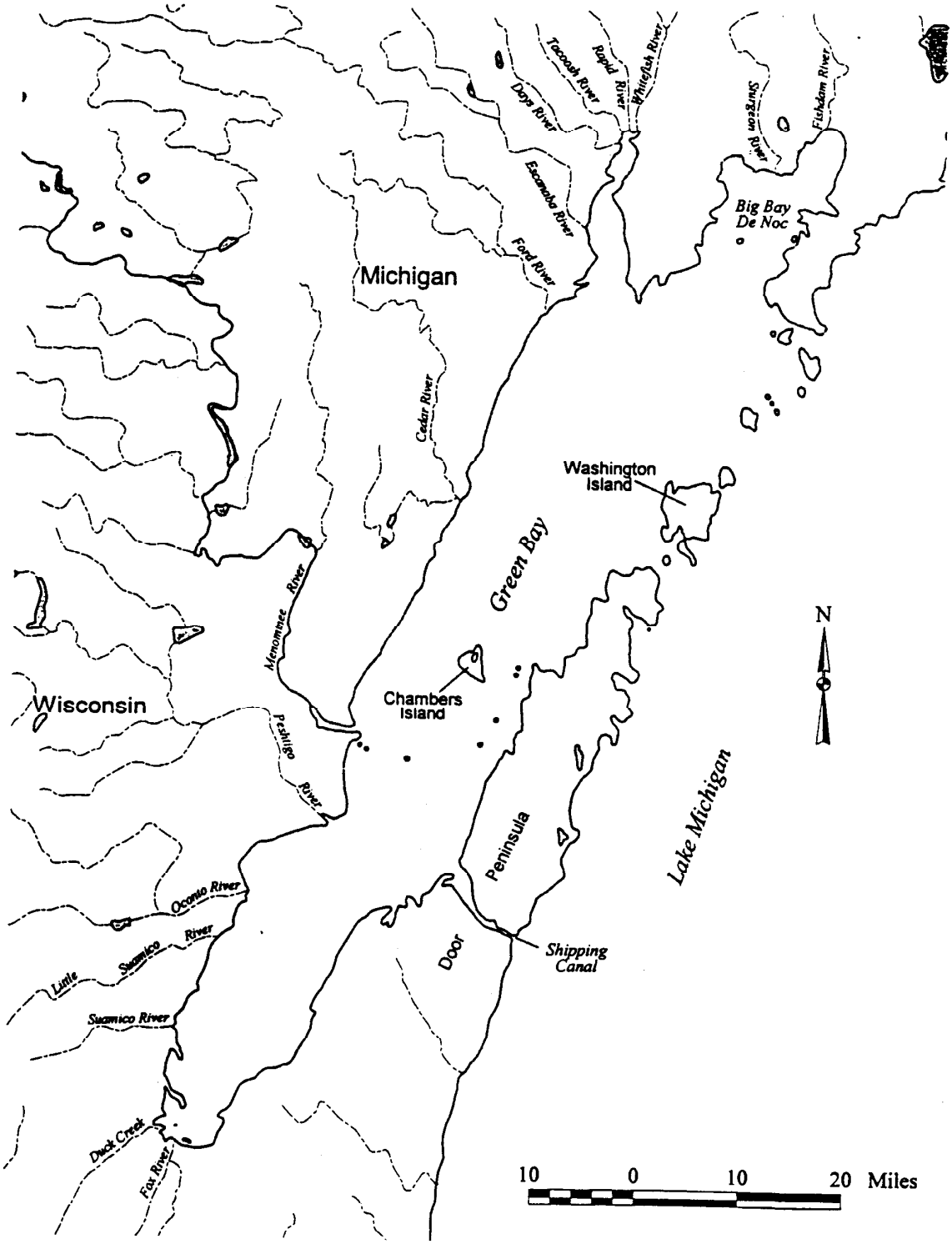
Figure 2-3
Detailed Map of Green Bay



2.3 HISTORY OF PULP AND PAPER MILLS AT THE ASSESSMENT AREA

Paper mills began operations along the Lower Fox River between 1850 and 1900 (Persson et al., 1988). Currently, the Lower Fox River from Lake Winnebago to Green Bay has the greatest concentration of pulp and paper mills in the world (Allen et al., 1987). In 1987, there were 14 pulp and paper mills and 5 municipal waste treatment facilities between Little Lake Butte des Morts (LLBDM) and the mouth of the Fox River at Green Bay (Allen et al., 1987). PCBs were first introduced into the paper making process in the mid-1950s (Patterson et al., 1994, cited in WDNR, 1995a). Virgin carbonless copy paper manufactured between 1957 and 1971 (the date when the use of PCBs in copy paper was discontinued) contained an average of 3.4% PCBs, in the form of Aroclor 1242 (Carr et al., 1977).

