Harpeth Conservancy's TN Water Watch Report

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Tennessee Water Watch is a predictive river advisory tool that Harpeth Conservancy developed and launched for public use in June 2024. This tool forecasts the levels of *E. coli* at select, highly recreated river access points and compares it to thresholds set by the Environmental Protection Agency(EPA) in order to provide insight into the relative health risks of the water.

In 2012 the EPA published recreational water quality criteria(RWQC) recommendations in order to protect human health in coastal and non-coastal waters designated for primary contact (swimming, wading, *etc.*). These recommendations can be used as precautionary criteria to make recreation decisions based on the densities of *E. coli* in the water. The recommended threshold for individual freshwater samples is 235 colony forming units(CFUs)/100 mL. EPA recommends this threshold can be used for notification purposes to protect human health when participating in primary contact activities - 235 CFUs/100 mL equates to an human estimated illness rate of 36 out of 1000 primary contact recreators. To learn more about the EPA's recreational water quality criteria and estimated illness rates, feel free to explore the guidance documents found on their webpage.

As people make recreation plans, they can use this tool to make informed decisions about when and where to recreate and to gauge safety precautions.

"Before you play, check the water for the day!"

TN Water Watch sampling began in June 2020. Since then Harpeth Conservancy has collected 635 samples from 18 different locations. Samples were collected on a weekly basis and analyzed for *E. coli* between June and October each year. We focus on the recreational season to help inform and protect human health risks during recreational activities along our rivers.

TN Water Watch is Harpeth Conservancy's *E. coli* forecast tool. You can access the TN Water Watch tool by visiting TNWaterWatch.org.

So far this year, 2025, volunteers have collected 0 samples.

Table 1: Weekly Round-up

Date	Location	River	E. coli (CFUs/100 mL)
NA	NA	NA	NA

-Locations highlighted in red had *E. coli* values higher than the EPA recommended threshold of 235 CFUs/100 mL

Table 2: Summary of All Water Quality Data

Location	Number of Samples	Samples Above EPA Threshold	Green Status	Yellow Status	Orange Status	Red Status	Percent Advisory
Browns Creek - Battlemont Park	44	40	4	5	19	16	90.9
Centerville River Park	10	1	9	1	0	0	10.0
Coley Davis Access	23	9	14	5	2	2	39.1
Cumberland River - Downtown Access	25	7	18	1	5	1	28.0
Highway 100 Boat Launch	56	12	44	5	1	6	21.4
Hwy 70 Boat Launch	65	11	54	2	1	8	16.9
Jackson Blvd	54	32	22	11	14	7	59.3
Lewisburg Pike	66	17	49	4	7	6	25.8
Little Harpeth - Warner Parks	20	13	7	5	7	1	65.0
Mill Creek Greenway	48	17	31	9	5	3	35.4
Moran Road Bridge	65	16	49	5	5	6	24.6
Otter Creek	6	3	3	0	1	2	50.0
Richland Creek Greenway	52	32	20	8	9	15	61.5
Walter Hill Dam Recreational Area	17	4	13	0	2	2	23.5
Whites Creek at Hartman Park	31	8	23	1	2	5	25.8
Whitsett Park	41	13	28	3	7	3	31.7

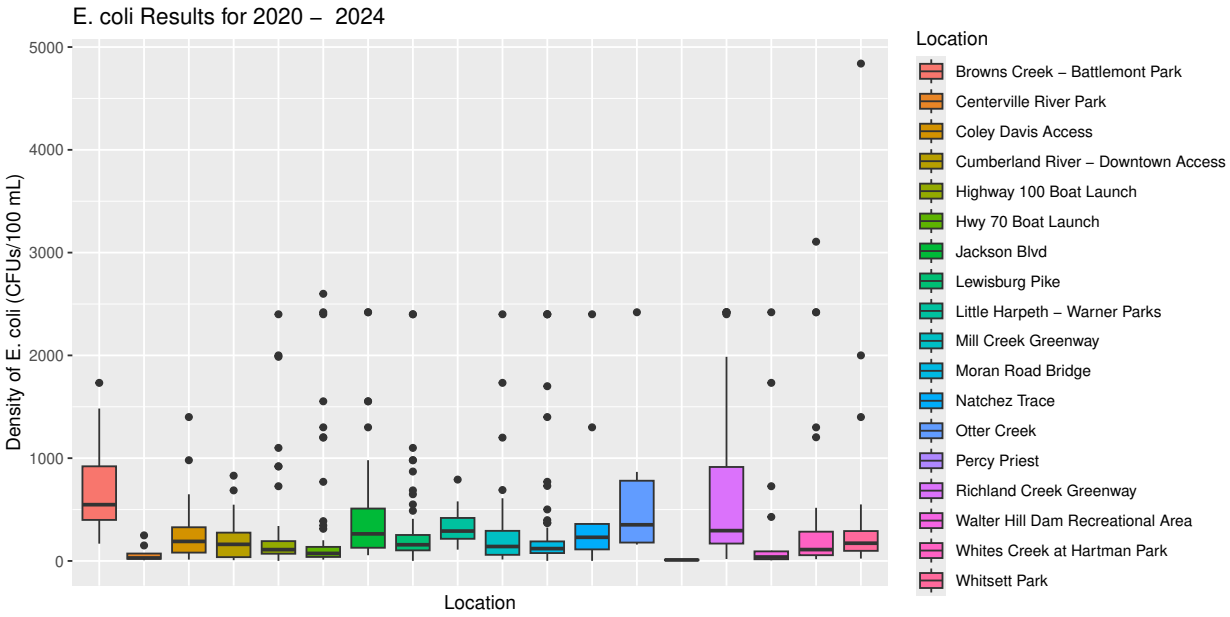
Table Explanation:

- Number of Samples = Total number of sampling days for the specified location
- Samples Above EPA Threshold = Number of samples that were above the EPA advisory threshold of 235 colony forming units (CFUs) per 100 mL
- Green Status = Number of samples that were below the EPA threshold - Green results are equivilent to a “Safe” status
- Yellow Status = Number of samples that were above the EPA threshold of 235 CFUs/100 mL but below 350 CFUs/100 mL - Yellow results are equivilent to an “Advisory” status
- Orange Status = Number of samples that were above 350 CFUs/100 mL and below 750 CFUs/100 mL - Orange results are equivilent to a “Caution” status
- Red Status = Number of samples that were above 750 CFUs/100 mL - Red results are equivilent to a “Warning” status
- Percent Advisory = Percentage of samples that were above 235 CFUs/100 mL

E. coli Boxplots

Below is a boxplot that represents all of the *E. coli* samples collected by the Harpeth Conservancy. Here is a brief summary to understand how to read a boxplot:

- Box: Represents the middle 50% of the data, from the 1st quartile (Q1) to the 3rd quartile (Q3).
- Median Line: Inside the box, shows the median value (50th percentile) of the data.
- Whiskers: Extend from the box to the smallest and largest values within 1.5 times the interquartile range (IQR) from Q1 and Q3.
- Outliers: Data points outside the whiskers are considered outliers and are plotted individually.



Below is a boxplot that displays *E. coli* samples collected so far this year (2025) by the Harpeth Conservancy.