

Sankofa Wetland Park Monitoring Report

1st Quarter of 2026



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Summary of Activities: January-March 2026

Monitoring Sampling Design

Environmental monitoring at the Sankofa Wetland Park began in January of 2022. The sampling design includes five monitoring locations (S1 through S5), spaced approximately equidistant along the one-mile length of the linear park. Additional monitoring sites include the St. Bernard drainage ditch, accessed at the bridge to the Veolia wastewater treatment plant (SB), and a site in the Bayou Bienvenue Wetland Triangle (either T1 or T2, depending on accessibility). In 2022, only sites S1 and S2 were monitored. Sites S3 through S5, along with SB and T1 & T2, were added as the wetland park was expanded in 2023.



Location of sampling sites at the Sankofa Wetland Park (S1-S5), the Bayou Bienvenue Wetland Triangle (sites T1 & T2), the St. Bernard drainage ditch at the bridge to the Veolia WTP (SB), and the Sankofa culvert (SC).

Since January 2022, in situ measurements of dissolved oxygen, conductivity, temperature, salinity, pH, and total dissolved solids (TDS) have been taken monthly at each monitoring location using a handheld water quality probe. Approximately every three months, water samples are collected for analysis of nutrients (nitrate+nitrite (NO₂+NO₃), ammonia (NH₃), total nitrogen (TN), phosphate (PO₄), total phosphorus (TP)), five-day biological oxygen demand (BOD₅), and total suspended solids (TSS). Fecal coliform analysis was also carried out. All samples are stored on ice and transported to Pace Analytical Services in Baton Rouge or St. Rose for laboratory analysis. In addition, water levels are recorded hourly using automated pressure transducer probes installed at two locations: near site S2 within the wetland park and at site T2 in the Bayou Bienvenue Wetland Triangle.

Monitoring – Probe Data

Summary: Across the three in situ sampling events on January 19, February 9, and March 13, 2026, the Sankofa Wetland Park remained fresh overall, with salinity generally low at site SB and the wetland park sites (S1-S5) and somewhat higher at the wetland triangle site (T1). Conductivity and total dissolved solids followed a similar pattern, with the T1-site consistently more mineralized than most of the interior wetland sites, indicating influence from a more concentrated water source near the wastewater treatment plant. pH remained circumneutral to slightly alkaline throughout the park, and water temperatures followed expected seasonal warming from January into March.

Dissolved oxygen showed the most variability among the field parameters. In January, dissolved oxygen was moderate to high across most sites. In February, dissolved oxygen dropped sharply at sites SB, S1, S2, S3, and T1, while site S5 remained high and no standing water was present at site S4. By March, dissolved oxygen had recovered at most sites, though sites SB, S1, and T1 still remained somewhat lower than the rest of the wetland cells. Overall, the park generally maintained fresh-water conditions, but with recurring spatial differences, especially at site T1, and a notable temporary decline in dissolved oxygen during February.

January 19, 2026: Held on the MLK Day Of Service, regular monitoring was also carried out. Dr. Lane dug a ditch with volunteers while Mr. Day carried out the monitoring and cleared the new birding trail with volunteers.

Dissolved oxygen was 6.7 mg/L at site SB, ranged from 4.2 to 10.0 mg/L at sites S1-S5, and was 7.3 mg/L at site T1. Conductivity was approximately 740 mS at site SB, ranged from approximately 590 to 1050 mS at sites S1-S5, and was approximately 1050 mS at site T1. Salinity was 0.5 ppt at site SB, ranged from 0.4 to 0.7 ppt at sites S1-S5, and was 0.8 ppt at site T1. Water temperature was 7.5°C at site SB, ranged from 7.9 to 11.3°C at sites S1-S5, and was 6.0°C at site T1. The pH was 7.4 at site SB, ranged from 6.9 to 7.7 at sites S1-S5, and was 7.1 at site T1. Total dissolved solids were 721.0 mg/L at site SB, ranged from 540.3 to 918.0 mg/L at sites S1-S5, and were 686.1 mg/L at site T1.

Discrete water quality data from January 19, 2026.

Site	Date	DO (mg/l)	Cond. (mS)	Salinity (ppt)	Temp. (°C)	pH	TDS (mg/L)
SB	1/19/26	6.7	741.0	0.5	7.5	7.4	721.0
S1	1/19/26	6.3	996.0	0.7	10.5	7.4	889.9
S2	1/19/26	10.0	1045.0	0.7	11.3	7.7	918.0
S3	1/19/26	4.2	710.0	0.5	7.9	7.4	680.0
S4	1/19/26	7.7	816.0	0.6	9.0	7.0	761.0
S5	1/19/26	7.5	585.0	0.4	9.2	6.9	540.3
T1	1/19/26	7.3	1047.0	0.8	6.0	7.1	686.1





Volunteers clearing the birding trail January 19, 2026.