The greatest releases of PCBs into the Lower Fox River occurred during the deinking and repulping of carbonless copy paper that was manufactured with PCBs (Sullivan et al., 1983). Several paper companies along the Lower Fox River deinked and repulped carbonless copy paper between 1957 and the present, including Bergstrom Paper Corporation (currently the P.H. Glatfelter Corporation), Wisconsin Tissue Mills, Riverside Paper, and Fort Howard Paper Company (Sullivan and Delfino, 1982). Even after the 1971 discontinuation of PCB use in carbonless copy paper, PCBs remained in the effluent from paper mills. For example, concentrations of PCBs in effluent from the Bergstrom Paper Mill between 1975 and 1976 ranged from 5,500 to 75,000 ng/l (Behrens, 1991). The PCB concentration in the effluent from Riverside Paper was measured at 3,600 ng/l in 1976, and PCB concentrations in the effluent from Fort Howard Paper Company ranged from 1,200 to 160,000 ng/l in 1975 and 1976 (Behrens, 1991). The highest PCB concentrations in the Fox River are found in sediment deposits in LLBDM downstream from the Bergstrom (now P.H. Glatfelter) Paper Mill (Allen et al., 1987).

Resuspension of previously contaminated sediments continues to expose natural resources to PCBs. Between LLBDM and the DePere Dam on the Lower Fox River, the estimated volume of sediments with PCB concentrations greater than 0.05 ppm exceeds 2 million m^3 (Jaeger, 1995). These sediments contain an estimated 3,886 kg of PCBs (Jaeger, 1995). Between the DePere Dam and the mouth of the Fox River, the estimated volume of contaminated sediments exceeds 5 million m^3 (Jaeger, 1995). These sediments contain an estimated 29,211 kg of PCBs (Jaeger, 1995). Contaminated sediments along the Fox River are a primary source for continuing PCB contamination of surface water and the accumulation of PCBs in the food chain in Fox River, Green Bay, and Lake Michigan environments (U.S. EPA, 1992; U.S. EPA, 1993a).

2.4 DESCRIPTION OF NATURAL RESOURCES

The assessment area supports many plant, fish, and wildlife species, including both commercial and recreational fishing stocks. Commercial fish species in Green Bay and Lake Michigan historically have included alewife, burbot, carp, chubs, northern pike, perch, smelt, walleye, and

whitefish (WDNR, 1974). Natural resources involved in the assessment include surface water, sediments, and biological resources, including aquatic biota and wildlife. Specifically, trust resources in the assessment area include, but are not limited to, threatened species (e.g., bald eagle); migratory birds (e.g., bald eagle, Forster's tern, common tern, mallard, double-crested cormorant, black-crowned night-heron, tree swallow, red-breasted merganser, herring gull, and red-winged blackbird); anadromous fish species (e.g., coho salmon, chinook salmon, pink salmon, rainbow trout, and rainbow smelt); National Wildlife Refuge lands; nationally significant interjurisdictional fish stocks in the Great Lakes (e.g., lake trout, yellow perch, lake sturgeon, walleye, forage fish, and Atlantic salmon; pursuant to the Great Lakes Fish and Wildlife Restoration Act, as amended, 16 U.S.C. 941); piscivorous mammals (e.g., otter, mink); and lake trout in Lake Michigan that were stocked from federal hatcheries.

CHAPTER 3
AUTHORITY

DOI, in conjunction with the MITW and the OTIW (collectively, the trustees), are conducting an NRDA on the Fox River, Green Bay, and Lake Michigan, pursuant to CERCLA, as amended [42 U.S.C. §§ 9607(f)(1)-(2)] and the CWA [33 U.S.C. §§ 1321(f)(4)-(5)]. The President is required under CERCLA [42 U.S.C. § 9607(f)(2)] to designate in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) [40 CFR Part 300], the Federal officials who are authorized to act on behalf of the public as trustees for natural resources under CERCLA and the CWA. Under the NCP, the Secretary of the Interior is designated to act as a trustee for natural resources "belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the DOI," as well as the supporting ecosystems for those natural resources [40 CFR §§ 300.600(a), (b), (b)(2)].

