or concerns about this final audit report, please feel free to contact Jessica Patronis at (850) 245-8980 or Joy Jackson at (850) 245-8074.

Notice of Rights

This action is final and effective on the date filed with the Clerk of the Department unless a sufficient petition for an administrative hearing is timely filed under sections 120.569 and 120.57 of the Florida Statutes as provided below. If a sufficient petition for an administrative hearing is timely filed, this agency action becomes only proposed agency action, subject to the result of the administrative review process. Therefore, on the filing of a timely and sufficient petition, this action will not be final and effective until further order of the department. Because an administrative hearing may result in the reversal or substantial modification of this action, the petitioner is advised not to proceed until the deadlines noted below for filing a petition for an administrative hearing or request for an extension of time have expired.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov. Also, a copy of the petition shall be mailed to the addressee of this order at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the addressee of this order must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the addressee of this order must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time
Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

Judicial Review
This determination constitutes an order of the department. Subject to the provisions of paragraph 120.68(7)(a) of the Florida Statutes, which may require a remand for an administrative hearing, the addressee of this order has the right to seek judicial review of the order under section 120.68 of the Florida Statutes, by the filing of a notice of appeal under rules 9.110 and 9.190 of the Florida Rules of Appellate Procedure with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

David Whiting, Deputy Director
Division of Environmental Assessment and Restoration
2600 Blair Stone Road
Tallahassee, FL 32399
Tel No.: (850) 245-8191

Attachments:
Final Audit Report

Copies furnished to:
Katie Slattery, Florida DEP Office of General Counsel
File

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this determination, including all copies, was e-mailed before the close of business on August 25th, 2025 to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to 120.52(7),
Florida Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.

Clerk 8/25/2025 Date

Final Audit Report
Ecological Associates, Inc.
Stream Condition Index Laboratory Records Audit



Aquatic Ecology and Quality Assurance Section
Water Quality Standards Program
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

August 2025

STREAM CONDITION INDEX LABORATORY RECORDS AUDIT REPORT

Introduction and Scope

Ecological Associates Inc (EAI) processes and identifies Stream Condition Index (SCI) samples and submits the resulting date to the Florida Department of Environmental Protection (DEP) for permit compliance. DEP initiated a records audit of the EAI laboratory to ensure their processes adhered to DEP SOP SCI 2000. The audit assessed items that can be evaluated via the laboratory records. Records were provided by EAI and cover the scope of samples that EAI processed for DEP-related projects between May 2021 and August 2024. Records for 38 SCI samples were submitted, and 17 of these were reviewed as part of this audit (**Table 1**). Not all samples were processed in their entirety by EAI as indicated in the footnotes of **Table 1**. Only the procedures undertaken by the EAI laboratory were included as part of this audit.

Records Evaluated:

1. List of the taxonomic literature most often consulted (provide at least the ten most relied upon).
2. List of all samples processed for DEP-related projects through to the present, indicating which samples were used for taxonomic QC purposes.
3. List of taxa in your reference collection, including the verifying taxonomists' names.
4. Brief description of your laboratory protocols for precautionary and corrective measures taken if sorting efficiency or taxonomic QC results fail to meet the required targets.
5. Sorting efficiency tracking records for all active employees involved in the processing of DEP samples.
6. Taxonomic quality control tracking records for all active employees involved in the processing of DEP samples.
7. Original bench sheets associated with DEP samples.
8. SCI metric and index calculation records for each requested sample showing the final taxonomic list for calculations, indication of which taxa were used to calculate each metric, numbers or percentages of appropriate taxa for metric calculation, calculated metrics, and final SCI scores.

Table 1. Stream Condition Index samples submitted and reviewed as part of this audit (**Record #2**: "List of SCI Samples Since 2021," reformatted).

