Health Consultation

Evaluation of Health Concerns Associated with
Floodplains on the Milwaukee River Between the Former Eastbrook Dam and Spillway and the Former North Avenue Dam
Milwaukee Estuary Area of Concern
Milwaukee County, Wisconsin

Prepared by the
Wisconsin Department of Health Services

WISCONSIN DEPARTMENT *of* HEALTH SERVICES

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Health Consultation: A Note of Explanation

A health consultation is a verbal or written response from ATSDR or ATSDR's Cooperative Agreement Partners to specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. To prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducing health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR or ATSDR's Cooperative Agreement Partner which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

Summary

The Wisconsin Department of Health Services (DHS) concludes that recreational use of certain parts of floodplains 1 through 11 may increase the risk of adverse health effects due to access to soils impacted by polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), and heavy metals. Frequent exposure to these chemicals can cause harm to human health. These chemicals have many health effects including cancer. Some of these chemicals can build up in the body to eventually reach levels of concern. The health concerns related to these chemicals are more pronounced in developing fetuses and children and therefore it is important that pregnant individuals and children limit exposures.

To prevent harmful exposures, DHS recommends the following actions to interrupt exposure to contaminated soil:

- DHS supports the United States Environmental Protection Agency (U.S. EPA) remediation plan to remove contaminated soils. In areas that the U.S. EPA's remediates, soil that is a health risk to recreational users will be removed.
- DHS recommends that individuals stay on the paved areas to limit contact with contaminated soil.
- DHS supports the usage of signage to inform individuals of the risk of chemical exposure and safe recreating advice. This includes cleaning off soil from shoes, clothes, pets, bikes, and kayaks, washing hands after touching soil, cleaning off soil before eating, and not foraging.
- DHS also supports additional signage pertaining the safety of consuming fish.
- DHS supports the education of employees and volunteers that routinely work in floodplain soils on safe work practices in these areas. DHS suggests these workers wear gloves, long sleeves, pants, and closed toe shoes when working in the soil to limit contact.

Table A. Summary of Findings

	Noncancer Health Risk	Cancer Health Risk
Floodplain 1	No	Yes- Children
Floodplain 2	No	Yes- Children and Adults
Floodplain 3	No	Yes- Children and Adults
Floodplain 4	No	Yes- Children
Floodplain 5	No	Yes- Children
Floodplain 6	Yes (Aroclor 1242- Intermediate/Chronic risk to young children. Lead in young children)	Yes- Children and Adults
Floodplain 7	Yes (Aroclor 1242, 1248, 1254- Intermediate/Chronic risk to young children)	Yes- Children and Adults
Floodplain 8/9	Yes (Aroclor 1242- Intermediate/Chronic risk to young children)	Yes- Children and Adults
Floodplain 10	Yes (Aroclor 1242- Intermediate/Chronic risk to young children)	Yes- Children and Adults
Floodplain 11	No	Yes- Children and Adults

Background

Statement of Issue and Purpose

The Wisconsin Department of Natural Resources (DNR) requested the Wisconsin Department of Health Services (DHS) evaluate the human health risk of chemical exposures in floodplains along the Milwaukee River in the Milwaukee Estuary Area of Concern (AOC). DHS used soil sampling data, collected by the U.S. EPA during its field investigation of the floodplains to complete the health assessment, and offer guidance on recreational use of the floodplains based on potential chemical exposures. This report summarizes the DHS's evaluation and recommendations.

Site Description

The Milwaukee Estuary AOC was identified as one of 31 U.S.-based AOCs across the Great Lakes. AOCs were created by the 1987 Great Lakes Water Quality Agreement. The Milwaukee Estuary contains portions of the Milwaukee, Menomonee, and Kinnickinnic Rivers, as well the Milwaukee Bay of Lake Michigan (Figure 1). Contamination of the Milwaukee Estuary has resulted from historical discharges from industries, wastewater treatment plants, sewer overflows, and both agricultural and urban runoff. Primary contaminants of concern (COCs) in the Milwaukee Estuary are polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and heavy metals. The U.S. EPA Great Lakes National Program Office identified 11 floodplains on the Milwaukee River between the former Estabrook Dam and Spillway and the former North Avenue Dam (Figure 2) to assess for this segment of the AOC.

The floodplains are characterized as being low lying areas below the bluff line and below the 100-year floodplain elevation. The floodplains overlap with the various wetlands along the river. Floodplains 6 and 8 are vegetated with grass and shrubs, while the others are categorized as forested wetlands. Soil in the floodplain was contaminated by deposition due to flooding and the impoundment behind the former North Avenue Dam. Partial removal of the North Avenue Dam has influenced levels of PCBs, as PCB concentrations are higher in the floodplains below the elevation of the former dam pool. There is currently a fish advisory for this portion of the Milwaukee River (Figure 3)[1]. In our assessment, we evaluated ten groups of floodplains. Floodplains 8 and 9 were combined due to Floodplain 9 being adjacent to Floodplain 8.

On May 5, 2021, DHS staff conducted a site visit at eight of the floodplains (Appendix A). DHS recommendations stemming from that visit included updating and adding signage, moving fixtures away from contaminated soil, covering contaminated soil with straw, and educating Urban Ecology Center and affiliated stakeholders on the risks of activities in the floodplains. Several additional site visits by DHS staff occurred in 2022 and 2023.

Defaced signage was identified in at least one of the floodplains during these visits. In other floodplains, DHS determined that the signage was up to date and not defaced and that contaminated areas were largely inaccessible. On November 2, 2023, February 15, 2024, April 25, 2024, and June 13, 2024, DHS Staff attended public information meetings where community members had access to City of

[1] WI DNR Fish Advisory Brochure PUB_FH_824_ChooseWisely.pdf (widen.net)

Milwaukee, Milwaukee County Parks, DNR, DHS, and U.S. EPA staff to learn about project progress and voice any concerns[2,3].

Demographics

The City of Milwaukee has an estimated population of 563,305. With the exception of one parcel, the City is located entirely within Milwaukee County. Milwaukee is 33% non-Hispanic white, 39.4% African American, 0.6% American Indian and Alaska Native, 4.5% Asian, 19.9% Hispanic or Latino, and 7.6% mixed race. The City is 26.3% under the age of 18, 7.5% under the age of five, and 10.8% over the age of 65. The population is 51.5% female. 24.1% of the population of Milwaukee lives in poverty[4].

The U.S. EPA EJScreen was used to create a more precise demographic analysis of the floodplain areas[5]. The EJScreen analysis was performed on the floodplains area of the Milwaukee River with a 1-mile buffer zone. In this area, there is a population of 87,128. 65% of the population is white, 19% black, 4% Asian, 7% Hispanic, and 4% mixed. The population is 50% male and 50% female, and 34% of the community is low income (Appendix C).

Community Concerns

The community of Milwaukee is involved in risk communication regarding the Milwaukee Estuary AOC. DHS has had regular communication with the Milwaukee County Parks, the City of Milwaukee, and organizations such as the Urban Ecology Center, River Revitalization Foundation, and other organizations that make up the Milwaukee Greenway River Coalition. In collaboration with DNR and U.S. EPA, DHS has participated in public information meetings and has presented about the human health risks that recreational use of the floodplains present. The U.S. EPA and DNR, with DHS support, also plan to reach out to private landowners adjacent to the floodplains to discuss the contamination and planned cleanup. DHS has also previously consulted the DNR and U.S. EPA and suggested that day camps and other childcare providers, such as LifeWays Early Childhood Development Center, not use contaminated areas. This health consultation will address concerns associated with PCB, PAH, and heavy metal exposures. It will also address the potential risk of these specific chemicals to children who may be frequenting the facilities. Our evaluation will also consider the fact that the floodplain is not open for a portion of the year due to weather and that the soil is not accessible due to snow/ice coverage.

Community concerns at the public sessions have largely been focused on the ecological health of the floodplains. DHS has received concerns over the amount of fishing that occurs in the area and the lack of appropriate fish related signage. There has also been concern about the dredging process creating airborne health hazards.

Data Review

From 2016 to 2021, the U.S. EPA collected samples from 105 locations in the floodplains (Figure 4). Each sample location had measurements from 0-0.5 feet, 0.5-1.5 feet, 1.5-2.5 feet, and 2.5-3.2 or 4.0 feet. In

[2] WI DNR Milwaukee Estuary AOC Milwaukee Estuary Area of Concern | | Wisconsin DNR
[3] US EPA Great Lakes AOC Information for the Milwaukee Estuary AOC Milwaukee Estuary AOC | US EPA
[4] US Census 2020 Milwaukee U.S. Census Bureau QuickFacts: Milwaukee city, Wisconsin
[5] EJScreen: Environmental Justice Screening and Mapping Tool | US EPA

total, there are 629 collected samples. There were 72 total contaminants that were detected in the samples. Contaminants detected are summarized in Table 1 and include:

- PCBs: Aroclors 1260, 1254,1268, 1221, 1232, 1248, 1016, 1262, and 1242
- PAHs: Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k) fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd) pyrene, 2-methyl-naphthalene, acenaphthene, cenaphthylene, anthracene, benzo(e)pyrene, benzo(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene, and
- Heavy Metals: lead, arsenic, nickel, cadmium, chromium, copper, zinc, and mercury

Discussion

Toxicology of PCBs

PCBs are a group of structurally related molecules that are chemically stable, highly soluble in oil, and insoluble in water. PCBs last for decades in the environment, tend to accumulate in body fats, and bioaccumulate through the food chain. In the environment, PCBs are found mostly adsorbed to sediments and soil rather than in water. PCBs have various effects on the body that are related to physiological development, regulation of the cell cycle, and tumorigenesis. Several population-level studies have linked prenatal and perinatal exposure to PCBs to lower birth weights and learning problems. Some forms of PCBs are suspected human carcinogens. Due to the widespread dispersion and chemical stability of PCBs in the environment, some exposure (mostly through consumption) is unavoidable[6].

Toxicology of PAHs

PAHs are a group of over 100 different chemicals that are formed during the incomplete combustion of organic material. PAHs enter the water through discharges from industrial and wastewater treatment plants. PAHs are hydrophobic and do not dissolve in water. Instead, they stick to solid particles and deposit to the sediment of rivers and lakes. Certain PAHs in soil can be broken down in months via microorganisms. PAHs have been shown to cause reproductive issues in mice. Animal studies also suggest PAH exposures can lead to dermal toxicity and immunotoxicity. Some PAHs have been shown to be to be carcinogenic[7].