Under the NRDA regulations, assessment plans must "include a statement of the authority for asserting trusteeship or cotrusteeship for those natural resources within the Assessment Plan" [43 CFR § 11.31(a)(2)]. Based on the authority designated to the Secretary of the Interior, DOI derives trusteeship authority over natural resources in the assessment area from its statutorily prescribed programs, including, but not limited to, the Migratory Bird Treaty Act of 1918, 16 U.S.C. §§ 703-712; the Bald and Golden Eagle Protection Act of 1940, 16 U.S.C. §§ 668-668d; the Fish and Wildlife Act of 1956, 16 U.S.C. §§ 742a-742j-1; the Anadromous Fish Conservation Act of 1965, 16 U.S.C. §§ 757a-757g; the Estuary Protection Act of 1968, 16 U.S.C. §§ 1221-1226; the Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361-1407; the Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544; the Emergency Wetlands Resources Act of 1986, 16 U.S.C. §§ 3901-3932; the Great Lakes Coastal Barrier Act of 1988, 16 U.S.C. §§ 3501-3510; the Great Lakes Fish and Wildlife Restoration Act of 1990, 16 U.S.C. § 941; and the Great Lakes Fish and Wildlife Tissue Bank Act of 1992, 16 U.S.C. §§ 943-943c.

CERCLA also identifies Indian tribes as trustees for "natural resources belonging to, managed by, controlled by, or appertaining to such tribe, or held in trust for the benefit of such tribe, or belonging to a member of such tribe if such resources are subject to a trust restriction on alienation . . ." [42 U.S.C. § 9607(f)(1)]. Under the NCP, tribal chairmen (or heads of their governing bodies) of Indian tribes, or a person designated by the tribal officials, shall act on behalf of the Indian tribes as trustees for natural resources under tribal trusteeship [40 CFR § 300.610].

Based on the authority designating tribes as trustees for natural resources, the OTIW asserts that it is a trustee for all natural resources within its reservation as established pursuant, but not limited to, the Treaty with the Oneida, 7 Stat. 566 (1838). The MITW asserts that it is a trustee for those

natural resources established pursuant, but not limited to, the Treaty of February 8, 1831, 7 Stat. 342, *supplemented*, February 17, 1831, 7 Stat. 346, *amended*, October 27, 1832, 7 Stat. 405 (Treaty of Washington); Treaty of September 3, 1836, 7 Stat. 506 (Treaty of Cedar Point); and Treaty of May 12, 1854, 10 Stat. 1064 (Treaty of Wolf River).

CHAPTER 4
COORDINATION AND PREVIOUS ACTIONS OF TRUSTEES

On December 9, 1993, the DOI invited the WDNR to act as a natural resource co-trustee for the NRDA. On February 10, 1994, the DOI invited the MITW, the OTIW, and the Stockbridge Munsee community of Wisconsin to act as natural resource co-trustees. On May 19, 1994, the WDNR declined to participate as a natural resource co-trustee. On May 26, 1994, the DOI finalized a preassessment screen and determination for the site. On June 20, 1994, the DOI identified five PRPs and transmitted notices of intent to perform an assessment and invitations to participate in the assessment [43 CFR § 11.32(a)(2)(iii)]. On August 15, 1994, the MITW decided to participate with DOI as a co-trustee at the site. On October 7, 1994, the DOI notified the MITW of its intent to develop an assessment plan. On October 20, 1994, the DOI notified the U.S. EPA, Office of Superfund, of opportunities to coordinate any future response actions with the NRDA. Neither U.S. EPA nor WDNR has carried out or planned response actions under the CWA or CERCLA. On February 5, 1996, the DOI identified two additional PRPs and transmitted notices of intent to perform an assessment and invitations to participate. Some of the PRPs notified are currently considering participation in the NRDA. In February 1996, the OTIW decided to participate with DOI as a co-trustee for natural resources. The National Oceanic and Atmospheric Administration (NOAA), has been notified of the NRDA and has elected to defer to DOI at this time.

CHAPTER 5
DECISION TO PERFORM TYPE B ASSESSMENT

This chapter documents the Trustees' decision to perform a type B assessment. Trustees may select between performing a type A or a type B NRDA [43 CFR § 11.33]. Type A procedures are "simplified procedures that require minimal field observation." [43 CFR § 11.33(a)]. A type A model has been developed for Great Lakes environments (NRDAM/GLE) [43 CFR § 11.33(a)]. Under 43 CFR § 11.34, an authorized official may use a type A assessment only if six factors are found in existence at a particular site. Several of these factors do not apply to the assessment area, including those defined in § 11.34(d) and § 11.34(f), making a type A inappropriate. NRDA regulations specify that the decision whether to use a type A model is made "by weighing the difficulty of collecting site-specific data against the suitability of the averaged data and simplifying assumptions in the type A procedure" [43 CFR § 11.35(a)].

