

## Quarterly Report: Monitoring Potential Cadmium Levels in Avian Tissues Associated with the Savannah Harbor Expansion Project – June 2014 (2<sup>nd</sup> Qtr)

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We initiated avian sampling in the second quarter of the project, including two, 4-5 day visits to the DMCAs for collections. The first visit occurred from 10-14 April and was primarily dedicated to the capture and sampling of land birds. All captures in this visit occurred through use of mist nets in DCMAs 14a and 13b (14b is unavailable during year 1 due to construction activities). Eight species were captured and/or banded and/or had blood collected from them (see 1<sup>st</sup> and 2<sup>nd</sup> quarter totals in Table 1). Of note during the April sampling was the continued presence of “winter”/migratory species, which occasionally impacted our capture efforts. Their presence particularly affected any opportunity to collect aquatic sentinel species (Black-necked Stilts and Mottled Ducks) as the sentinel species were present in low numbers in a sea of other shorebirds and waterfowl. The second visit occurred from 15-19 May, with the focus on blood collections from Mourning Doves, stilts and Mottled Ducks. We employed small, baited walk-in traps to capture the doves and a combination of nest traps and a net launcher to capture the stilts. Mottled ducks were still present in very low numbers (< 15 observed) and most were observed in pairs, suggesting they were not nesting yet, and thus were not sampled. The total number of avian captures and blood collections to date is shown in Table 1.



**Nest trap being placed over a stilt nest and a stilt captured with the net launcher.**

**Table 1. Birds Captured and Sampled on the Savannah Dredge Material Containment Areas (DMCA) in the April/May of 2014.**

<u>Sentinel Species</u>	<u>No. Banded/Sampled**</u>
Black-necked Stilt	8
Brown Thrasher	6
Eastern Towhee	4
Mourning Dove	9
Northern Mockingbird	4
Red-winged Blackbird	13
Savannah Sparrow*	7
House Wren*	1
<u>Additional Species</u>	
Common Ground Dove	4
Northern Cardinal	4
Swamp Sparrow	7

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\*Winter sentinel species.

\*\*Overall Spring/Summer (with one more sampling period to go) goals were to sample ~ 10 individuals per species.

Prey base collections were conducted at avian sampling locations on sites 13B and 14A. Terrestrial and aquatic invertebrates were sampled using sweep nets, dip nets, or by hand. When possible, collections were made where target avian species were observed foraging. Samples were preserved in the field, then sorted and identified in the laboratory. Specimens identified as possible target avian prey resources were reserved and stored for cadmium testing. Samples include specimens from the Orders: Orthoptera, Hemiptera, Coleoptera, Araneae, Hymenoptera, Lepidoptera, Diptera and Pulmonata. Specimens include grasshoppers, katydids, rice bugs, terrestrial and aquatic beetles, bees, spiders, flies, moths and snails. The most abundant terrestrial invertebrates collected were grasshoppers, katydids, spiders and beetles. Water beetles and fly larvae were the most abundant specimens in aquatic samples. Dried seed heads from terrestrial grasses (Poaceae) observed near mourning dove foraging locations were collected for identification and frozen for cadmium testing.

We will conduct our final Spring/Summer avian blood collections in mid-August, targeting all sentinel species, as well as additional prey base sampling. After this sampling session, we will discuss our sampling results with USACE and USFWS, and discuss any potential shifts in methodology and/or sentinel species we might recommend based on our initial sampling.