Sampling Date	Sample ID	Waterbody	Reviewed
5/20/2021	BC-SCI-052021 (A & B)	Boggy Creek	X
5/20/2021	LWR-SCI-052021 (A & B)	Little Wekiva	
5/20/2021	SC-SCI-052021 (A & B)	Shingle Creek	X
11/4/2021	BC-SCI-110421 (A & B)	Boggy Creek	X
11/4/2021	LWR-SCI-110421 (A & B)	Little Wekiva	
11/4/2021	SC-SCI-110421 (A & B)	Shingle Creek	
2/17/2022	OEW-SCI-17022022-UP (A & B)	Orange Co East (Little Econ)	
2/17/2022	OEW-SCI-17022022-NF (A & B)	Orange Co East (Little Econ)	
2/18/2022	OEW-SCI-18022022-FF (A & B)	Orange Co East (Little Econ)	

2/22/2022	IBWRF-SCI-22022022-NF (A & B)	Iron Bridge WRF (Little Econ)	X
2/22/2022	IBWRF-SCI-22022022-UP (A & B)	Iron Bridge WRF (Little Econ)	X
2/22/2022	IBWRF-SCI-22022022-FF (A & B)	Iron Bridge WRF (Little Econ)	X
5/19/2022	BC-SCI-19052022 (A & B)	Boggy Creek	X
5/19/2022	LWR-SCI-19052022 (A & B)	Little Wekiva	
5/19/2022	SC-SCI-19052022 (A & B)	Shingle Creek	
12/15/2022	BC-SCI-121522 (A & B)	Boggy Creek	X
12/15/2022	LWR-SCI-121522 (A & B)	Little Wekiva	
12/15/2022	SC-SCI-121522 (A & B)	Shingle Creek	
2/5/2023	IBWRF-SCI-050223-NF (A & B)	Iron Bridge WRF (Little Econ)	X
2/5/2023	IBWRF-SCI-050223-UP (A & B)	Iron Bridge WRF (Little Econ)	X
2/5/2023	IBWRF-SCI-050223-FF (A & B)	Iron Bridge WRF (Little Econ)	X
4/20/2023	BC-SCI-042023 (A & B) *	Boggy Creek	X
4/20/2023	LWR-SCI-042023 (A & B) *	Little Wekiva	
4/20/2023	SC-SCI-042023 (A & B) *	Shingle Creek	
4/27/2023	OEW-SCI-042723-FF (A & B)	Orange Co East (Little Econ)	
4/27/2023	OEW-SCI-042723-NF (A & B)	Orange Co East (Little Econ)	
4/27/2023	OEW-SCI-042723-UP (A & B)	Orange Co East (Little Econ)	
12/14/2023	BC-SCI-121423 (A & B) *	Boggy Creek	X
12/14/2023	LWR-SCI-121423 (A & B) *	Little Wekiva	
12/14/2023	SC-SCI-121423 (A & B) *	Shingle Creek	
2/9/2024	LER-020924 (A & B) SCI Audit	Little Econ	X
4/16/2024	BC-SCI-041624 (A & B)	Boggy Creek	X
4/16/2024	LWR-SCI-041624 (A & B)	Little Wekiva	
4/16/2024	SC-SCI-041624 (A & B)	Shingle Creek	
8/15/2024	BC-SCI-081524 (A & B) **	Boggy Creek	X
8/15/2024	LWR-SCI-081524 (A & B) **	Little Wekiva	
8/16/2024	SC-SCI-081624 (A & B) **	Shingle Creek	
8/20/2024	CC-SCI-082024-00x-2 ***	Charlie Creek	X

* Sorted by EAI, Identified by Reece Environmental Consulting (REC).
** Not processed.
*** Sorted. Not Identified.

Findings

A preliminary report was sent to EAI on April 10, 2025, describing the corrective actions and recommendations necessary for conformance with DEP SOPs. EAI submitted responses to the preliminary report on May 23 and 26, 2025 (**Table 3**). DEP auditors discovered several issues in taxa assignments and individual metric calculations that resulted in incorrect SCI scores. There were multiple discrepancies in terms of which organisms were included in the various metrics, including the very tolerant, clinger, Tanytarsini, Trichoptera, sensitive, long-lived, dominant, and filter feeder metrics. Ostracods and nematodes, which are not considered part of the stream benthic community, were included in samples. When these organisms were removed, there were too few organisms for a valid SCI calculation. EAI retained the original sample material and was able to sort additional material to attain the

prescribed number of organisms. EAI revised the calculations, corrected scores, and submitted all missing documents. DEP found EAI's responses and corrective actions acceptable.