Releases of hazardous substances in the assessment area are likely to have occurred since 1957 (Chapter 2); contamination extends over at least 39 miles of the Fox River and 1,500 square miles of Green Bay (WDNR, 1995a; Manchester, 1993) as well as Lake Michigan and other areas containing natural resources potentially injured by hazardous substances originating in the Lower Fox River. Hazardous substances have been transmitted through the food chain, affecting many different trophic levels (e.g., WDNR, 1976-1994; Masnado, 1987; Hoffman et al., 1993). Consequently, the releases cannot be considered of a short duration, minor or resulting from a single event, and therefore are not readily amenable to simplified models. Further, the spatial and temporal extent and heterogeneity of exposure conditions and potentially affected resources are not suitable for application of simplifying assumptions and averaged data and conditions inherent in type A procedures. For example, the NRDAM/GLE is designed for application to discrete spills of oil/hazardous substances "up to a few days in duration" [Vol. 1, Sec. 1.2, publication incorporated by reference at 43 CFR § 11.18(a)(5)] rather than long-term, chronic exposures; biological injuries are based on acute toxicity of substances, rather than chronic toxic effects; transport submodels are not designed to be applied to complex, heterogeneous habitats and transport parameters; and only surface water exposure pathways are considered [see publication incorporated by reference at 43 CFR § 11.18(a)(5)]. Therefore, simplified type A assessment methodologies would be inappropriate for this NRDA.

The Trustees have determined: (1) that the type A NRDAM/GLE is not appropriately applied to the long-term, spatially and temporally complex nature of releases and exposures to hazardous substances characteristic of the assessment area; (2) that substantial site-specific data already exist to support the assessment; and (3) that additional site-specific data can be collected at reasonable cost. As a result, the Trustees have concluded that the use of type B procedures is justified.

CHAPTER 6
CONFIRMATION OF EXPOSURE

A natural resource has been "exposed" to a hazardous substance if "all or part of a natural resource is, or has been, in physical contact with . . . a hazardous substance, or with media containing a . . . hazardous substance" [43 CFR § 11.14(q)]. The assessment plan should confirm that:

> . . . *at least one* of the natural resources identified as potentially injured in the preassessment screen has in fact been exposed to the released substance [43 CFR § 11.37(a)] (emphasis added).

The regulations state that "Whenever possible, exposure shall be confirmed by using existing data" from previous studies of the assessment area [43 CFR § 11.37(b)(1)].

The following sections provide confirmation of exposure for a number of the potentially injured resources within the assessment area, including the following:

- surface water resources (surface water and sediments)
- biological resources, including fish and wildlife.

It should be noted that the following discussion uses existing data to provide limited examples confirming exposure of natural resources to hazardous substances (as defined above).

6.1 SURFACE WATER

Several investigators have shown that surface water in the Lower Fox River has been exposed to PCBs, including Marti and Armstrong (1990), the U.S. Geological Survey (USGS) (House, 1990, 1995; House et al., 1993), and the WDNR (WDNR, 1995b).

6.1.1 Preliminary Evaluation of Potential Background Concentrations

PCB concentrations were measured in surface water upstream of the Fox River pulp and paper mills and in Green Bay tributaries not directly exposed to PCBs released from the Fox River (Table 6-1) (see Figures 2-2 and 2-3 for approximate locations). These locations were used as

Table 6-1
Comparison of Surface Water PCB Concentrations in the Lower Fox River with Upstream and Potential Background PCB Concentrations