Toxicology of Lead

Lead is a widely distributed element. A major source of environmental lead is from use of leaded gasolines. The largest source of lead in soil is from atmospheric deposition. Lead strongly binds to sediments which act as lead sinks in the environment. The health effects from lead have been widely documented. The ATSDR states that “no safe blood lead level has been identified.” Information on the health effects of lead are largely epidemiological. Toxic effects of lead have been observed in every

[6] ATSDR, 2000. TOXICOLOGICAL PROFILE FOR POLYCHLORINATED BIPHENYLS (PCBs) ATSDR Polychlorinated Biphenyls (PCBs) Tox Profile (cdc.gov)
[7] ATSDR, 1995. TOXICOLOGICAL PROFILE FOR POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) ATSDR Polycyclic Aromatic Hydrocarbons (PAHs) Tox Profile (cdc.gov)

organ studied. The most widely studied effects are neurological, renal, cardiovascular, hematological, immunological, reproductive, and developmental. The neurological effects of lead are of particular concern in children and infants because lead exposure has been shown to cause life-lasting effects in neurological function[8].

Toxicology of Arsenic

Arsenic is a naturally occurring element that is widely distributed in soils around the world. Historical uses of arsenic include wood preservation and pesticides. Exposure to arsenic can result in respiratory, immunological, cardiac, and dermal effects. Arsenic has been classified as a known human carcinogen. There is some evidence that long-term exposure to arsenic in children can lead to decreased IQ levels. Reproductive effects have been discovered in animal studies involving high levels of arsenic[9].

Toxicology of Nickel

Nickel is a naturally occurring element. Nickel compounds are used in industrial settings for coating, in batteries, and as a catalyst. Nickel is released by industries using nickel compounds in their manufacturing processes. Nickel in the air will deposit to soil and nickel in water will attach to soil particles that contain iron or manganese. Nickel can cause allergic reactions in people. The most common effect is causing a rash at the site of contact. Some contact can result in respiratory issues. Occupational nickel exposure result in respiratory issues and cancer[10].

Toxicology of Cadmium

Cadmium is a naturally occurring element. Environmental releases of cadmium are caused by the mining industry, burning coal, battery manufacturing, and household waste. Cadmium strongly binds to soil. Fish, plants, and animals can uptake cadmium. Health effects of cadmium exposure include renal effects, lung damage, bone weakening, and upset stomach. Cadmium has been classified as a known human carcinogen[11].

Toxicology of Chromium

Chromium is a naturally occurring element. Chromium is used in to make steel and chrome plating. Chromium can be released into the environment from industrial sources. Chromium deposits into soil and water. Inhalation of chromium can lead to irritation of the airway. Ingestion of chromium can lead to ulcers in the stomach and small intestine. Dermal exposure can lead to skin ulcers. Hexavalent chromium (Cr^{+6}) has been determined to be a human carcinogen[12].

Toxicology of Copper

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[8] ATSDR, 2020. TOXICOLOGICAL PROFILE FOR LEAD ATSDR Lead Tox Profile (cdc.gov)
[9] ATSDR, 2020. TOXICOLOGICAL PROFILE FOR ARSENIC ATSDR Arsenic Tox Profile (cdc.gov)
[10] ATSDR, 2023. TOXICOLOGICAL PROFILE FOR NICKEL Toxicological Profile for Nickel (cdc.gov)
[11] ATSDR, 2012. TOXICOLOGICAL PROFILE FOR CADMIUM ATSDR Cadmium Tox Profile (cdc.gov)
[12] ATSDR, 2012. TOXICOLOGICAL PROFILE FOR CHROMIUM ATSDR Chromium Tox Profile (cdc.gov)

Copper is a naturally occurring element and metal found in nature. Copper is released from natural sources and human activities such as municipal solid waste management and burning of fossil fuels. Inhalation of copper can lead to irritation of airways. Copper is essential for a healthy diet but overconsumption can lead to vomiting, nausea, abdominal pain, and diarrhea and chronic over consumption can lead to kidney and liver damage[13].

Toxicology of Zinc

Zinc is a naturally occurring element and of the most common elements in the earth's crust. Zinc is used commercially as a coating to prevent rust, as a component in batteries, and mixed with other metals to make alloys. Zinc is released into the environment through human activities such as mining, steel production, and coal and waste burning. Acute ingestion of zinc can lead to stomach pain, nausea and vomiting. Longer exposures can cause anemia. Inhalation of high levels of zinc can lead to metal fume fever[14].

Toxicology of Mercury

Mercury is a naturally occurring element. Mercury is used in various products and industries. It is used in the manufacturing of electronics, lighting, and dental products. It has historically been used in other products such as batteries, thermometers, and other scientific and medical devices. Mercury does not break down in the environment. Most exposures to mercury occur from its consumption in foods such as fish. Mercury effects the nervous system and kidneys. Mercury exposure is a particular concern for pregnant people and young children. Children born in communities that consumed food with high levels of mercury have been found to have learning, sensory, and movement issues. In some cases of high mercury exposure, babies have been born with birth defects[15].

Scientific Evaluations

Exposure assessments and risk calculations are based on data from the three U.S. EPA sampling events (2016, 2020, and 2021), performed by Jacobs on behalf of the EPA. This assessment only focuses on samples collected at the surface (0 and 0.5 feet). These samples were deemed the most pertinent to human exposures. In total, this includes 142 sample locations.

Exposure point concentrations were calculated using ATSDR's exposure point calculator (Table 2). Exposure point concentrations (EPCs) are either the maximum concentration detected or the 95% upper confidence limit (UCL) of the mean of all the samples. The type of EPC chosen is based on the number of samples available. The calculations performed assume that each year, an individual comes into contact with the contaminated soil 3 days per week, 35 weeks per year, for 30 years (considering the soil is inaccessible during the 17 winter weeks when the ground is frozen or covered by snowfall). Exposures were assumed to be via both ingestion and dermal pathways. Our assessment used default soil adhesion factors and default skin surface areas[16].

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[13] ATSDR, 2022. TOXICOLOGICAL PROFILE FOR COPPER Toxicological Profile for Copper (cdc.gov)
[14] ATSDR, 2005. TOXICOLOGICAL PROFILE FOR ZINC ATSDR Zinc Tox Profile (cdc.gov)
[15] ATSDR, 2022. TOXICOLOGICAL PROFILE FOR MERCURY Toxicological Profile for Mercury (cdc.gov)
[16] https://www.atsdr.cdc.gov/pha-guidance/resources/ATSDR-EDG-Soil-Sediment-Dermal-Absorption-508.pdf

The Agency for Toxic Substances and Disease Registry (ATSDR) has not developed screening levels for any Aroclors other than 1254 and 1016 so this report assumes toxic equivalency between all other Aroclors and 1254[17]. All exposure levels for all Aroclors other than 1254 and 1016 will be compared to the minimal risk level for Aroclor 1254. Risk assessments are based on reasonable maximum exposure (RME) levels. For PAHs, there is insufficient data and therefore there is only non-cancer screening levels for benzo(a)pyrene. Polycyclic aromatic hydrocarbon exposure levels will be compared to concentrations of benzo(a)pyrene as a conservative risk assessment approach.

Comparison values (CVs) were used for initial screening of contaminants of concern to determine which compounds at which floodplains required further investigation (Table 3). Contaminants that had exceedances of ATSDR or other CVs were evaluated further for exposure levels. Contaminants with CVs evaluated include total PCBs, Aroclor 1254, Aroclor 1016, Benzo(a)pyrene, acenaphthene, anthracene, fluoranthene, fluorene, naphthalene, pyrene, arsenic, nickel, cadmium, and zinc.

ATSDR and U.S. EPA have not developed a CV for ingestion of lead through soil. Therefore, the usual approach of estimating human exposure to an environmental contaminant and then comparing this dose to a health guideline, or CV, cannot be used. Instead, exposure to lead is evaluated by using a biological model that predicts a blood lead concentration that would result from exposure to environmental lead contamination. The modeled blood lead concentration is then compared to the level of concern for blood lead concentrations in children as recommended by the Centers for Disease Control and Prevention (CDC). CDC's current reference level is 3.5 micrograms of lead per deciliter of blood (µg/dL)[18].

Floodplains 1, 2, 3, and 4 had exceedances in CVs for total PCBs, benzo(a)pyrene, and arsenic. Floodplain 5 had exceedances in total PCBs, Aroclor 1254, benzo(a)pyrene, and arsenic. Floodplain 6 and floodplain 7 had exceedances in total PCBs, Aroclor 1254, benzo(a)pyrene, cadmium, and arsenic. Floodplain 8/9 has CV exceedances in total PCBs, benzo(a)pyrene, Aroclor 1254, Aroclor 1016, arsenic, and cadmium. Floodplains 10 and 11 have exceedances in total PCBs, benzo(a)pyrene, Aroclor 1254, and arsenic. Note that lead assessments for the various floodplains are detailed in the next section (Table 3a).

Non-Cancer Risk Assessment

For non-cancer risk assessment, we compared the total estimated dose of a contaminant to the oral reference dose (RfD) established by EPA. We calculated the hazard quotient by dividing the total estimated dose by the oral RfD. The hazard quotient is the ratio of the potential exposure to a substance to the level at which no harmful effect is expected. If the hazard quotient value is greater than 1, the substance may represent a risk to human health.