Lab Quality System

EAI maintains copies of pertinent taxonomic identification keys for specimens encountered in the samples processed for this audit (**Record #1**: "SCI Laboratory Audit Documentation Taxonomic Resources"). **Record #1** contained a list of 20 references, and the 10 most often used were highlighted. EAI's reference collection as presented in **Record #3** (SCI Freshwater Macroinvertebrate Reference Collection_12.11.2024") was very well organized and, according to email correspondence, staff are actively working to increase the number of specimens verified by external experts. DEP noted several taxa identified in the samples that were not represented in the reference collection. For instance, in sample SC-SCI-041624 Rep. B, 19 of 35 taxa (54%) were represented in the reference collection and in sample OEW-SCI-042723-FF Rep. A, 25 of 30 taxa (83%) were represented. Currently, EAI has a total of 329 specimens in their collection, and only 70 individuals (or 21%) have been externally verified. By comparison, the DEP Laboratory has 2,258 unique taxa and 1,353 (or 60%) have been verified by a taxonomic expert (**Table 2**). We recognize that the EAI taxonomic laboratory is relatively new and has not processed samples outside of the Peninsular Florida Bioregion; however, they are encouraged to add specimens as they are encountered and to have them externally verified as time and expertise allows. EAI has made progress towards a robust reference collection, especially for Chironomidae, Coleoptera, Trichoptera, and worms, but further work is necessary to achieve a comprehensive reference collection. This element will be re-evaluated during the next audit cycle to ensure that taxa encountered during routine sample processing are represented in the reference collection.

Table 2. A comparison of EAI and DEP invertebrate reference collection.

EAI Laboratory	# Specimens	# Verified	% Verified
Unique Specimens	329	70	21%
Chironomidae	117	30	26%
Coleoptera	35	33	94%
Diptera (excl. Chironomidae)	17	0	0%
Ephemeroptera	9	1	11%
Plecoptera	2	0	0%
Trichoptera	47	1	2%
Worms	25	5	20%
DEP Laboratory	**# Specimens**	**# Verified**	**% Verified**
Unique Specimens	2257	1353	60%
Chironomidae	283	215	76%
Coleoptera	319	227	71%
Diptera (excl. Chironomidae)	183	84	46%
Ephemeroptera	85	73	86%
Plecoptera	38	36	95%
Trichoptera	120	70	58%
Worms	59	47	80%

EAI's Sample Sorting and Identification Process

According to a description of their lab sorting protocols (**Record #4(a)**: "Description of Lab Protocols" and **4b**: "SOP 32 Taxonomic Laboratory Rev 5"), during the initial training stage, all sorting QA/QC is done by the lab's lead taxonomist and missed specimens are placed on a watch glass and given to the sorter for immediate feedback. The sorter examines the specimens before adding them to the sorting vial. Training continues until the target sorting efficiency is achieved (≥90%). Afterward, one dish per sample or one in every 10 dishes is resorted. If a dish scores below 90%, a second dish is assessed. If a second dish scores below 90%, retraining takes place until a sorting efficiency of 90% or greater is achieved. To remain certified, a sorting technician must maintain a sorting efficiency of 95% or greater (dependent upon the project-specific requirements) for all QA'd samples. This practice complies with DEP SOPs.

Sample Sorting QC

The original records that were submitted (**Record #5**: "SCI Sorting QA Log") only included sorters between February 17, 2023, and October 31, 2024. In response to the preliminary report, additional records were provided that covered the entire audit period and included analysts no longer actively sorting ('EAI Additional SCI Sorter QA Log'). The records showed occasions when the sorting efficiency was not recorded and others where it fell below the target level (≥90%) without any notes or mention of corrective measures, but EAI's narrative description (**Record #4a**: "Description of lab protocols") states that missed organisms were added back to the sample and sorters were made aware of which organisms were missed. Going forward, sorting efficiency results and corrective actions must be documented. In addition, if the senior analyst re-sorts every tray/dish/sample to ensure the targets are met, they too must have their dishes/trays reviewed at the minimum of 10% and documented on an on-going basis.