Location	Year	Number of Samples	PCB Concentration (ng/l)	Reference
Upstream and Potential Background Samples				
Fox River (Menasha Dam)	1987-1988	23	max = 4.2 20 of 23 = nd[1]	House, 1995
Fox River (Neenah Dam)	1987-1988	7	nd (detection limits ranged from 1.9 to 7.0)	
Duck Creek	1987	1	nd (detection limit = 15)	House, 1990
Little Suamico River	1987-1988	3	nd (detection limits ranged from 15 to 40)	
Suamico River	1987-1988	3	nd (detection limits ranged from 15 to 40)	
Lower Fox River Downstream of Pulp/Paper Mills				
Little Lake Butte des Morts	1976	na[2]	max = 27,000	WDNR, 1995b
Appleton	1987-1988	27	max = 137 mean = 64	House, 1995
Downstream of DePere Dam	1976	na	max = 7,500	WDNR, 1995b
DePere	1989-1990	49	max = 115 mean = 45	House et al., 1993
Mouth of River	1976	na	max = 10,800	WDNR, 1995b
Mouth of River	1980-1983	8	max = 262 mean = 98	Marti and Armstrong, 1990
Mouth of River	1989-1990	110	max = 152 mean = 58	House et al., 1993

1. nd = not detected.
2. na = not available.

preliminary "background" sampling locations for this Assessment Plan. The potential background surface water samples are mostly below levels of detection for PCBs. In 1987-1988, the water draining Lake Winnebago from the Neenah and Menasha dams contained few detectable PCBs. The USGS reported total PCB concentrations from 23 samples collected at the Menasha Dam, and 7 samples collected at the Neenah Dam, in 1987-1988 (House, 1995). Twenty of 23 samples at Menasha Dam contained undetectable PCBs (detection limits ranging from 7.0 to 3.0 ng/l). The highest detectable PCB concentration was 4.2 ng/l. At the Neenah Dam, all seven samples contained no detectable PCBs, at detection limits ranging from 1.7 ng/l to 7.0 ng/l (Table 6-1).

The USGS also measured PCB concentrations in a number of Green Bay tributaries other than the Fox River in 1987-1988 (House, 1990). Table 6-1 also reports PCB concentrations from three tributaries not directly exposed to PCBs released from the Fox River: Duck Creek, the Little Suamico River, and the Suamico River. No PCBs were detectable at any of these tributaries at detection levels of 15 to 40 ng/l. In fact, no PCBs were detected in any of the 11 Green Bay tributaries sampled as part of that effort.

Thus, the only detectable PCBs from the surface water sampling described above were three samples from the Menasha Dam. These samples contained 3.8, 4.0, and 4.2 ng/l PCBs, respectively (House, 1995).

6.1.2 Fox River Concentrations

In contrast, PCB concentrations in Fox River surface water downstream of PCB releases are substantially elevated compared with potential background concentrations. In the mid-1970s, the WDNR measured PCB concentrations in Little Lake Butte des Morts as high as 27,000 ng/l and near the mouth of the Fox River as high as 10,800 ng/l (Table 6-1) (WDNR, 1995b). These concentrations are at least three to four orders of magnitude greater than background concentrations from the 1980s.

Although PCB concentrations declined from 1976 to the 1990s, investigators continued to find that Fox River surface water was exposed to elevated PCB concentrations (Table 6-1). The *average* PCB concentration of 8 water samples collected from the mouth of the Fox River between 1980 and 1983 was 98 ng/l (Marti and Armstrong, 1990). Between April 1987 and October 1988, 27 water samples were collected and analyzed from the Fox River near Appleton (House, 1995). Three of the samples exceeded 100 ng/l PCBs. The average concentration for the 27 samples was 64 ng/l (Table 6-1). In sampling conducted in the Fox River at DePere and at the mouth of the river from January 1989 through May 1990, PCB concentrations were consistently elevated (House et al., 1993). The mean concentration at DePere was 45 ng/l, and the maximum concentration was 115 ng/l (Table 6-1). At the river mouth, 110 samples were analyzed; the mean PCB concentration was 58 ng/l, clearly indicating that the Fox River has been exposed to PCBs (Table 6-1). The above data confirm that surface water has been, and continues to be, exposed to PCBs.

6.2 SEDIMENTS

The DOI regulations define "surface water resources" to include, "sediments suspended in water or lying on the bank, bed, or shoreline and sediments in or transported through . . . marine areas" [43 CFR 11.14(pp)]. This assessment plan, however, addresses sediments separately from surface water for several reasons: there is a large amount of data specific to sediments; sediments can be a principal and ongoing exposure pathway to other natural resources; and many primary restoration actions may focus on sediments.

