

COMPLIANCE EVALUATION INSPECTION REPORT
EBCI Trout Hatchery, Project No. CV-NC0052451-06162021

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4**

**Enforcement and Compliance Assurance Division
Water Enforcement Branch
61 Forsyth Street, SW
Atlanta, Georgia 30303**



COMPLIANCE EVALUATION INSPECTION REPORT

**EBCI Trout Hatchery
Eastern Band of Cherokee Indians
1840 Paint Town Road (PO Box 455)
Cherokee, North Carolina, 28719
NPDES Permit Number: NC0052451**

Facility Address:
954 Straight Fork Road
Cherokee North Carolina 28719

Inspection Date:
June 16, 2021

Inspectors:
Tristan Odekirk, Environmental Engineer, EPA Region 4
John Goodwin, Environmental Engineer, EPA Region 4
Jairo Castillo, Environmental Engineer, EPA Region 4

Inspection Report Prepared by:
Tristan Odekirk

July 19, 2021

Project ID:
CV-NC0052451-06162021

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Approval Sheet

Title: Compliance Evaluation Inspection EBCI Trout Hatchery, Cherokee, North Carolina

Approving Official:

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Wastewater Enforcement Section
Water Enforcement Branch

Date

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1. INTRODUCTION

A Compliance Evaluation Inspection (CEI) was performed at the Eastern Band of Cherokee Indians (EBCI) Trout Hatchery in Cherokee, NC on June 16, 2021. The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This narrative report and attachments present the findings of the inspection.

2. PARTICIPANTS

EBCI Trout Hatchery:

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EBCI Natural Resources Program:

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U.S. Environmental Protection Agency (EPA):

Tristan Odekirk	404-562-9295	odekirk.tristan@epa.gov
Jairo Castillo	404-562-9257	castillo.jairo@epa.gov
John Goodwin	404-562-8488	goodwin.john@epa.gov

3. FACILITY DESCRIPTION

The EBCI trout hatchery raises trout to stock water bodies in the Qualla Boundary to support recreational fishing. Fish produced in the hatchery are primarily rainbow trout with some brook trout. The facility is comprised of 33 raceways and 1 settling pond.

Water is supplied from the Straight Fork of the Raven Fork river (Photos 1 & 2) with an estimated flow of 3,000-5,000gpm. The water enters a splitter box (Photo 3) diverting water into three parallel trains (A, B, C). Liquid oxygen is supplied to the system from a liquid oxygen tank via the splitter box to achieve a desired dissolved oxygen concentration of 8-10 ppm.

Fish are regularly sorted into size category so that each raceway contains approximately 8,000 – 10,000 lbs of fish. Feed is supplied to fish by automatic feeders (Photo 4) five times per day. At the time of inspection, the operations were about to switch to nighttime feeding as the days were becoming too warm for the fish.

Water exits the final raceway directly into the Straight fork of the Raven Fork River. During high activity (e.g., cleaning, fish moving) effluent is routed to the settling pond (Photo 5). The settling pond is a 62'x19'8" concrete basin with a wooden baffle at one end to slow flow and retain solids. The original design of the system has two sedimentation chambers, but only one is active with the other used to store excess sediment emptied annually for the active pond. Wastes are

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hauled to the EBCI solid waste transfer facility. Water exits the sedimentation pond and discharges into the Straight Fork of the Raven Fork River.

Feed and salt are stored in a warehouse on site and catalogued. At the time of inspection, records were kept on paper as computer systems were reported to be down. Facility staff stated that once new office facilities and computer became operational records, records would be transferred to digital.

4. INSPECTION PROCEDURES

The inspectors arrived at the facility at 10:45 a.m. The inspection began with an opening conference in which inspector credentials were presented to the facility staff. After an overview of the inspection plans and a brief overview of documents, a facility tour was conducted. Water intake system, raceways, settling ponds, and chemical and feed storage were inspected. A new building under construction to house eggs, fingerlings, laboratory, and office space were also inspected. The inspection ended with a closing conference.

5. FINDINGS AND CONCLUSIONS

a. ANIMAL MORTALITIES

During the facility walkthrough several dead fish were observed in multiple raceways. These appeared to have been present in the system for several days. The Best Management Practices (BMP) Plan states that animal mortalities should be removed from the system “in a timely manner.” Operators state that mortalities are removed according to frequency, but commonly aim to remove dead animals 3-5 times per week. Dead animals are placed into drums and hand loaded onto a facility truck to be taken to the EBCI landfill where the fish are turned into compost. The EPA recommends that the operators practice more diligence in removing and recording animal mortalities.

b. SOLIDS

The removal of solids in the raceways appeared to be ongoing, with no buildup observed in quiescent zones. However, EPA observed a significant accumulation of solids in the settling pond. According to the operator, while the BMP Plan specifies that solids shall be removed from settling ponds annually, the pond had not been emptied since 2019 due to restrictions from COVID-19. Furthermore, wooden baffle structures in the pond had severe damage with one board broken in half (Photo 5). The EPA recommends that the facility promptly fix this board and empty the pond according to facility BMP Plan.

c. SAMPLING

At the time of the inspection, sampling was conducted at the permitted outfall 001 located at Latitude 35.576743; Longitude -83.244118. This is the main outlet from the raceways and does not route water through settling ponds. Settling ponds are only used during high intensity activities such as cleaning and feeding. This is consistent with reference material which state that

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during normal activity, flow through concentrated aquatic animal production facilities achieve effluent qualities below regulatory limits. Pollutants exceed regulatory limits during high intensity operations such as feeding or cleaning (US EPA, Revised August 2004).