February 9, 2026: Jason Day met with Ms. Ferdinand to discuss the birding trail and cypress plantings. No data were collected at site S4 due to low to no water being present.

Dissolved oxygen was 0.60 mg/L at site SB, ranged from 0.51 to 10.1 mg/L at sites S1-S5, and was 0.85 mg/L at site T1. Conductivity was approximately 1260 mS at site SB, ranged from approximately 770 to 1210 mS at sites S1-S5, and was approximately 1500 mS at site T1. Salinity was 0.63 ppt at site SB, ranged from 0.41 to 0.72 ppt at sites S1-S5, and was 0.85 ppt at site T1. Water temperature was 15.8°C at site SB, ranged from 16.6 to 21.2°C at sites S1-S5, and was 20.0°C at site T1. The pH was 7.6 at site SB, ranged from 7.8 to 8.0 at sites S1-S5, and was 8.1 at site T1. Total dissolved solids were 812.2 mg/L at site SB, ranged from 547.3 to 932.3 mg/L at sites S1-S5, and were 1076.1 mg/L at site T1.

Discrete water quality data from February 9, 2026.

Site	Date	DO (mg/l)	Cond. (mS)	Salinity (ppt)	Temp. (°C)	pH	TDS (mg/L)
SB	2/9/26	0.60	1261.0	0.63	15.8	7.6	812.2
S1	2/9/26	0.51	1165.0	0.70	16.6	7.8	901.2
S2	2/9/26	0.89	1214.0	0.72	17.1	7.9	932.3
S3	2/9/26	0.81	1068.0	0.57	21.2	8.0	745.2
S4	2/9/26	.	.	.	.	.	.
S5	2/9/26	10.1	768.0	0.41	20.3	8.0	547.3
T1	2/9/26	0.85	1498.0	0.85	20.0	8.1	1076.1



Dry conditions at site S4 on February 9, 2026.

March 13, 2026: All tagged trees were measured along wetland edge. Mr. Day met Ms. Ferdinand and company while doing work on birding trail.

Dissolved oxygen was 2.8 mg/L at site SB, 2.7 mg/L at site S1, 6.7 mg/L at site S2, 7.7 mg/L at site S3, 6.6 mg/L at site S4, 5.7 mg/L at site S5, and 3.9 mg/L at site T1. Conductivity was approximately 740 mS at site SB, approximately 1190 mS at site S1, approximately 1260 mS at site S2, approximately 1190 mS at site S3, approximately 910 mS at site S4, approximately 940 mS at site S5, and approximately 1920 mS at site T1. Salinity was 0.44 ppt at site SB, 0.67 ppt at site S1, 0.69 ppt at site S2, 0.59 ppt at site S3, 0.44 ppt at site S4, 0.45 ppt at site S5, and 1.1 ppt at site T1. Water temperature was 15.8°C at site SB, 18.9°C at site S1, 20.4°C at site S2, 21.1°C at site S3, 20.4°C at site S4, 21.0°C at site S5, and 19.8°C at site T1. The pH was 7.3 at site SB, 7.6 at site S1, 7.6 at site S2, 8.1 at site S3, 7.7 at site S4, 7.8 at site S5, and 7.7 at site T1. Total dissolved solids were 586.9 mg/L at site SB, 872.7 mg/L at site S1, 900.4 mg/L at site S2, 774.0 mg/L at site S3, 590.0 mg/L at site S4, 620.0 mg/L at site S5, and 1397.0 mg/L at site T1.

Discrete water quality data from March 13, 2026.

Site	Date	DO (mg/l)	Cond. (mS)	Salinity (ppt)	Temp. (°C)	pH	TDS (mg/L)
SB	3/13/26	2.8	744.0	0.44	15.8	7.3	586.9
S1	3/13/26	2.7	1188.0	0.67	18.9	7.6	872.7
S2	3/13/26	6.7	1261.0	0.69	20.4	7.6	900.4
S3	3/13/26	7.7	1189.0	0.59	21.1	8.1	774.0
S4	3/13/26	6.6	909.0	0.44	20.4	7.7	590.0
S5	3/13/26	5.7	940.0	0.45	21.0	7.8	620.0
T1	3/13/26	3.9	1920.0	1.1	19.8	7.7	1397.0



Measuring tree diameters of tagged trees on March 13, 2026.

Monitoring – Nutrients, BOD₅ & TSS

Water samples were collected on **February 9, 2026**, for nutrient (NO₂+NO₃ (NO_x), NH₃, TN, PO₄ & TP), biological oxygen demand (BOD₅), suspended sediment (TSS) and fecal coliform analysis.

