United States Department of the Interior
U.S. Fish and Wildlife Service
Alabama Field Office – Birmingham Suboffice
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Project Description: Preliminary Survey of Contaminants in Bird Eggs for the Anniston PCB Site, Anniston, Alabama

1.0 Introduction

The State of Alabama, acting through the Department of Conservation and Natural Resources (ADCNR) and the Geological Survey of Alabama (GSA), and the Secretary of the Interior, as represented by the Regional Director of the Southeast Region of the U.S. Fish and Wildlife Service (USFWS; collectively referred to as the Natural Resources Trustees or Trustees), are in the process of assessing injuries to, loss of, or destruction of natural resources from releases of hazardous substances from the Anniston Polychlorinated Biphenyl (PCB) Site, which is located in the north-eastern portion of Alabama in the vicinity of the municipality of Anniston in Calhoun County (Figure 1). Sometimes the Anniston PCB Site is also referred to in this document as the Site Assessment Area. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9601 et. seq., (CERCLA) and the Clean Water Act, 33 U.S.C. §§ 1251-1376 (Federal Water Pollution Control Act or CWA), provide authority to the Trustees to seek damages for injuries to natural resources within their trusteeship [42 U.S.C. §§ 9607(a) and (f); 33 U.S.C. § 1321]. Trustees must use recovered funds to restore, replace, rehabilitate, or acquire the equivalent of, the injured natural resources, or may elect to allow the responsible parties to directly implement restoration activities under Trustee oversight.

Environmental concerns in the area have focused primarily on the Monsanto Company's (Facility) releases of PCBs and other hazardous substances between 1935 and the early 1970's. Facility records document that PCBs were released from the Facility during production. Releases occurred in the form of wastewater discharges, leakage from Facility landfills, equipment washing runoff, accidental spills, atmospheric releases, storm water runoff, and miscellaneous releases from operational components. The total mass of PCBs released to the environment over the 35 years that PCBs were produced at the Facility is uncertain. However, based on Facility records, more than 45 tons of PCBs may have been discharged in process wastewater alone during a single year of production. Storm water monitoring data indicate that the release of PCBs from the Facility continued through 2001. Based on the available data, environmental media from the Anniston facility to at least Logan Martin Dam (i.e., Snow Creek, Choccolocco Creek, Coosa River, and associated floodplains) have been contaminated by PCBs and/or other contaminants, posing potential risks to ecological receptors, like birds and fish.

2.0 Project Description

Evaluations of injury to avian receptors utilizing aquatic and riparian habitats are typically conducted by modeling dietary exposure to chemicals of potential concern (COPCs) and comparing estimated daily intake rates to published tolerable daily intakes or effects thresholds from the literature. While this approach is reasonable and appropriate for the purpose of estimating damages, it is also useful to document exposure of avian species to PCBs and other COPCs. For this reason, a bird egg survey will be conducted to evaluate exposure of selected

species of birds to PCBs and other COPCs at the site and to evaluate the potential effects associated with accumulation of PCBs and other COPCs in bird eggs.

The preliminary investigation of contaminant exposure of avian species utilizing habitats in the vicinity of the Anniston PCB site will be conducted jointly by USFWS, ADCNR, U.S. Geological Survey (USGS), and Jacksonville State University (JSU). The project will consist of the following elements:

- Identification of the avian species utilizing aquatic and riparian habitats within the Choccolocco Creek corridor;
- Selection of target species of birds, based on abundance, habitat use, diet, and other relevant factors (e.g., application as surrogates for other invertivores);
- Obtaining the necessary Federal and State authorizations for collecting bird eggs from the Site Assessment Area;
- Conducting reconnaissance surveys to identify suitable locations for installing nesting boxes within each reach of the Site Assessment Area. The locations of likely nesting areas for target bird species will also be identified;
- Installation of nesting boxes at the selected locations;
- Collecting eggs from the target bird species from selected locations within the Site Assessment Area. Eggs of other bird species may be collected as such opportunities arise;
- Processing of bird egg samples;
- Analysis of egg tissue samples for PCBs and selected other COPCs (including percent lipids, percent moisture, PCB Aroclors, mercury, metals, PCB congeners, and/or polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans [PCDDs/PCDFs]); and,
- Data compilation, evaluation, analysis, and reporting.

It is anticipated that the results of this study will provide the information needed to determine the extent to which avian species utilizing habitats in the study area are currently being exposed to COPCs, to determine which species may be adversely affected by COPC burdens in egg tissues (i.e., by comparing concentrations of COPCs to the results of egg injection studies), and to determine if additional avian pathway and/or injury studies should be conducted. In addition, the results of this study may be used to estimate potential exposure of Indiana bats (*Myotis sodalis*) and gray bats (*Myotis grisescens*) to PCBs and other COPCs (i.e., based on data collected for aerial-feeding invertivores).

3.0 Project Schedule

This project will be initiated in 2013 and will be completed by 2015.

4.0 Budget

The budget for this project is $367,000.