Taxonomic Identification QC

According to **Record #4(b)**, a taxonomist must maintain a Taxonomic Agreement value of 95% or greater (dependent upon the project-specific requirements) for all QA checked samples. For all benthic macroinvertebrate samples, 5% of all samples, or at least one per year, are reviewed by a secondary taxonomist for taxonomic QA checks. During a taxonomic QA check, the identified and enumerated organisms of a randomly selected sample are re-examined by a second taxonomist. Organisms that are believed to be incorrectly identified are set aside so the original and QA taxonomists can review together. Once the entire sample has been reviewed, Taxonomic Agreement is calculated based on the number of organisms in which both the original and QA taxonomist agree on the taxa divided by the total number of organisms identified. If a taxonomist fails a QA check, the following samples must be verified until a Taxonomic Agreement of 95% or greater is achieved. This practice adheres to the DEP SOP.

For the DEP audited samples, EAI identified taxa to lowest practical taxonomic level. In fact, some specimens, notably worms, were taken to species without a verified specimen in their reference collection. Worms are particularly difficult to identify given the limited number of diagnostic characteristics. While it is commendable that they were taken to the lowest practical level, the department cautions EAI to not take taxa below what is practical or what has been externally verified as this may result in inflated taxa richness scores.

DEP auditors did not see any notes in the files showing that organisms had been removed from samples for reference collection purposes. It is possible that no specimens were removed from the samples reviewed as part of this audit, but EAI is reminded to note this on the original bench sheets when this occurs.

Metric and Index Calculation

Based on the records provided as part of **Record #8** that included metric and index calculation records and final SCI scores, there were several instances where EAI's SCI metrics were not calculated correctly (**Table 3**). Auditors discovered issues in the collapsing of taxa, taxa metric assignments, and individual metric calculations that resulted in erroneous final SCI scores. There were multiple instances where the metrics were miscaculated, including the very tolerant, clinger, Tanytarsini, Trichoptera, sensitive, long-lived, dominant, and filter feeder metrics that resulted in both higher and lower final SCI scores compared to DEP-calculated scores based on revised collapsing and metric assignments. Information on DEP's metric assignments can be found in SCI 2100 Section 5 and on the DEP website (SBIO Taxonomic Lists). The calculation issues resulted in different final SCI scores for all samples reviewed (**Table 4**). The differences in scores ranged from 2 to 11 points between the EAI and DEP calculated scores. Score differences this large could affect the individual impairment status of a sample (i.e., Pass to Fail or vice versa), although auditors did not find an instance where this occurred. As a follow-up to this audit, EAI should recalculate all results, and submit recalculated scores to all interested parties at the conclusion of the final audit report.

Data Usability Recommendation

The department's use of EAI's data for assessment and compliance purposes is contingent upon the implementation of the corrective actions outlined in this report. After implementing the corrective actions from this audit , the Aquatic Ecology and Quality Assurance Section has determined that EAI's invertebrate taxonomy analysis procedures meet the data quality objectives for SCI data and recommends that the data may be used for DEP related purposes and in support of the scope of projects covered in this audit. Data users should ensure they have the recalculated results from the audited period that includes May 2021 through August 2024.