Floodplain 1

Acute RME doses to Aroclors ranged between 1.9×10^{-7} mg/kg/day of Aroclor 1260 for an adult to 1.5×10^{-5} mg/kg/day of Aroclor 1248 for a child between zero and one years old (Table 4a,

[17] Personal communication, D. Mellard, ATSDR/OCHHA, Associate Director for Science, 6/6/2023
[18] Testing for Lead Poisoning in Children | Childhood Lead Poisoning Prevention | CDC

Appendix B.1). Our risk calculations indicate that the Aroclors at Floodplain 1 do not present a public health hazard (Table 5a, Appendix B.2).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6, Appendix B.1). RME doses for benzo(a) pyrene range between 1.0×10^{-6} mg/kg/day for a chronic exposure to an adult and 4.5×10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7a Appendix B.1). There are similar exposure levels (less than 25% difference) of benz(a)anthracene, chrysene, and benzo(g,h,i)perylene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene and phenanthrene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

RME doses to chromium range from a chronic exposure of 1.50×10^{-5} mg/kg/day for an adult to an acute exposure of 7.9×10^{-4} mg/kg/day for a child aged zero to one years old (Appendix B.1). RME mercury doses range from 6.9×10^{-7} mg/kg/day for a chronic exposure to an adult to an acute exposure of 3.1×10^{-5} to a child between zero and one years old (Table 9a, Appendix B.1). Exposures to lead could result in CTE blood lead levels of 1.6 µg/dL in children ages one to two years old, which is below the ATSDR blood lead reference level (Table 10). The adult lead blood level is unlikely (<1%) to result in a fetal blood level that is above the ATSDR blood lead reference level.

Floodplain 2

Acute RME doses to Aroclors can range between 2.4×10^{-7} mg/kg/day of Aroclor 1248 to an adult to 1.5×10^{-5} mg/kg/day of Aroclor 1242 for a child between zero and one years old (Table 4b). Our risk calculations indicate that the Aroclors at Floodplain 2 do not present a public health hazard (Table 5b).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 1.10×10^{-5} mg/kg/day for a chronic exposure to an adult and 5.00×10^{-4} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7b). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

RME doses to chromium range from a chronic exposure of 2.8×10^{-5} mg/kg/day for an adult to an acute exposure of 1.5×10^{-3} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 1.2×10^{-7} mg/kg/day for a chronic exposure to an adult to an acute exposure of 5.4×10^{-6} to a child between zero and one years old (Table 9b). Exposures to lead could result in CTE blood lead levels of 2 µg/dL in children ages one to two years old which is below the CDCs blood lead reference level (Table 10). The adult lead blood level is unlikely (<1%) to result in a fetal blood level that is above the CDCs blood lead reference level.

Floodplain 3

Acute RME doses to Aroclors can range between 2.6 x 10^{-7} mg/kg/day of Aroclor 1260 to an adult to 1.70 x 10^{-5} mg/kg/day of Aroclor 1248 for a child between zero and one years old (Table 4c). Our risk calculations indicate that the Aroclors at Floodplain 3 do not present a public health hazard (Table 5c).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 2.0 x 10^{-6} mg/kg/day for a chronic exposure to an adult and 9.1 x 10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7c). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

RME doses to chromium range from a chronic exposure of 2.5 x 10^{-5} mg/kg/day for an adult to an acute exposure of 1.3x10^{-3} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 8.1x10^{-8} mg/kg/day for a chronic exposure to an adult to an acute exposure of 3.6 x 10^{-6} to a child between zero and one years old (Table 9c). Exposures to lead could result in central tendency exposure (CTE) blood lead levels of 1.8 µg/dL in children ages one to two years old which is below the CDC's blood lead reference level (Table 10). The adult lead blood level is unlikely (<1%) to result in a fetal blood level that is above the CDC blood lead reference level.

Floodplain 4

Acute RME doses to Aroclors can range between 3.0 x 10^{-7} mg/kg/day of Aroclor 1260 to an adult to 1.4 x 10^{-5} mg/kg/day of Aroclor 1248 for a child between zero and one years old (Table 4d). Our risk calculations indicate that the Aroclors at Floodplain 4 do not present a public health hazard (Table 5d).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 1.7 x 10^{-6} mg/kg/day for a chronic exposure to an adult and 7.6 x 10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7d). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

RME doses to chromium range from a chronic exposure of 1.5 x 10^{-5} mg/kg/day for an adult to an acute exposure of 3.1 x 10^{-4} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 8.9 x 10^{-8} mg/kg/day for a chronic exposure to an adult to an acute exposure of 4.00 x 10^{-6} to a child between zero and one years old (Table 9d). Exposures to lead could result in CTE blood lead levels of 1.2 µg/dL in children ages one to two years old which is

below the CDCs blood lead reference level (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the ATSDR blood lead reference level.

Floodplain 5

Acute RME doses to Aroclors can range between 3.0 x 10^{-7} mg/kg/day of Aroclor 1260 to an adult to 1.4 x 10^{-5} mg/kg/day of Aroclor 1248 for a child between zero and one years old (Table 4e). Our risk calculations indicate that the Aroclors at Floodplain 5 do not present a public health hazard (Table 5e).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 1.7 x 10^{-6} mg/kg/day for a chronic exposure to an adult and 7.6 x 10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7e). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

RME doses to chromium range from a chronic exposure of 1.5 x 10^{-5} mg/kg/day for an adult to an acute exposure of 8.1 x 10^{-4} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 8.9 x 10^{-8} mg/kg/day for a chronic exposure to an adult to an acute exposure of 4.0x10^{-6} to a child between zero and one years old (Table 9e). Exposures to lead could result in CTE blood lead levels of 2.8 µg/dL in children ages one to two years old which is below the CDCs blood lead reference level. (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the CDCs blood lead reference level.

Floodplain 6

Acute RME doses to Aroclors can range between 8.3 x 10^{-7} mg/kg/day of Aroclors 1260 to an adult to 1.1 x 10^{-4} mg/kg/day of Aroclor 1242 for a child between zero and one years old (Table 4f). Our risk calculations suggests that there is a non-cancer health risk to children ages two and below from levels of Aroclor 1242 for both chronic and intermediate exposures (Table 5f).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 2.0 x 10^{-6} mg/kg/day for a chronic exposure to an adult and 9.1 x 10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7f). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, benzo(g,h,i)perylene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

Our risk calculations suggest that there is no public health risk from intermediate and chronic exposures to cadmium (Table 11). RME doses to cadmium range from a chronic exposure of 2.0 x 10^{-6} mg/kg/day for an adult to an acute exposure of 9.9 x 10^{-5} mg/kg/day for a child aged zero to one years old. RME doses to chromium range from a chronic exposure of 4.10 x 10^{-5}

mg/kg/day for an adult to an acute exposure of 2.1 x 10^{-3} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 2.1 x 10^{-7} mg/kg/day for a chronic exposure to an adult to an acute exposure of 9.5 x 10^{-6} mg/kd/day to a child between zero and one years old (Table 9f). Exposures to lead could result in CTE blood lead levels of 3.5 µg/dL in children ages one to two years old which is at the CDCs blood lead reference level (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the CDC blood lead reference level.

Floodplain 7

Acute RME doses to Aroclors can range between 1.0 x 10^{-6} mg/kg/day of Aroclors 1221 and 1232 to an adult to 1.4 x 10^{-4} mg/kg/day of Aroclor 1242 for a child between zero and one years old (Table 4g). Our risk calculations suggests that there are elevated non-cancer health risks from levels of Aroclors 1242 and 1248 to children under the age of six and from Aroclor 1254 to children under the age of two for both chronic and intermediate exposures (Table 5g).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 2.5 x 10^{-6} mg/kg/day for a chronic exposure to an adult and 1.1x10^{-4} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7g). There are similar levels (less than 25% difference) of benz(a)anthracene and chrysene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, and phenanthrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

Our risk calculations suggest that there is no public health risk from intermediate and chronic exposures to cadmium (Table 11). RME doses to cadmium range from a chronic exposure of 2.1 x 10^{-6} mg/kg/day for an adult to an acute exposure of 1.1 x 10^{-4} mg/kg/day for a child aged zero to one years old. RME doses to chromium range from a chronic exposure of 4.2 x 10^{-5} mg/kg/day for an adult to an acute exposure of 2.2 x 10^{-3} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 3.2 x 10^{-7} mg/kg/day for a chronic exposure to an adult to an acute dose of 9.5 x 10^{-6} mg/kg/day to a child between zero and one years old (Table 9g). Exposures to lead could result in CTE blood lead levels of 2.9 µg/dL in children ages one to two years old which is below the CDCs blood lead reference level (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the ATSDR blood lead reference level.

Floodplains 8 and 9

Acute RME doses to Aroclors can range between 8.3 x 10^{-7} mg/kg/day of Aroclors 1221 and 1232 to an adult to 8.7 x 10^{-5} mg/kg/day of Aroclor 1242 for a child between zero and one years old (Table 4h). Our risk calculations suggests that there is a non-cancer health risk to children ages two and below from levels of Aroclor 1242 for both chronic and intermediate exposures (Table 5h).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 1.4 x 10^{-6} mg/kg/day for a

chronic exposure to an adult and 6.3 x 10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7h). There are similar levels (less than 25% difference) of benz(a)anthracene, benzo(g,h,i)perylene, and chrysene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene and phenanthrene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

Our risk calculations suggest that there is no public health risk from intermediate and chronic exposures to cadmium (Table 11). RME doses to cadmium range from a chronic exposure of 1.5 x 10^{-6} mg/kg/day for an adult to an acute exposure of 7.3 x 10^{-5} mg/kg/day for a child aged zero to one years old. RME doses to chromium range from a chronic exposure of 3.1 x 10^{-5} mg/kg/day for an adult to an acute exposure of 1.6 x 10^{-3} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 1.9 x 10^{-7} mg/kg/day for a chronic exposure to an adult to an acute exposure of 8.4 x 10^{-6} mg/kg/day to a child between zero and one years old (Table 9h). Exposures to lead could result in CTE blood lead levels of 2.6 µg/dL in children ages one to two years old which is below the CDCs blood lead reference level of 3.5 µg/dL (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the ATSDR blood lead reference level.

Floodplain 10

Acute RME doses to Aroclors can range between 6.00 x 10^{-7} mg/kg/day of Aroclor 1260 to an adult to 7.5 x 10^{-5} mg/kg/day of Aroclor 1242 for a child between zero and one years old (Table 4i). Our risk calculations suggests that there is a non-cancer health risk to children ages one and below from levels of Aroclor 1242 for both chronic and intermediate exposures (Table 5i).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 9.4x10^{-7} mg/kg/day for a chronic exposure to an adult and 4.2x10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7i). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, benzo(g,h,i)perylene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

Our risk calculations suggest that there is no public health risk from intermediate and chronic exposures to cadmium (Table 11). RME doses to cadmium range from a chronic exposure of 1.6 x 10^{-6} mg/kg/day for an adult to an acute exposure of 8.0 x 10^{-5} mg/kg/day for a child aged zero to one years old. RME doses to chromium range from a chronic exposure of 3.2 x 10^{-5} mg/kg/day for an adult to an acute exposure of 6.5 x 10^{-4} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 2.0 x 10^{-7} mg/kg/day for a chronic exposure to an adult to an acute exposure of 9.1 x 10^{-6} mg/kg/day to a child between zero and one years old (Table 9i). Exposures to lead could result in CTE blood lead levels of 2.5 µg/dL in children ages one to two years old which is below the CDC's blood lead reference level (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the ATSDR blood lead reference level.