PCB concentrations are highly elevated in sediments in the Fox River and Green Bay compared to potential background concentrations (Table 6-2). PCB concentrations in potential background sediments (upstream of the Fox River paper and pulp mills) were undetected in two samples (Blasland & Bouck, 1993; WDNR 1995c), and ranged between 0.014 and 0.044 mg/kg in four other background samples collected from the Menasha Channel (WDNR, 1993) (Figure 6-1). In contrast, PCB concentrations in LLBDM sediments just downstream of the Menasha Channel have been as high as 250 mg/kg, over four orders of magnitude greater than background concentrations (Table 6-2). Several studies have found PCB concentrations in excess of 100 mg/kg in LLBDM, including WDNR (unpublished, as cited in Lohr, 1988), Blasland & Bouck (1993), and WDNR (1995a). These PCB concentrations not only are over a thousand times greater than the potential background concentrations, but they are more than twice the 50 mg/kg threshold specified in the Toxic Substances Control Act (TSCA) regulations for hazardous chemical disposal [40 CFR § 761.60(a)(5)].

PCB concentrations are also elevated farther downstream in the Fox River (Table 6-2). For example, sediments near Kimberly contained PCB concentrations greater than 100 mg/kg during 1989 and 1990 sampling (WDNR, 1995a). In the impoundment behind the DePere Dam, PCB concentrations have been measured as high as 47.8 mg/kg (WDNR, 1995a), over 5,000 times greater than the highest background concentration (Table 6-2).

PCB concentrations are also highly elevated downstream of the DePere Dam compared to potential background levels. Table 6-2 shows data from several studies in which PCB concentrations exceed 10 mg/kg downstream of the DePere Dam; many of these data are in a PCB data summary document produced by the WDNR (Lohr, 1988). For example, PCB concentrations in the sediments near Fort Howard have been measured as high as 79 mg/kg (Table 6-2). The U.S. Army Corps of Engineers (U.S. ACOE) collected sediment samples from the Fort Howard turning basin in 1984; several samples contained PCB concentrations between 28 and 30 mg/kg (Lohr, 1988), over 3,000 times higher than background concentrations. PCB samples logged into a WDNR database (WDNR, 1995a and associated database from Jeff Steuer, USGS — Madison) show PCB concentrations in the Lower Fox River near Nicolet Paper to be as high as 75.8 mg/kg, greater than the TSCA disposal threshold (50 mg/kg) and much greater than the 0.014-0.044 mg/kg background concentrations (Table 6-2).

Table 6-2
Comparison of Maximum Sediment PCB Concentrations in the Fox River and Green Bay with Upstream and Potential Background PCB Concentrations

Location	Year	Number of Samples	Maximum PCB Concentration (mg/kg)	Reference
Upstream and Potential Background				
Menasha Channel	1990-1991	4	0.014-0.044	WDNR, 1993
Menasha Channel	1992-1993	1	<0.050	WDNR, 1995c
Lake Winnebago	1993	1	<0.061	Blasland & Bouck, 1993
Fox River Downstream of Paper Mills (Neenah to DePere)				
Little Lake Butte des Morts	1982	15	250	WDNR (unpublished), cited in Lohr, 1988
Little Lake Butte des Morts	1983	15	246	WDNR (unpublished), cited in Lohr, 1988
Deposit A, Little Lake Butte des Morts	1989-1990	≈11	223	WDNR, 1995a (and associated database from USGS)
Deposit A, Little Lake Butte des Morts	1993	33	130	Blasland & Bouck, 1993
Deposit N, near Kimberly	1989-1990	≈4	131	WDNR, 1995a (and associated database from USGS)
Deposits EE & GG, near DePere Dam	1989-1990	≈9	47.8	
Fox River Downstream of Paper Mills (DePere to mouth)				
Downstream of DePere Dam	1977	3	11.6	U.S. EPA, 1977, cited in Lohr, 1988
Downstream of DePere Dam	1983	2	40.5	WDNR (unpublished), cited in Lohr, 1988
Downstream of Nicolet Paper	1989-1990	≈10	75.8	WDNR, 1995a (and associated database from USGS)
North of Hwy 172 bridge	1989-1990	≈8	36	
Fort Howard turning basin	1984	10	30.1	U.S. ACOE, 1984, cited in Lohr, 1988
Fox River at Fort Howard	1982	27	79	WDNR (unpublished), cited in Lohr, 1988

Table 6-2 (cont.)
Comparison of Maximum Sediment PCB Concentrations in the Fox River and Green Bay with Upstream and Potential Background PCB Concentrations