Table 3. Audit Findings. Deficiencies and/or requests for additional information for Laboratory Records of selected SCI sample data produced by EAI.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
(1) SCI 2100 Section 5.3 Index Calculation	Boggy Creek 041624 B	*Unionicola spp.*, *Limnesia spp.*, and *Polypedilum flavum* were incorrectly classified as a very tolerant taxon.	**Required:** Determine which additional samples are affected by this error, correct erroneous formulas, recalculate metrics and final scores, and provide updated data to DEP. Update EAI database with the current taxonomic lists available on the DEP website (SBIO Taxonomic Lists).	Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 042023 B	*Planorbella (Seminola) scalaris* was not classified as very tolerant taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 110421 A	*Dicrotendipes neomodestus* was incorrectly classified as Tanytarsini taxon and should have been classified as very tolerant taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 110421 A	*Neureclipsis crepuscularis, Quistadrilus multisetosus*, and *Tanytarsus spp*. were incorrectly classified as very tolerant taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 110421 B	*Quistadrilus multisetosus* was incorrectly classified as very tolerant taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-NF 22022022 B	*Chironomus spp*. was not included as very tolerant taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(2) SCI 2100 Section 5.5	LER 020924 A	*Corbicula spp*. *Musculium artumeium, Ectemnia primaeval,* and		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
Index Calculation		*Rheotanytarsus pellucidus* were incorrectly classified as 50% filter feeder taxon instead of 100% filter feeder taxon. EAI did not include *Cheumatopsyche spp*. as 100% filter feeder or clinger taxon. *Rheotanytarsus exiguus* 100% filter feeder count should be 6, not 3. *Ectemnia primaeval, Rheotanytarsus exiguus,* and *Rheotanytarsus pellucidus* were not included as clinger taxon.			spreadsheets to DEP on 5/23/2025.	
	LER 020924 B	*Corbicula spp., Musculium partumeium, Ectemnia primaeval, Rheotanytarsus exiguus,* and *Rheotanytarsus pellucidus* were incorrectly classified as 50% filter feeder taxon instead of 100% filter feeder taxon. EAI did not include *Cheumatopsyche spp*.as 100% filter feeder or clinger taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
	Boggy Creek 121522 A	EAI did not include *Cheumatopsyche spp*.as 100% filter feeder or clinger taxon. EAI did not include *Rheotanytarsus exiguus group* as clinger taxon. *Labrundinia spp*. was incorrectly classified as 50% filter feeder by EAI. *Rheotanytarsus exiguus group* was incorrectly classified as 50% filter feeder instead of 100% filter feeder by EAI.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 052021 A	EAI did not include *Tanytarsus sp. Z Epler, Tanytarsus spp.*, or *Stempellinella fimbriata* as 50% filter feeder taxon. *Rheotanytarsus pellucidus* was incorrectly classified as 50% filter feeder taxon instead of 100% filter feeder taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 052021 B	EAI did not include *Hydropsyche sparna (Ceratopsyche spp.)* as 100% filter feeder taxon. EAI did not include *Tanytarsus spp.,*		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
		Stempellinella spp., or *Dicrotendipes neomodestus* as 50% filter feeder taxon.				
	Boggy Creek 110421 A	EAI did not include *Neureclipsis crepuscularis* or *Rheotanytarsus exiguus group* as clinger taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 110421 B	EAI did not include *Hydropsyche sparna (Ceratopsyche spp.)* or *Rheotanytarsus exiguus group* as 100% filter feeder taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 190522 A	EAI did not include *Paratanytarsus spp*. as 50% filter feeder. *Neureclipsis crepuscularis* was incorrectly classified as 100% filter feeder taxon instead of 50% filter feeder taxon. Also was not included as clinger taxon. *Pisidium dubium*, *Anopheles spp*., and *Ceratopsyche spp*. were incorrectly classified as 50% filter feeder instead of 100% filter feeder taxon. EAI did not include *Rheotanytarsus exiguus group* as clinger taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
	Boggy Creek 190522 B	*Rheotanytarsus exiguus group* was incorrectly classified as 50% filter feeder instead of 100% filter feeder by EAI. EAI did not include *Stempellinella fimbriata* as 50% filter feeder taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-FF 22022022 A	*Simulium spp.* and *Chimarra spp.* were not included as 100% filter feeder.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-FF 22022022 B	*Hydropsyche sparna* was not included as 100% filter feeder.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-NF 22022022 A & B	EAI did not include *Ceratopsyche spp.* as 100% filter feeder taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-NF 22022022 A	EAI did not include *Rheotanytarsus exiguus group* as clinger taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-SCI-050223-FF A & B	EAI did not include *Chimarra aterrima* as 100% filter feeder taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-SCI-	EAI incorrectly included *Stylaria lacustris* as clinger taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
	050223-FF A				spreadsheets to DEP on 5/23/2025.	
(3) SCI 2100 Section 5.4 Index Calculation	Boggy Creek 121522 B	EAI did not include *Tanytarsus spp*. as Tanytarsini taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 190522 A	EAI incorrectly identified *Tanytarsus spp*. as dominant, should be *Tanytarsus spp. buckleyi*.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-FF 22022022 A	*Cernotina spp*. was not included as Trichoptera taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-NF 22022022 A	*Cernotina spp.* was not included as Trichoptera taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-SCI-050223-FF B	EAI did not include *Tanytarsus sp. F Epler* as Tanytarsini taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(4) SCI 2100 Section 5.2 Index Calculation	Boggy Creek 052021 B	EAI did not include *Stempellinella spp*. as sensitive taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	Boggy Creek 110421 A	*Ceratopsyche sparna* was incorrectly classified as sensitive taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
(5) SCI 2230 Table SCI 2230 and Section 3.3.2.9 Taxonomic Effort Table	Boggy Creek 052021 A & B	*Ostracoda* should not be included in the SCI. Results in total taxa count being less than 140.		Agreed.	Removed ostracods from the sample. Sorted an additional aliquot and identified the additional specimens. Added new specimens to SCI calculations and updated score.	Corrective action is acceptable.
	Boggy Creek 041624 A	Nematoda should not be included in the SCI.		Agreed.	Removed nematodes from SCI calculation and updated score.	Corrective action is acceptable.
(6) SCI 2100 Section 5.1 Index Calculation	IBWRF-FF 22022022 A	*Culicoides spp*. was incorrectly classified as long-lived taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
	IBWRF-NF 22022022 A & B	*Corbicula fluminea* was not included as long-lived taxon.		Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(7) Table 2100-1	All samples	EAI used the incorrect formula for all % very tolerant calculations.		Agreed.	Corrected the formula for all calculation sheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(8) SCI 2100 Section 4 SCI Metric Scoring	All samples	EAI did not follow appropriate collapsing procedures.	**Required:** Determine which samples are affected by this error, recalculate metrics and final scores, and provide updated data to DEP.	Agreed.	Reviewed all SCI calculation spreadsheets and fixed inappropriate collapsing issues. Recalculated SCI metrics and sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(9) SCI 2110 Required Documentation	All samples	Records#6 and #7 were not provided at the time of this report.	**Required:** Provide taxonomic quality control tracking records for all active employees involved in the processing of DEP	Agreed.	Sent records quest #6 & #7 as requested on 5/23/2025.	Corrective action is acceptable.