Floodplain 11

Acute RME doses to Aroclors can range between 3.60 x 10^{-7} mg/kg/day of Aroclor 1260 to an adult to 1.90 x 10^{-5} mg/kg/day of Aroclor 1254 for a child between zero and one years old (Table 4j). Our risk calculations indicate that the Aroclors at Floodplain 11 do not present a public health hazard (Table 5j).

Our risk assessment indicates that the levels of benzo(a)pyrene do not present a public health hazard (Table 6). RME levels for benzo(a) pyrene range between 1.6x10^{-6} mg/kg/day for a chronic exposure to an adult and 3.6x10^{-5} mg/kg/day for an acute exposure to an infant between zero and one years old (Table 7j). There are similar levels (less than 25% difference) of benz(a)anthracene, chrysene, benzo(g,h,i)perylene, and phenanthrene to levels of benzo(a)pyrene. The levels of benzo(b)fluoranthene are over 25% higher than the levels of benzo(a)pyrene. The levels of benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene are over 25% less than the levels of benzo(a)pyrene (Table 8).

RME doses to chromium range from a chronic exposure of 2.0 x 10^{-5} mg/kg/day for an adult to an acute exposure of 4.1 x 10^{-4} mg/kg/day for a child aged zero to one years old. RME mercury exposure doses range from 1.7 x 10^{-8} mg/kg/day for a chronic exposure to an adult to an acute exposure of 7.6 x 10^{-6} mg/kg/day to a child between zero and one years old (Table 9j). Exposures to lead could result in CTE blood lead levels of 2.7 µg/dL in children ages one to two years old which is below the ATSDR's blood lead reference level (Table 10). The adult lead blood level is unlikely (<0.5%) to result in a fetal blood level that is above the ATSDR blood lead reference level.

Cancer Risk

There is assumed to be no "safe dose" of a chemical that can cause cancer. A theoretical cancer risk is used to evaluate the risk of exposures to carcinogens. Cancer risk is estimated by calculating a dose of a chemical received and multiplying that dose by the cancer-causing potential of that chemical, also known as the cancer slope factor or cancer potency factor (Appendix B.3).

According to Wisconsin Administrative Code NR 720, "an individual compound's soil residual contaminant level (RCL) for direct contact may not exceed a target cancer risk of 1 x 10^{-6} (1 in 1,000,000) and the cumulative effect of all compounds in the soil may not exceed a target cancer risk of 1 x 10^{-5} (1 in 100,000)." For the floodplains, cancer risk is a result of exposure to mixtures of PCBs and PAHs. Cancer risk from PAHs is reported as Benzo(a)pyrene (BaP) equivalents and cancer risk from the Aroclors is calculated from total PCBs. Total PCBs is calculated by summing all the Aroclor measurements for a given sample location. Total BaP equivalents is calculated by determining the BaP equivalency for each PAH by multiplying the level of the given PAH by its potency equivalency factor and summing the totals. Because cancer risk is being calculated for mixtures, we evaluated the cancer risk for each class of chemical mixture (PCBs and PAHs) individually and combined against a target cancer risk of 1 x 10^{-5}. However, due to the uncertainty of the actual PCB composition of Aroclor mixtures, total PCB cancer risk is evaluated against target cancer risk of 1 x 10^{-6}. Cancer risk from BaP equivalents is evaluated against target cancer risk of 1 x 10^{-5}. All floodplains have excess childhood cancer risks for combined exposure to total PCBs and BaP equivalents (Table 12). This assumes that cancer risk from the PCBs and BaP equivalents are additive in nature. The total RME childhood cancer risk ranged from 2.0 x 10^{-5} in

Floodplain 1 to 1.9 x 10^{-4} in floodplain 2. There are childhood cancer risk exceedances (greater than 1 x 10^{-6}) for BaP equivalents and total PCBs in all the floodplains. Floodplains 2, 7, and 11 have a combined excess cancer risk for adults based on an RME exposure. The only exceedance based on BaP equivalents was in Floodplain 2. There were exceedances based only on PCBs in floodplains 2, 3, 6, 7, 8/9, 10, and 11 (Table 12).

It is important to note that our approach to this assessment was very health protective. Our assessment used an RME as an estimated exposure. Cancer risk assumed carcinogenicity of different compounds was additive. In addition, the cancer risk of PCBs and PAHs were compared to screening value of the compound with the highest carcinogenic compound.

Children's Health Considerations

We want to emphasize that children are of special concern when dealing with environmental contamination. Certain factors contribute to the likelihood that children are at greater risk than adults. One of these factors is increased exposures due to hand-to-mouth behaviors. Another factor is a higher skin surface area to body weight ratio in children. Additionally, children are at a higher risk due to being in sensitive periods of growth where exposures can affect development. Studies of children exposed *in utero* to PCBs found correlations between exposures and decreased birthweight and delayed cognitive development[19]. Because PCBs accumulate in the body and remain for a long time, reducing childhood exposures to environmental PCBs will limit lifetime accumulation. Childhood exposure to lead also can cause damage to the brain and nervous system that can result in slowed growth and development, learning and behavior issues, and hearing and speech problems.

Conclusions

DHS concludes that, based on the levels of chemical contamination, **the floodplains present increased health risk for recreating individuals**, particularly younger children.

- Floodplains 6-10 pose a chronic health risk to young children due to PCB levels.
- Lead levels at Floodplain 6 could result in blood lead levels at the ATSDR's blood lead reference level in very young children.
- There is an unacceptable cumulative childhood cancer risk at all of the floodplains due to levels of PAHs and PCBs.
- There are also elevated cancer risks to adults observed in Floodplain 2, 7, and 11.

It is important to note that there are limited health guidelines for many of the contaminants of concerns and that this DHS health assessment was made with the currently available information.

Recommendations:

Our recommendations include:

[19] ATSDR, 2000. TOXICOLOGICAL PROFILE FOR POLYCHLORINATED BIPHENYLS (PCBs) ATSDR Polychlorinated Biphenyls (PCBs) Tox Profile (cdc.gov)

- Young children and pregnant women should limit exposure to soil via consumption and skin contact, particularly in the most contaminated floodplains. In general, DHS recommends use of the paved paths. Dirt paths can be covered with straw or woodchips to limit exposure to chemical contaminants.
- Clean off soil from shoes, clothes, pets' paws, bikes, and kayaks.
- Wash hands after touching soil and cleaning off soil from hand before eating.
- Follow local fish consumption guidelines.
- Do not forage.
- Keep the public educated and aware of the risk involved with recreating in the floodplains area of the Milwaukee Estuary AOC by maintaining signage and other forms of communication. Of particular importance is informing the public of the fish advisories by posting more warning signs.

DHS supports the U.S. EPA led clean-up initiative of the Milwaukee Estuary AOC, which will remove contaminated soil identified in the floodplains, to the extent practicable, and restore these areas with clean soil. In areas that the U.S. EPA's remediates, soil that is a health risk to recreational users will be removed. This clean-up of the floodplains is anticipated to be complete by 2030.

Public Health Action Plans

DHS continues to support the U.S. EPA and other collaborating organizations in their work in the Milwaukee Estuary AOC. Support includes:

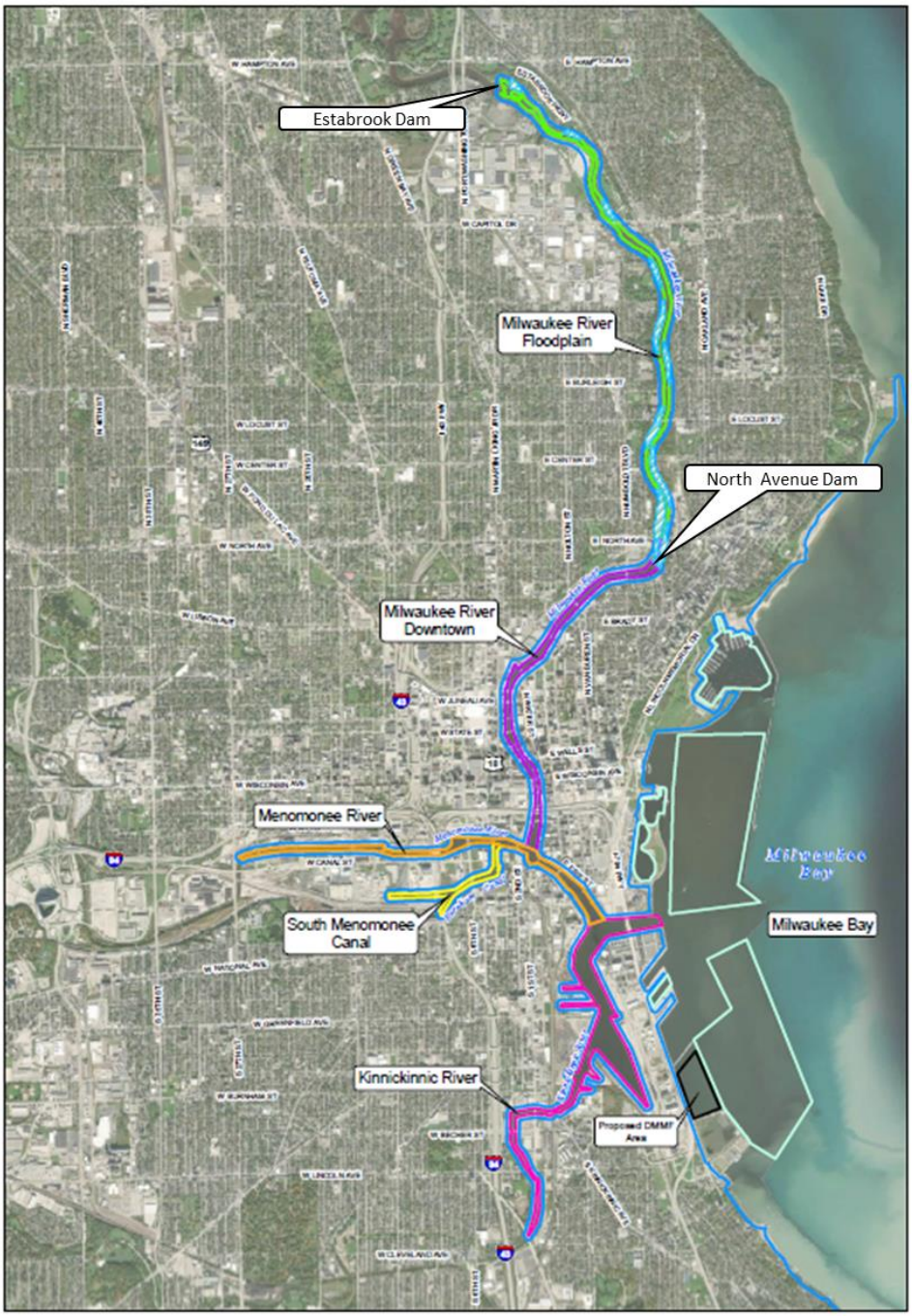
- DHS supports testing performed to date to determine extent of the contamination.
- DHS continues to be involved in partners' meetings and public information meetings about the proposed cleanup of the AOC's contaminated soils and sediments.
- DHS remains involved with partners in the design and maintenance of the signage used throughout the recreational areas of the floodplains.
- DHS supports the education of employees and volunteers that routinely work in floodplain soils on safe work practices in these areas.