Location	Year	Number of Samples	Maximum PCB Concentration (mg/kg)	Reference
Fox River at Fort Howard	1989-1990	≈7	83.7	WDNR, 1995a (and associated database per se from USGS)
Fox River mouth	1976	2	38	WDNR, 1978, cited in Lohr, 1988
Green Bay				
Near Point Au Sable	1977	12	11	WDNR, 1978, cited in Lohr, 1988
Near Grassy Island	1984	4	13	U.S. ACOE, 1985, cited in Lohr, 1988
Green Bay	1987-1990	>700	1.6	Manchester, 1993

PCB concentrations in Green Bay are lower than the concentrations in the Fox River, yet greatly elevated compared to the potential background concentrations (Table 6-2). In the 1980s, the U.S. ACOE collected samples in Green Bay near the confined disposal facility (CDF) known as Renard or Kidney Island. PCB concentrations in the sediments within the CDF were as high as 43.5 mg/kg (Lohr, 1988). In Green Bay open water sediments, PCB concentrations have been measured as high as 11 mg/kg near Au Sable Point (WDNR, 1978, cited in Lohr, 1988) and as high as 13 mg/kg near Grassy Island (U.S. ACOE, 1985, cited in Lohr, 1988). Other Green Bay sediment studies have consistently shown PCB concentrations throughout the bay to range between 1 and 2 mg/kg (Manchester, 1993; Hermanson et al., 1991), between 10 and 140 times greater than background concentrations (Table 6-2). These data confirm that sediments have been, and continue to be, exposed to PCBs.

6.3 FISH

Elevated PCB concentrations in fish from the assessment area have been documented since 1976 by the WDNR (Jensen et al., 1982; Sullivan et al., 1983; WDNR, 1995d). Since 1976, PCB fillet concentrations have been sufficiently high to trigger fish consumption advisories by the Wisconsin Department of Health and Human Services (WDHHS) for many sport and commercially exploited fish species. Fish consumption advisories are still in effect for specified sizes of most species (WDNR, 1976 to 1994) (Table 6-3).