SOP Reference	Sample ID	Audit Finding	Recommended or Required Corrective Action(s)	EAI Response	Corrective Action and Implementation Date	DEP Comments
			samples and the original bench sheets associated with DEP samples.			
(10) SCI 2110 Required Documentation	Charlie Creek B	The correct number of Chironomus individuals (55) was used for the calculation but the incorrect number was shown in the Very Tolerant column (46).	**Recommended**: Revise worksheet to reflect correct number. No other correction required.	Agreed.	Corrected the number of Chironomus individuals in the Very Tolerant column. Recalculated SCI metrics and sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(11) SCI 2110 Required Documentation	IBWRF-FF 22022022 A & B	*Oecetis georgia* is a Tricoptera, but the rest of the classification is not correct (e.g., Trombidiformes is an aquatic mite).	**Recommended**: Revise worksheet to reflect correct classification. No other correction required	Agreed.	Made all required updates to calculation spreadsheets. Sent revised SCI calculation spreadsheets to DEP on 5/23/2025.	Corrective action is acceptable.
(12) SCI 2110 Required Documentation	All samples	EAI calculated the % dominant taxa correctly, but they did not identify the dominant taxon in their worksheets.	**Recommended**: Revise worksheet to reflect dominant taxon. No other correction required	Agreed.	Highlighted dominant taxa in SCI calculation spreadsheets.	Corrective action is acceptable.

Table 4. Differences in SCI scores between EAI and DEP after recalculating metrics.

Sample ID	EAI Score	DEP Derived Score	Difference Between Scores
LER 020924	53	64	-11
Boggy Creek 41624	59	57	2
Boggy Creek 121522	56	58	-2
Boggy Creek 42023	47	49	-2
Boggy Creek 52021	68	71	-3

Boggy Creek 110421	69	63	6
Boggy Creek 190522	77	80	-3
Charlie Creek 82024	31	23	8
IBWRF-FF-22022022	48	56	-8
IBWRF-NF-22022022	66	73	-7
IBWRF-SCI-050223	73	65	8