Consistent with our role in supporting local efforts to address sites of environmental contamination, DHS will continue to assist partners from the U.S. EPA, the DNR, Milwaukee County Parks, and the City of Milwaukee with technical support related to health concerns.

Who Prepared the Document

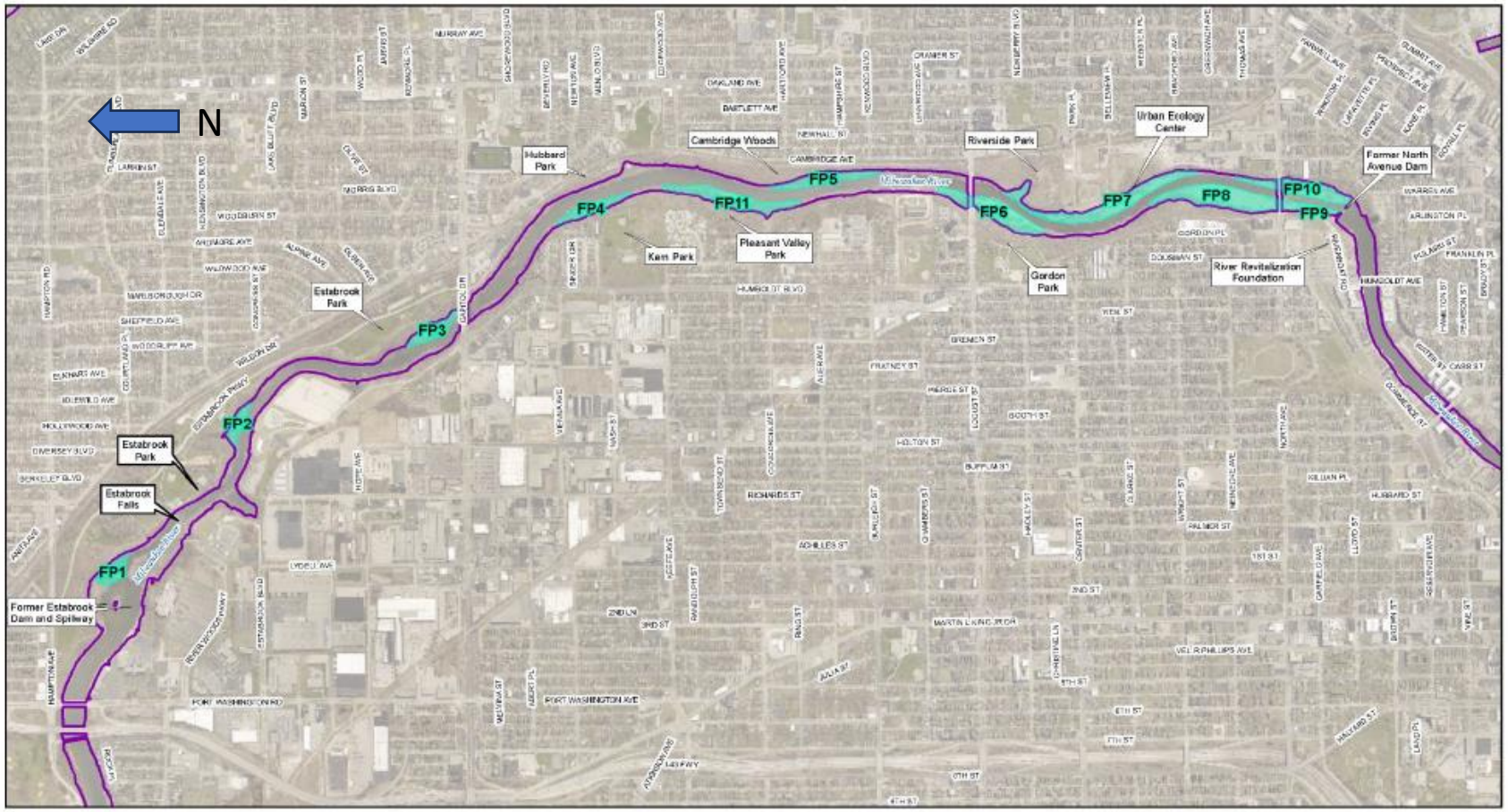
Document prepared by Jeremiah Yee, PhD, of the Wisconsin Site Evaluation Team, using data generated by the U.S. EPA.

Figure 1**.** Milwaukee Estuary Cleanup Area



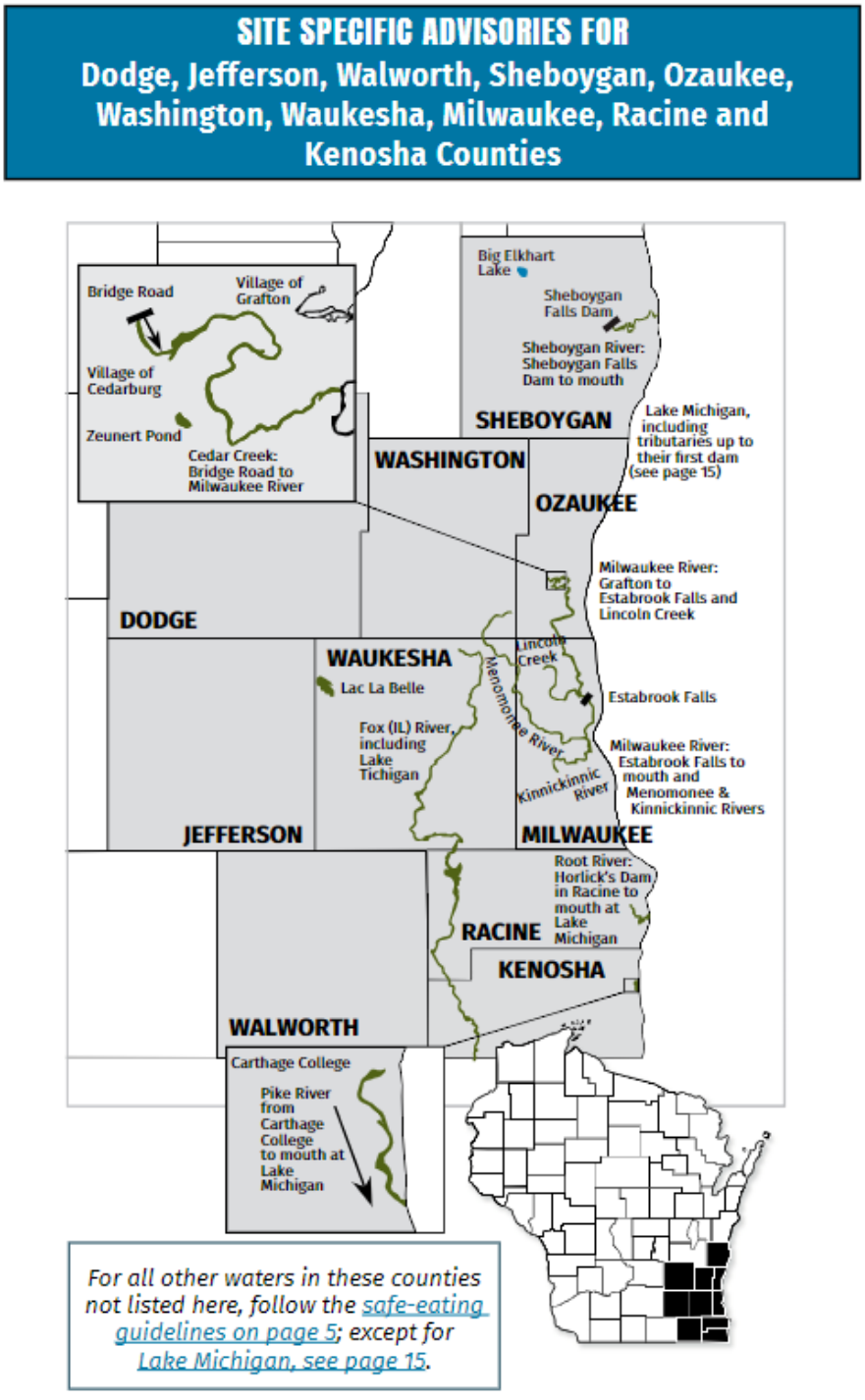
Draft Final Focused Feasibility Study Report WRP_FloodplainsReach-DraftFinal_FFS.pdf (mkewaterwaypartners.org)

Figure 2. Floodplain Locations



Jacobs Floodplain Reach Site Sampling Technical Memorandum

Figure 3. Milwaukee River Fish Advisory Location



WI DNR Fish Advisory Brochure PUB_FH_824_ChooseWisely.pdf (widen.net)