Nitrate+nitrite (NO_x) concentrations were 0.34 mg/L at site SB, 0.066 mg/L at site S1, 0.060 mg/L at site S2, 0.071 mg/L at site S3, 0.063 mg/L at site S5, and 0.15 mg/L at site T1. Ammonia concentrations were 0.47 mg/L at site SB, below detection (<0.051 mg/L) at site S1, 0.45 mg/L at site S3, below detection (<0.051 mg/L) at site S5, and 4.8 mg/L at site T1. Total nitrogen concentrations were 1.18 mg/L at site SB, 1.866 mg/L at site S1, 1.56 mg/L at site S2, 2.271 mg/L at site S3, 1.763 mg/L at site S5, and 7.45 mg/L at site T1. Phosphate concentrations were 0.028 mg/L at site SB, 0.13 mg/L at site S1, 0.024 mg/L at site S2, 0.018 mg/L at site S3, 0.024 mg/L at site S5, and 2.8 mg/L at site T1. Total phosphorus concentrations were 0.10 mg/L at site SB, 0.14 mg/L at site S1, 0.086 mg/L at site S2, 0.034 mg/L at site S3, 0.059 mg/L at site S5, and 2.7 mg/L at site T1. Total suspended solids were 5.6 mg/L at site SB, 14 mg/L at site S1, 12 mg/L at site S2, 10 mg/L at site S3, 16 mg/L at site S5, and below detection (<8.0 mg/L) at site T1. Five-day biological oxygen demand was 3.5 mg/L at site SB, 4.6 mg/L at site S1, 4.3 mg/L at site

S2, 5.8 mg/L at site S3, 7.7 mg/L at site S5, and 5.4 mg/L at site T1. Fecal coliform concentrations were 440 CFU/100 mL at site SB, 880 CFU/100 mL at site S1, 120 CFU/100 mL at site S2, 210 CFU/100 mL at site S3, 250 CFU/100 mL at site S5, and greater than 2000 CFU/100 mL at site T1. No analytical data were collected at site S4 due to dry conditions.

Analytical results from samples collected on February 9, 2026.

Site	Date	NO _x (mg/L)	NH ₃ (mg/L)	TN (mg/L)	PO ₄ (mg/L)	TP (mg/L)	TSS (mg/L)	BOD ₅ (mg/L)	Fecal (CFU/100ml)
SB	3/5/26	0.34	0.47	1.18	0.028	0.10	5.6	3.5	440
S1	3/5/26	0.066	<0.051	1.866	0.13	0.14	14	4.6	880
S2	3/5/26	0.060	<0.051	1.56	0.024	0.086	12	4.3	120
S3	3/5/26	0.071	0.45	2.271	0.018	0.034	10	5.8	210
S4	3/5/26	.	.	.	.	.	.	.	.
S5	3/5/26	0.063	<0.051	1.763	0.024	0.059	16	7.7	250
T1	3/5/26	0.15	4.8	7.45	2.8	2.7	<8.0	5.4	>2000



Water nutrients around site S2 on February 9, 2026.

Ecological Implications

Taken together, the last four tables suggest that water quality in most of the Sankofa Wetland Park remained within a generally fresh range, but with recurring evidence that one part of the system, especially the T-site location, was receiving more mineralized and nutrient-enriched water than the interior S-sites. Across the January through March field measurements, salinity

remained low throughout the park, generally between about 0.4 and 0.8 ppt at site SB and sites S1-S5, which is consistent with freshwater to very slightly brackish conditions and is not inherently problematic for the wetland vegetation. Conductivity and TDS were also moderate at most S-sites, although they were often somewhat elevated at site T1/T1 relative to the rest of the park. This indicates that the T-site was influenced by a different water source or stronger concentration of dissolved ions than the interior wetland cells. Even so, the park as a whole remained fresh during this period.

The dissolved oxygen data show more spatial and temporal variability than the other field parameters. In January, dissolved oxygen was moderate to high across most sites, but in February several locations, including SB, S1, S2, S3, and T1, had very low values, while S5 remained high. By March, dissolved oxygen had partially recovered at most sites, though SB, S1, and T1 still remained on the lower side. In wetlands, such variability is not unusual because dissolved oxygen can shift rapidly with temperature, water depth, residence time, microbial activity, algal production, and mixing. The February pattern likely reflects a combination of stagnant conditions and strong biological oxygen demand in parts of the system rather than a uniform park-wide impairment. Still, recurring low dissolved oxygen in localized areas could stress aquatic organisms, slow some aerobic processes, and favor reducing soil and water conditions.

The analytical results reinforce the idea that most of the park sites were functioning within a moderate nutrient range, while T1 stood out as a localized hotspot of enrichment. SB and sites S1-S5 generally had low NO_x, low phosphate and total phosphorus, moderate total nitrogen, modest TSS, and moderate BOD₅. In contrast, T1 had much higher ammonia, total nitrogen, phosphate, total phosphorus, and fecal coliform concentrations than the other sampled sites. Ecologically, this suggests that site T1 was receiving a concentrated nutrient and bacterial input that could stimulate algal or cyanobacterial growth, increase oxygen demand during decomposition, and contribute to poorer water quality if such inputs persist. The very high fecal coliform value at site T1 also points to a potential sewage, urban runoff, or other contaminated water source that warrants attention.

