

**ASSESSMENT PLAN ADDENDUM:
LOWER FOX RIVER/GREEN BAY NRDA**

Prepared for:

U.S. Fish and Wildlife Service
Region 3
Fort Snelling, MN 55111

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ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CWA	Federal Water Pollution Control Act
DOI	Department of the Interior
FDA	Food and Drug Administration
MITW	Menominee Indian Tribe of Wisconsin
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NOAA	National Oceanic and Atmospheric Administration
NRDA	Natural resource damage assessment
OTIW	Oneida Tribe of Indians of Wisconsin
PCB	Polychlorinated biphenyl
PRP	Potentially responsible party
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1.0 INTRODUCTION

The U.S. Fish and Wildlife Service (USFWS) of the Department of the Interior (DOI), the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce, the Menominee Indian Tribe of Wisconsin (MITW), and the Oneida Tribe of Indians of Wisconsin (OTIW) are preparing to assess damages to natural resources that have resulted from releases of hazardous substances to the Lower Fox River, Green Bay, and Lake Michigan and other areas containing natural resources potentially injured by hazardous substances released to the Lower Fox River (collectively known as the assessment area). Section 107 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) [42 U.S.C. § 9607], Section 311 of the Federal Water Pollution Control Act (CWA) [33 U.S.C. § 1321], and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) [40 CFR Part 300] provide authority to the DOI, NOAA, the MITW, and the OTIW (collectively, “the trustees”) to seek such damages.

This Assessment Plan Addendum follows the August 1996 Assessment Plan for the Lower Fox River/Green Bay natural resource damage assessment (NRDA), as noticed in the Federal Register (61 Fed. Reg. 43,558, August 23, 1996). The August 1996 Assessment Plan addressed the trustees’ overall assessment approach and included:

- ▶ background information on the natural resources and the assessment area
- ▶ trustee authority
- ▶ coordination and previous actions of trustees
- ▶ decision to perform Type B assessment
- ▶ confirmation of exposure
- ▶ recovery period
- ▶ injury assessment approaches
- ▶ damage determination approaches
- ▶ quality assurance project plan.

NOAA has agreed to join the USFWS, MITW, and OTIW in conducting the NRDA. In addition to the trustee authority described in the August 1996 Assessment Plan, and based on the authority delegated to the Secretary of the Interior and the Secretary of Commerce, NOAA derives trusteeship and/or cotrusteeship authority over natural resources in the assessment area under several statutes, regulations, and statutorily prescribed programs. These statutes, regulations, and programs include, but are not limited to, the following: Subpart G of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 CFR Section 300.600(b)(1), as

amended, as well as several of the authorities cited in the August 1996 Assessment Plan for the Department of the Interior.

This Assessment Plan Addendum describes a limited number of additional planned assessment activities that were not included in the August 1996 Assessment Plan. Both the Assessment Plan and this Assessment Plan Addendum have been prepared in accordance with NRDA regulations promulgated by the DOI at 43 CFR Part 11.

2.0 PUBLIC REVIEW AND COMMENT

This Assessment Plan Addendum is available for review and comment by potentially responsible parties (PRPs), other natural resource trustees, other affected federal or state agencies or Native American tribes, and any interested members of the public for a period of 30 days.

Comments may be submitted in writing to:

Frank J. Horvath
U.S. Fish and Wildlife Service
Region 3 (attn: ES/EC-NRDA)
B.H.W. Whipple Federal Building
1 Federal Drive
Fort Snelling, MN 55111

Comments must be received no later than 30 days after the date the notice of availability is published in the Federal Register.

3.0 SUMMARIES OF ADDITIONAL PLANNED STUDIES

After publication of the August 1996 Assessment Plan, additional studies were developed by the trustees following further review of available site data. These studies were determined to be necessary to supplement existing information and the studies described in the Assessment Plan. The following studies have been, or will soon be, initiated by the trustees.

3.1 Field Collection of Walleye for Assessment of Fish Health

Objective

The objective of this effort is to evaluate potential physiological and deformative injuries (fish health) in walleye collected from the assessment area. This effort follows the preliminary fish health evaluation study described in the August 1996 Assessment Plan and conducted in 1996.