Figure 4a. Floodplain 1 Sampling Locations

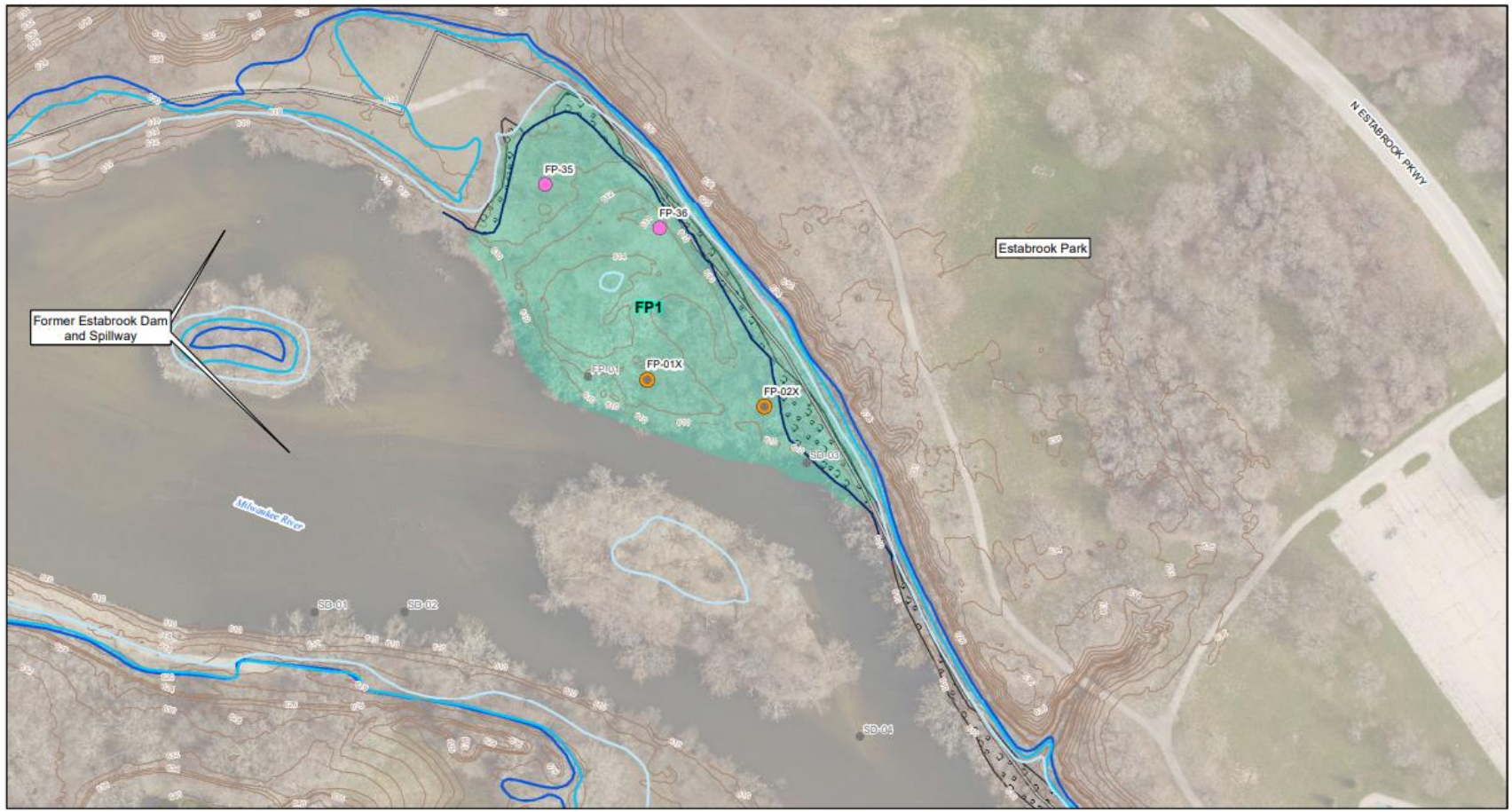


Figure 4b. Floodplain 2 Sampling Locations

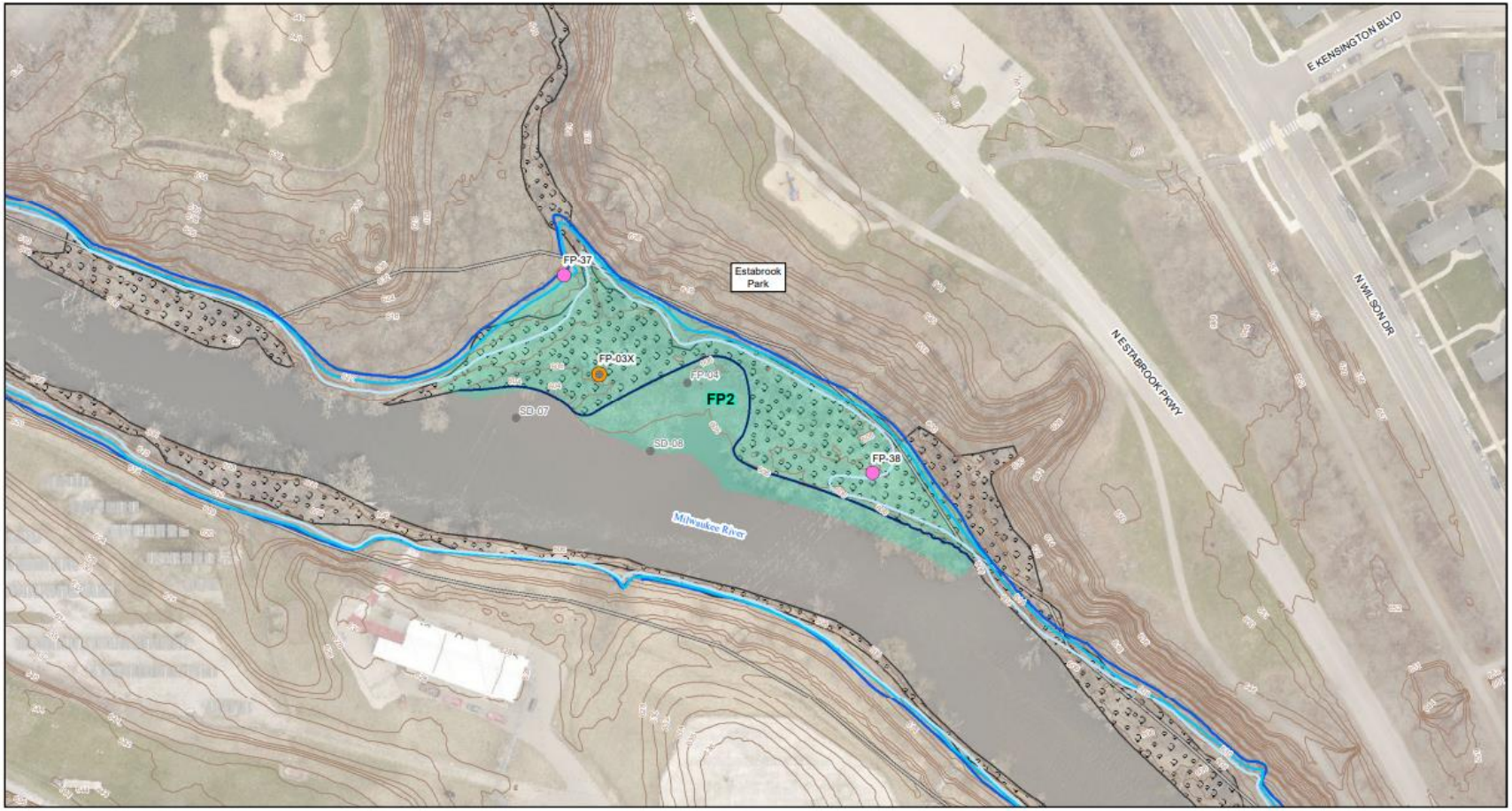


Figure 4c. Floodplain 3 Sampling Locations

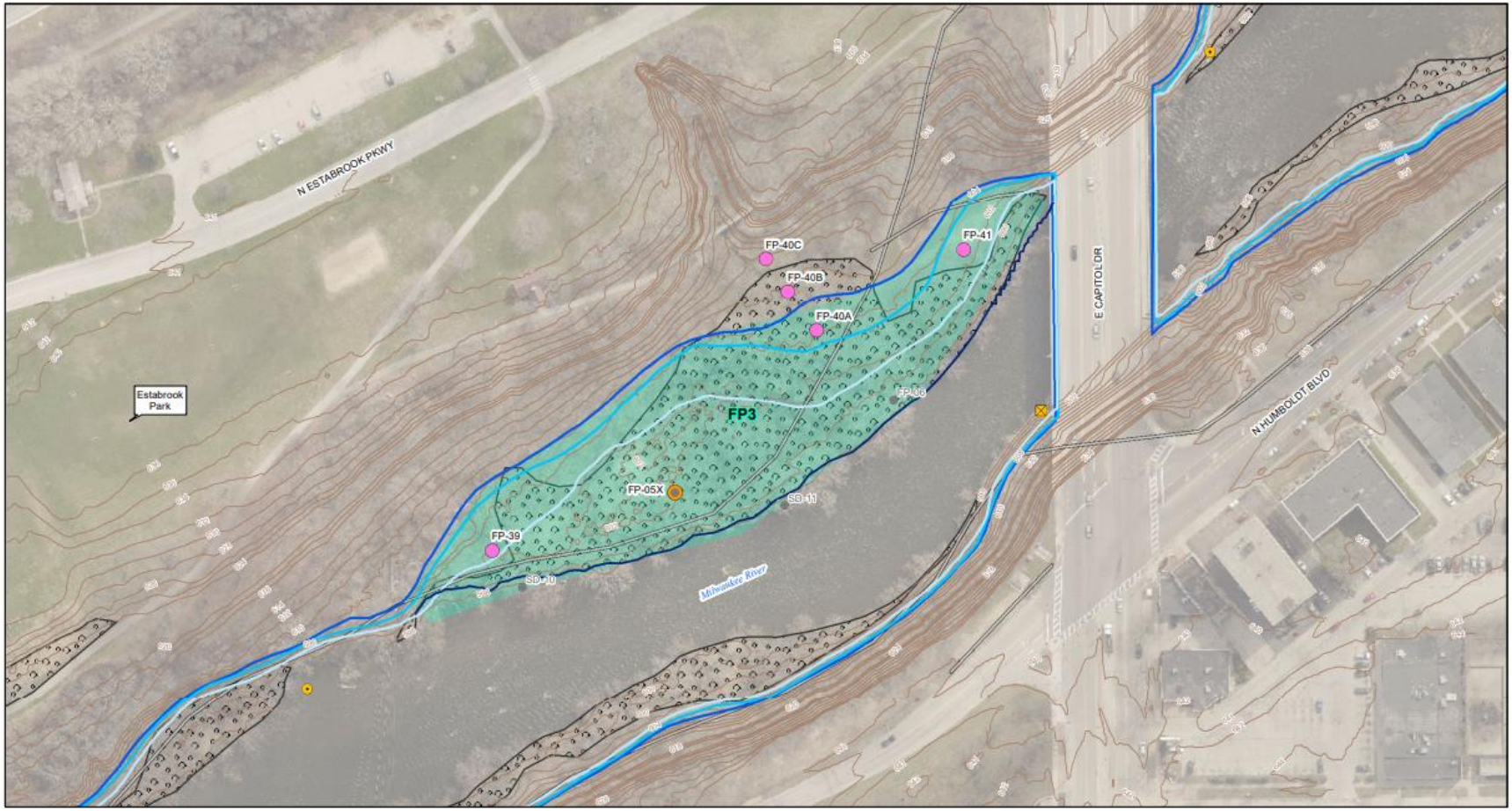


Figure 4d. Floodplain 4 Sampling Locations

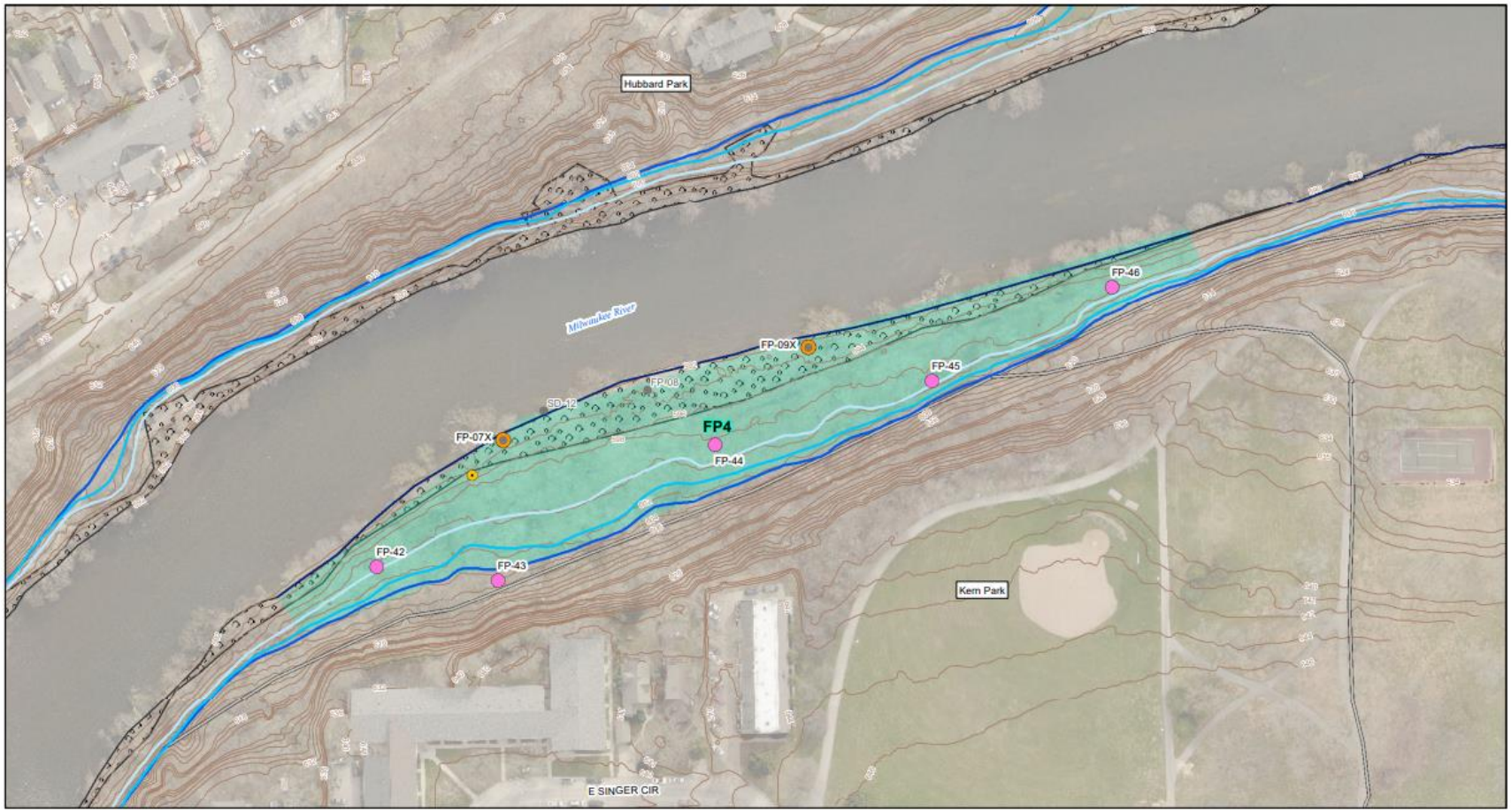


Figure 4e. Floodplains 5 and 11 Sampling Locations

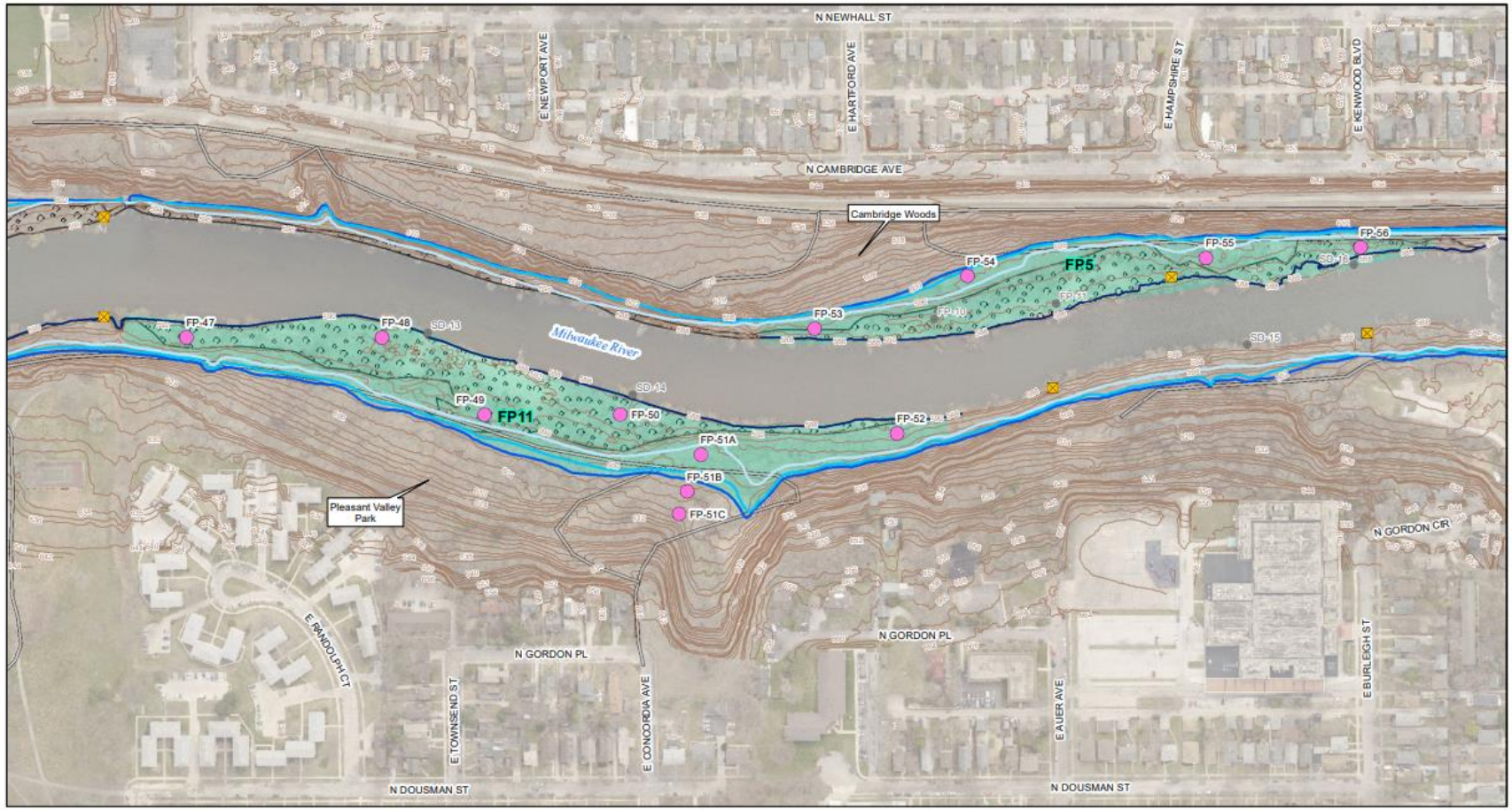


Figure 4f. Floodplains 6 and 7 Sampling Locations

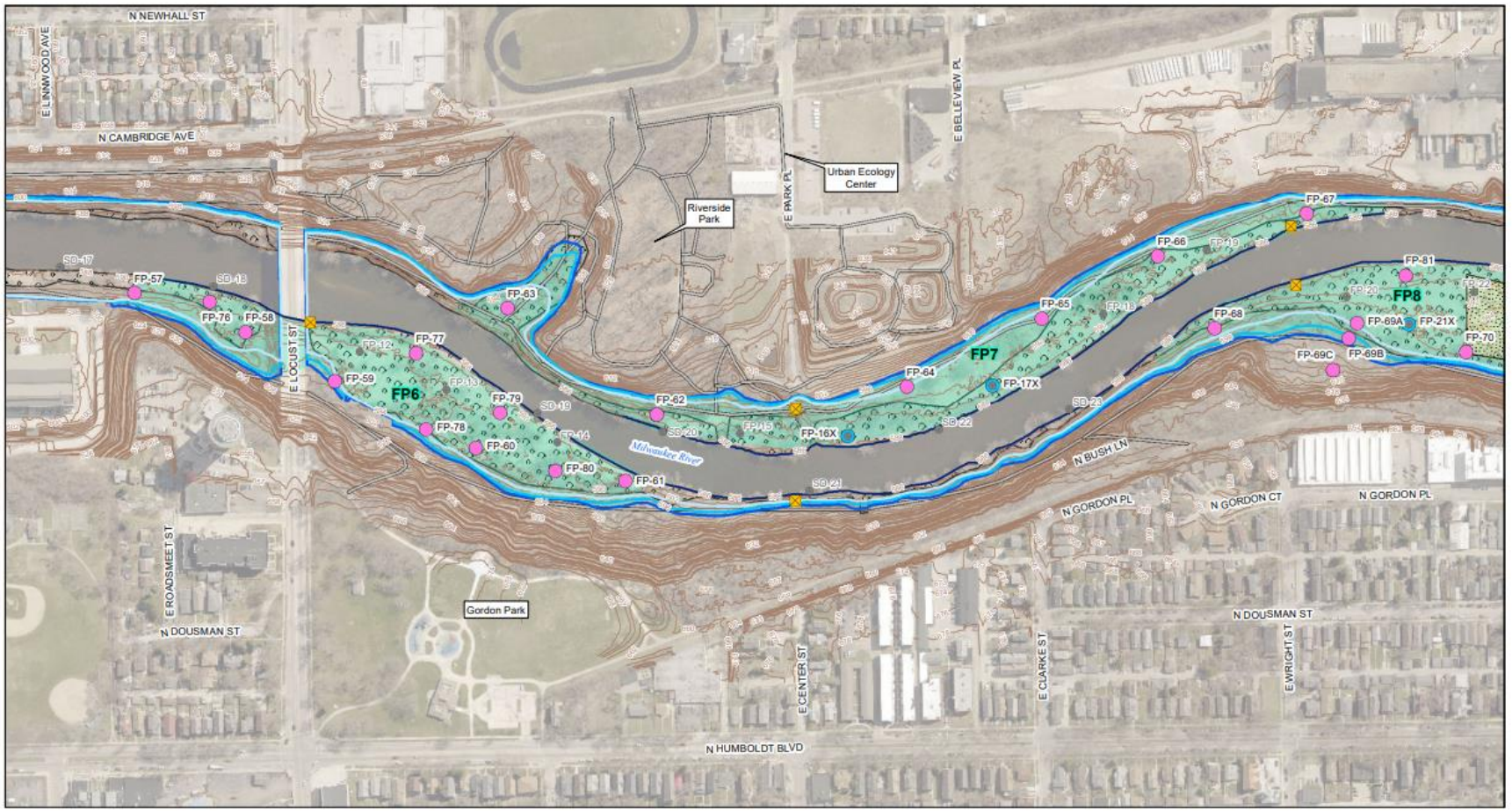
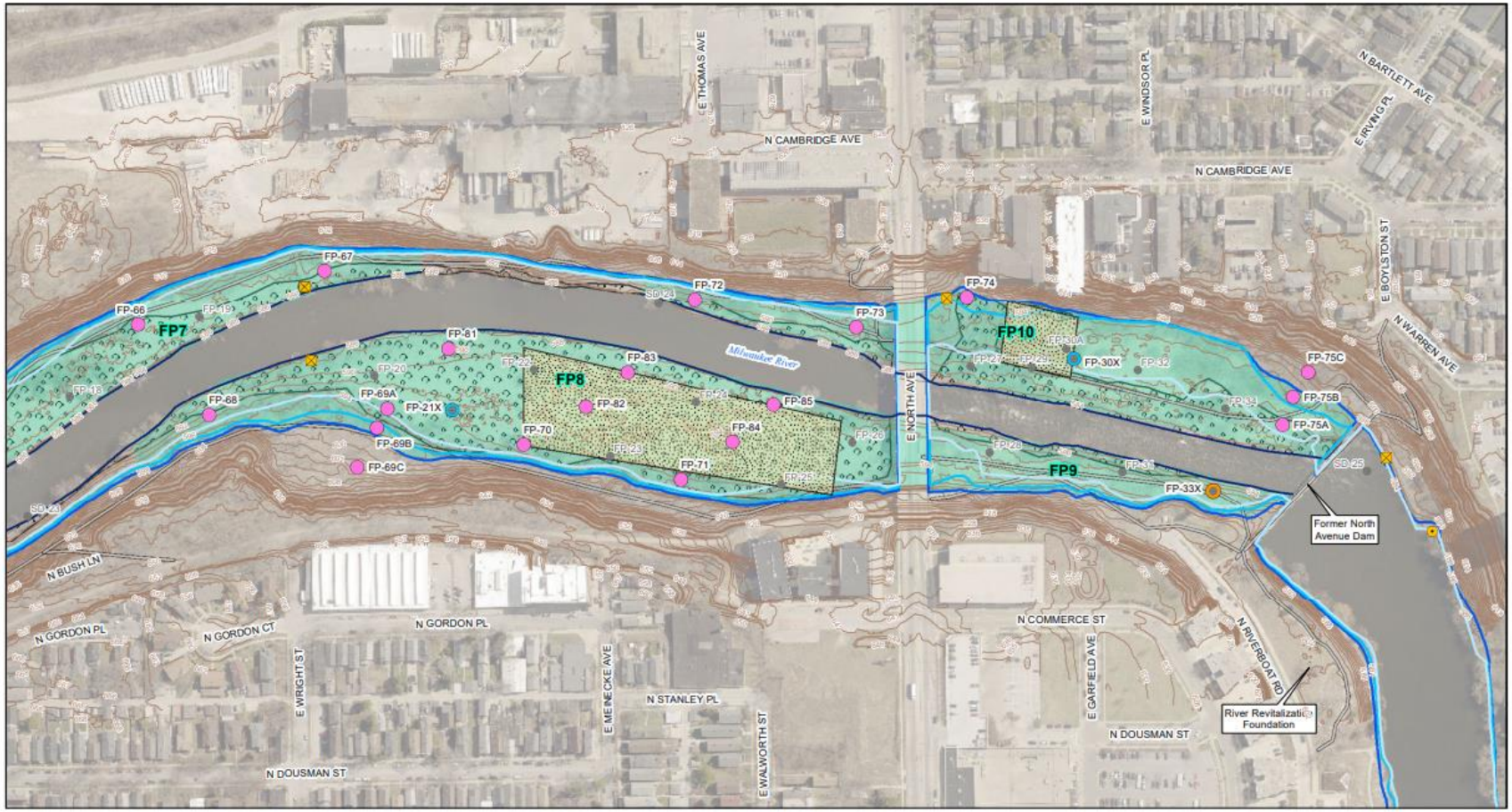


Figure 4g. Floodplain 8/9 and 10 Sampling Locations



Jacobs Floodplain Reach Site Sampling Technical Memorandum

Table 1a. Floodplain PCB Levels (mg/kg)