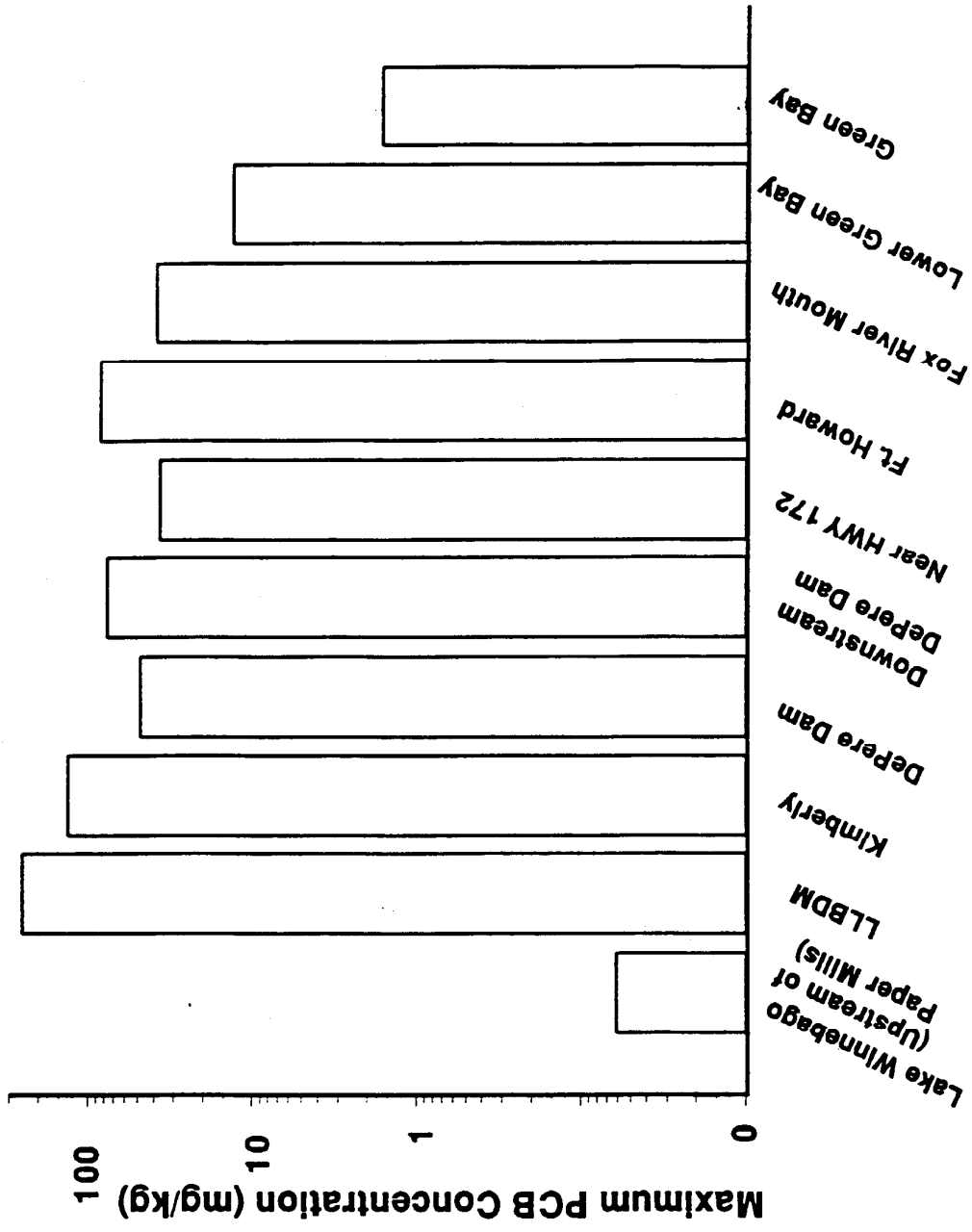


Figure 6-1
Maximum PCB Concentrations Measured in Lower Fox River and Green Bay Sediments. Sampling locations ordered from upstream to downstream. Note: Concentrations are plotted on a logarithmic scale.

Table 6-3
1994 Wisconsin Fish Consumption Advisories Related to PCBs and Pesticides[1]

Lake Michigan
- Group 1 Advisory for lake trout (up to 20 inches), coho salmon (up to 26 inches), chinook salmon (up to 21 inches), brook trout, rainbow trout, pink salmon, smelt, and perch
- Group 2 Advisory for lake trout (20 to 23 inches), coho salmon (over 26 inches), chinook salmon (21 to 32 inches), and brown trout (up to 23 inches)
- Group 3 Advisory for lake trout (over 23 inches),[2] chinook salmon (over 32 inches), brown trout (over 23 inches), carp, and catfish

Green Bay
- Group 1 Advisory for rainbow trout (up to 22 inches), chinook salmon (up to 25 inches), brook trout (up to 15 inches), smallmouth bass, northern pike (up to 28 inches), walleye (up to 20 inches), perch, brown trout (up to 12 inches), bullhead, and white sucker
- Group 2 Advisory for splake (up to 16 inches)
- Group 3 Advisory for rainbow trout (over 22 inches), chinook salmon (over 25 inches), brown trout (over 12 inches), brook trout (over 15 inches), carp,[2] splake (over 16 inches), northern pike (over 28 inches), walleye (over 20 inches),[2] white bass, and sturgeon

Lower Fox River (from its mouth at Green Bay up to the DePere Dam)
- Group 1 Advisory for walleye (up to 15 inches)
- Group 2 Advisory for northern pike, white sucker, and walleye (15 to 18 inches)
- Group 3 Advisory for white bass,[2] walleye (over 18 inches), carp,[2] drum,[2] and channel catfish[2]

Lower Fox River (from the DePere Dam up to the Neenah-Menasha Dam)
- Group 1 Advisory for walleye (up to 15 inches), white bass, northern pike, perch, and white sucker
- Group 2 Advisory for walleye (over 15 inches), and bullheads
- Group 3 Advisory for carp (over 17 inches)

Advisory levels:
Group 1: Ninety percent or more of tested Group 1 fish meet health standards. EATING GROUP 1 FISH POSES THE LOWEST HEALTH RISK. Trim fat and skin from Group 1 fish before cooking and eating them.
Group 2: Fifty to ninety percent of test Group 2 fish meet health standards. CHILDREN UNDER 15, AND WOMEN OF CHILDBEARING AGE SHOULD NOT EAT GROUP 2 FISH. You should also limit your overall consumption of other Group 2 fish, and trim skin and fat from these fish before cooking and eating them.
Group 3: Less than fifty percent of tested Group 3 fish meet health standards. NO ONE SHOULD EAT GROUP 3 FISH.

1. A single advisory is issued for contamination with PCBs and/or pesticides. However, pesticide residues in assessment area fish do not exceed advisory levels, whereas PCB residues do exceed advisory levels.
2. Ninety percent or more of these Group 3 fish contain contaminant levels exceeding one or more advisory levels.

Source: WDNR Division of Health, 1994.