Approach

During 1997 the following sequence of activities will occur:

1. Appropriate field reference sites will be selected.
2. Up to 130 walleye will be collected from the Lower Fox River, lower Green Bay, mid Green Bay (two sites), and two reference sites (up to 20-30 fish will be collected from each site).
3. Fish will be collected by electroshocking. Collected fish will be processed for health indicator analyses (e.g., immunotoxicological, histopathological, and biochemical analyses), and tissues will be archived for analyses, as appropriate.
4. A portion of liver tissue from each fish will be archived for possible contaminant analysis.

3.2 Determination of Contaminant Tissue Residues in Green Bay Waterfowl

Objective

The objectives of this effort are to measure tissue contaminant concentrations in a variety of waterfowl species from Green Bay and to compare the measured contaminant concentrations in Green Bay waterfowl with FDA tolerances.

Approach

During the fall of 1997 the following sequence of activities will occur:

1. Waterfowl sampling sites (i.e., areas where waterfowl congregate) in Green Bay will be identified.
 2. Waterfowl will be collected from the sampling sites by shooting. Up to 10 individual scaup, common goldeneye, and red-breasted merganser will be collected.
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3. The collected waterfowl will be prepared and transported to an analytical laboratory where contaminant analyses will be performed on their tissues.

In addition, during June 1997, 10 individual mallard were collected from Green Bay by shooting. These samples will be analyzed for contaminant residues.

3.3 Determination of Contaminant Tissue Residues in Green Bay Tree Swallow Eggs

Objectives

The objectives of this effort are to measure contaminant concentrations in tree swallow eggs from Green Bay nests and to investigate potential relationships between contaminant concentrations and reproductive success.

Approach

During the 1994 and 1995 breeding seasons, eggs from Green Bay tree swallow nests of known success were archived by C. Custer of the USGS, Upper Mississippi Science Center. These eggs will be transported to an analytical laboratory and their contaminant residues analyzed. The potential relationship between egg contaminant concentrations and reproductive success will then be investigated.

3.4 Determination of PCB Toxicity to Forster's Tern Embryos

Objective

The objective of this study is to experimentally determine the toxicity of PCBs to Forster's tern embryos.

Approach

This study includes the following activities:

1. Forster's tern nesting colonies that are comparatively uncontaminated with PCBs or other contaminants were identified in June and July 1997.
 2. During the 1998 nesting season, approximately 80 freshly laid eggs will be collected from the study colony (or colonies) and transported to a laboratory.
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3. In the laboratory, the Forster's tern eggs will be exposed to various doses of PCBs by egg injection, including a control dose of no PCBs.
4. The injected and control eggs will be incubated until hatching.
5. The relationships between PCB dose and various reproductive endpoints (potentially including hatching success and frequency of deformities) will be investigated.

3.5 Evaluation of Transportation Service Interruptions Due to Injured Sediments

Objective

The objective of this effort is to identify and evaluate the navigation and transportation service interruptions associated with PCB-contaminated sediment in navigation channels.

Approach

Information from appropriate federal, state, and local agencies will be gathered and evaluated to determine the level and nature of navigation and transportation services provided by the navigation channels, the quantity of contaminated sediment that must be removed to restore the services provided by the channels, and the additional costs of alternative methods of sediment dredging and disposal caused by the presence of the PCB contamination. The evaluation will also examine the potential for the navigation and transportation channels to become recontaminated in the future.

4.0 ADDITIONAL DETAILS ON ASSESSMENT ACTIVITIES SPECIFIC TO THE ONEIDA TRIBE OF INDIANS OF WISCONSIN

This section provides additional details on assessment activities specific to assessing injuries and damages related to the Oneida Tribe of Indians of Wisconsin (OTIW).

4.1 Measurement of PCB Concentrations in Fish and Birds On-reservation

The objective of this activity is to determine if fish or birds on the OTIW reservation may be exposed to PCBs in the Fox River and/or Green Bay. To accomplish this objective, selected species of fish and birds will be collected on the reservation, and their tissues will be analyzed for PCBs.

4.2 Evaluation of Lost Fishing, Hunting, and Trapping

This activity will examine the changes in Tribal fishing, hunting, and trapping uses resulting from environmental PCB contamination. Historical uses of the resources will be determined through historical documents and interviews, with special attention being given to potential changes in subsistence fishing, hunting, and trapping. Changes in recreational fishing patterns by OTIW community members will also be examined through personal and creel surveys.

4.3 Evaluation of Lost Cultural Activities

The extent of lost OTIW cultural activities as a result of the PCB contamination will be examined in this activity. Interviews will be used to evaluate how Tribal cultural activities have been affected by PCB contamination.