Floodplain ID	Sample ID	Total PCBs	Aroclor 1260	Aroclor 1254	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclor 1248	Aroclor 1016	Aroclor 1262	Aroclor 1242
FP01	MK-FP-01-0.0/0.5	0.23	0	0.0845	0	0	0	0	0	0	0.142
FP01	MK-FP-02-0.0/0.5	0.89	0.0489	0.264	0	0	0	0.574	0	0	0
FP01	MK-FP-35-0.0/0.5	0.69	0.074	0.33	0	0	0	0	0	0	0.29
FP01	MK-FP-36-0.0/0.5	0.79	0.097	0.37	0	0	0	0	0	0	0.32
FP01	MK-FP-86-0.0/0.5	0.52	0.054	0.27	0	0	0	0	0	0	0.2
FP02	MK-FP-03-0.0/0.5	1.2	0.113	0.5	0	0	0	0	0	0	0.6
FP02	MK-FP-04-0.0./0.5	0.15	0	0.0797	0	0	0	0	0	0	0.0747
FP02	MK-FP-37-0.0/0.5	0.27	0.048	0.12	0	0	0	0.099	0	0	0
FP02	MK-FP-38-0.0/0.5	0.67	0.064	0.3	0	0	0	0	0	0	0.31
FP02	MK-FP-87-0.0/0.5	0.35	0.12	0.16	0	0	0	0	0	0	0.069
FP03	MK-FP-05-0.0./0.5	0.66	0.0732	0.295	0	0	0	0	0	0	0.29