As stated above, the facility is permitted to discharge at only one outfall. The facility currently discharges at a second outfall not mentioned in the permit. According to facility personnel, this outfall has been in use consistently for many years dating to the creation of the facility.

d. FLOW MEASUREMENT

Main flow measurement devices are rectangular weirs located at the end of each raceway. Flow is measured periodically, though on no specific schedule. A staff gauge located at the water inlet serves to monitor high water conditions to indicate whether high water is increasing or receding.

e. PERMIT

The permit became effective on June 10, 2017 and will expire June 9, 2022. The maximum annual fish production permitted is 280,000 lbs, while maximum monthly feed average permitted is 16,605 lbs.

f. RECORDS AND REPORTS

EPA's Enforcement and Compliance History Online (ECHO) was accessed to review the NPDES compliance status of the facility. ECHO shows that the facility has significant noncompliance from April 2020 through March 2021 for discharge monitoring report (DMR) non-submittal. Through communications with the EBCI Natural Resources Program, missing DMRs were located and submitted to the EPA.

A data retrieval from the EPA's Integrated Compliance Information System (ICIS) in July 2021 shows missing DMRs for January 2020 through March 2020 and October 2020 through December 2020. The DMRs showed effluent concentrations within permitted limits for all pollutants except for a pH limit violation in 1st quarter 2020. EBCI Natural Resources Program has copies of the October, November, and December 2020 DMRs which have not been signed by Richard Myers, the signatory official for the farm. The EPA recommends that these documents are signed and submitted to EPA through NetDMR, to return to compliance. Furthermore, the facility should register for a NetDMR account as it is required in the permit.

The NetDMR account needed for a facility employee entering DMR data is a "Permittee (no signature)" account. The signatory (Responsible Official) will need a "Permittee (signature)" account, as explained on the web links provided below. After the data is entered, the Responsible Official must go into their account and sign the NetDMR. The following links contain instructions on creating an account with NetDMR:

- <https://netdmr.zendesk.com/hc/en-us/articles/360001797391-How-to-create-a-new-NetDMR-account->
- [Account](https://netdmr.zendesk.com/hc/en-us/articles/115002191783-How-to-Create-a-New-CDX-Account)

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Refer to Conditions T-44(3) and T45 (Signatory Requirements...) for requirement related to designating a Responsible Official.

An EPA inspection conducted on 9/25/2018 also identified the presence of the unpermitted outfall. The facility's representative indicated the difficulty to sample the second outfall. The EPA inspectors at that time recommended a dye tracer test to locate the outlet of the solids separator. Further, an email correspondence between EPA Region 4 NPDES Permitting office and EBCI Natural Resources Program, dated 3/6/2019, shows that the EPA assisted EBCI representatives in locating the outfall. At the time of the inspection, EBCI Natural Resources Program staff mentioned the difficulty in accessing the second outfall for sampling, and that they have not sampled this site. The EPA recommends that the EBCI begin sampling the unpermitted outfall as soon as possible and record the effluent characteristics to properly characterize the facility wastewater effluent. In addition, EBCI needs to communicate with the EPA Region 4 NPDES Permitting office to amend the permit to include this outfall.

g. SAMPLING REVIEW

Sampling is conducted by the EBCI Natural Resources Program and samples are analyzed at the laboratory located at the EBCI Wastewater Treatment Plant. The facility has a copy of the BMP Plan on site and follow approved methods. pH buffers and other calibration standards were up to date; however, many were near the expiration dates.

h. OPERATIONS AND MAINTENANCE

The trout hatchery has a copy of their BMP plan on site. This plan was last updated on 11/10/2014. Solids are controlled by food selection and feed frequency. Records are maintained on site for animal feeding, animal mass estimation, and animal deaths. Raceways are inspected daily for cleanliness and animal deaths. Materials are stored and catalogued to use the oldest available unexpired food. Expired food is to be disposed in the EBCI landfill.

i. EFFLUENT AND RECEIVING WATERS

The effluent was clear in appearance at the main outlet. The settling pond outlet was unreachable, and EPA was unable to observe the effluent. The EBCI Natural Resources Program representatives stated they were unable to reach the effluent location to retrieve samples and samples have been collected at the main outlet.

6. ATTACHMENTS

1. Photographs

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Photo 1. Inlet structure. Water passes through a grate into the system. A rough flow measurement staff is visible at the end of the inlet. Wear is visible on the retaining wall structure. Heavy sedimentation near the wall is the result of high flow conditions.



Photo 2. Retaining wall showing wear and damage. Clearer view of sedimentation.

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Photo 3. Splitter box distributing water incoming from inlet to three parallel raceway systems. Grey lines are liquid oxygen supplied from a nearby tank.



Photo 4. Time automated feeder boxes beside raceways.

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Photo 5. Settling pond with raceways in background. Pond is shown with high sediment buildup. Wooden wall is broken on the right.