

Quarterly Report: Monitoring Potential Cadmium Levels in Avian Tissues Associated with the Savannah Harbor Expansion Project – March 2016 (1st Quarter)

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In the first quarter of 2016, we collected the final, late season samples as part of the winter period of the second year of avian cadmium sampling (as a reminder, our sampling year spans portions of two calendar years). This sampling occurred during the following periods: 29 January-2 February and 23-24 February. During the late January effort, we collected good numbers of migratory songbirds (Savannah and Song sparrows), but only limited numbers of the resident songbirds (towhees and thrashers).

The success of the early February sampling period was negatively impacted by a lengthy severe storm followed by strong winds (which precluded our use of mist nests). However, fluctuations of DMCA water levels due to shifting of dredge materials to another DMCA were conducive for lethal collections of American Avocets (N=6) in 12A.

Our final tally of avian blood samples collected for cadmium analyses for the first year of monitoring related to SHEP are presented in Table 1.

With the conclusion of winter sampling, chemical analyses of collected samples is being finalized and the annual report is being drafted.

Table 1. Sentinel and Alternative Birds Captured and Sampled (Blood) on the Savannah Dredge Material Containment Areas (DMCA) in the Early and Late Portions of Summer and Winter Sampling Periods.

	Early	Late	Total
Spring/Summer			
Black-necked Stilt	6	3	9
Brown Thrasher	4	5	9
Eastern Towhee	2	1	3
Mottled Duck	0*	4	4
Mourning Dove**	0	9	9
Northern Mockingbird	4	3	7
Red-winged Blackbird	7	0	7
Winter			
American Avocet	1	6	7
Brown Thrasher	1	0	1
Eastern Towhee	3	1	4
Northern Mockingbird	1	1	2
Northern Shoveler	6	3	9
Savannah Sparrow	7	7	14
Song Sparrow	8	4	12
Northern Cardinal***	0	4	4

*We did not have our USFWS scientific collecting permit in time to lethally collect in the Early period.

**We also collected 2 Rock Doves/Pigeons and 2 Common Ground Doves.

***We collected Northern Cardinals as a potential alternate species.

Table 1. Sentinel and Alternative Birds Captured and Sampled (Blood) on the Savannah Dredge Material Containment Areas (DMCA) in the Summer (S) and Winter (W) Periods.

Sentinel Species	Sentinel		
	Season	Spring-Summer	Fall-Winter
Black-necked Stilt ^a	S	10	-
Brown Thrasher	Both	6	4
Eastern Towhee	Both	6	6
Mourning Dove	S	10	-
Northern Mockingbird	Both	13	13
Red-winged Blackbird	S	13	-
Mottled Duck ^a	S	0	-
Savannah Sparrow	W	7 ^a	13
House Wren	W	1 ^a	-
American Avocet ^a	W	-	0
Northern Shoveler ^a	W	-	8
Song Sparrow	W	-	11
<u>Alternative Species</u>			
Common Ground Dove	S	5	-
Northern Cardinal	Both	8	8
Swamp Sparrow	S	7	7
Yellow-rumped Warbler	W	-	12
American Coot ^a	W	-	4

^aThese species are typically associated with wet conditions/aquatic habitats, although all species utilize edge habitat between aquatic and terrestrial habitats. The shovellers, avocets, and doves were collected lethally.

^bWinter sentinel species captured in early Spring.