Overall, the main ecological implication is that most of the wetland park appeared to be maintaining acceptable freshwater wetland conditions, but water quality was not uniform across the system. The S-sites generally showed moderate nutrient levels and low salinity, which are compatible with normal wetland function, while the T-site repeatedly showed signs of greater hydrologic and water quality stress. That spatial pattern suggests that management should focus on identifying and reducing the source of enriched water entering or affecting the T-area, because continued nutrient and bacterial loading there could promote nuisance algal growth, depress dissolved oxygen, and degrade habitat quality even if the rest of the park remains in relatively good condition.

Monitoring - Avian Survey

A total of 50 species were sighted this quarter; 39 bird species were observed on January 19, 32 species on February 9, and 38 species on March 13, 2026.

Bird species observed at the Sankofa Wetland Park during 2026 Q1.

Common Name	Scientific Name	1/19/26	2/9/26	3/13/26
American Coot	<i>Fulica americana</i>	X		X
American Crow	<i>Corvus brachyrhynchos</i>	X	X	X
American Kestrel	<i>Falco sparverius</i>	X		X
Anhinga	<i>Anhinga anhinga</i>	X	X	X
Bald Eagle	<i>Haliaeetus leucocephalus</i>			X
Barn Swallow	<i>Hirundo rustica</i>			X
Belted Kingfisher	<i>Megaceryle alcyon</i>	X	X	
Black Vulture	<i>Coragyps atratus</i>	X	X	X
Black-and White Warbler	<i>Mniotilta varia</i>	X		
Black-Bellied Whistling-Duck	<i>Dendrocygna autumnalis</i>		X	X
Black-Winged Stilt	<i>Himantopus himantopus</i>			X
Blue Jay	<i>Cyanocitta cristata</i>	X	X	X
Blue-Grey Gnatcatcher	<i>Polioptila caerulea</i>	X		
Brown Pelican	<i>Pelecanus occidentalis</i>		X	
Carolina Chickadee	<i>Poecile carolinensis</i>	X	X	X
Carolina Wren	<i>Thryothorus ludovicianus</i>	X	X	X
Cattle Egret	<i>Bubulcus ibis</i>	X	X	
Common Grackle	<i>Quiscalus quiscula</i>	X		X
Common Moorhen	<i>Gallinula chloropus</i>	X	X	X
Common Yellowthroat	<i>Geothlypis trichas</i>	X	X	X
Double Crested Cormorant	<i>Phalacrocorax auritus</i>	X	X	X
Downy Woodpecker	<i>Dryobates pubescens</i>	X	X	X
Eastern Phoebe	<i>Sayornis phoebe</i>	X	X	
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	X	X	
European Starling	<i>Sturnus Vulgaris</i>	X	X	X
Fish Crow	<i>Corvus ossifragus</i>	X	X	X
Glossy Ibis	<i>Plegadis falcinellus</i>			X
Great Blue Heron	<i>Ardea herodias</i>	X	X	X
Great Egret	<i>Ardea alba</i>	X	X	X
Green Heron	<i>Butorides virescens</i>	X		
Killdeer	<i>Charadrius vociferus</i>	X	X	
Laughing Gull	<i>Larus atricilla</i>	X	X	X
Limpkin	<i>Aramus guarauna</i>	X	X	X
Little Blue Heron	<i>Egretta caerulea</i>	X	X	X
Mockingbird	<i>Mimus polyglottos</i>	X	X	X
Monk Parakeet	<i>Myiopsitta monachus</i>		X	X
Mourning Dove	<i>Zenaida macroura</i>	X	X	
Northern Cardinal	<i>Cardinalis cardinalis</i>	X	X	X
Osprey	<i>Pandion Haliaeetus</i>	X	X	X
Red Shouldered Hawk	<i>Buteo lineatus</i>			X
Red Winged Blackbird	<i>Agelaius phoeniceus</i>	X	X	X
Ruby-Crowned Kinglet	<i>Corthylio calendula</i>	X		
Snowy Egret	<i>Egretta thula</i>	X	X	X
Swamp Sparrow	<i>Melospiza georgiana</i>			X
Tree Swallow	<i>Tachycineta bicolor</i>	X		
Tufted Titmouse	<i>Baeolophus bicolor</i>	X	X	X
Turkey Vulture	<i>Cathartes aura</i>	X		X
White Ibis	<i>Eudocimus albus</i>			X
White Pelican	<i>Pelecanus erythrorhynchos</i>			X
Yellow-Rumped Warbler	<i>Setophaga coronata</i>	X		X