FP03	MK-FP-06-0.0/0.5	0.87	0.102	0.366	0	0	0	0.403	0	0	0
FP03	MK-FP-39-0.0/0.5	1.3	0.13	0.47	0	0	0	0.67	0	0	0
FP03	MK-FP-40A-0.0/0.5	0.15	0.025	0.068	0	0	0	0.053	0	0	0
FP03	MK-FP-40B-0.0/0.5	0.15	0.03	0.078	0	0	0	0.043	0	0	0
FP03	MK-FP-40C-0.0/0.5	0	0	0	0	0	0	0	0	0	0
FP03	MK-FP-41-0.0/0.5	0.064	0	0.064	0	0	0	0	0	0	0
FP03	MK-FP-88-0.0/0.5	0.55	0.067	0.24	0	0	0	0.25	0	0	0
FP04	MK-FP-07-0.0/0.5	1.1	0.126	0.404	0	0	0	0.549	0	0	0
FP04	MK-FP-08-0.0/0.5	0.88	0.112	0.362	0	0	0	0	0	0	0.409
FP04	MK-FP-09-0.0./0.5	0.82	0.15	0.336	0	0	0	0	0	0	0.333
FP04	MK-FP-42-0.0/0.5	0.022	0	0.022	0	0	0	0	0	0	0
FP04	MK-FP-43-0.0/0.5	0	0	0	0	0	0	0	0	0	0
FP04	MK-FP-44-0.0/0.5	0.085	0	0.047	0	0	0	0.038	0	0	0
FP04	MK-FP-45-0.0/0.5	0.025	0	0.025	0	0	0	0	0	0	0
FP04	MK-FP-46-0.0/0.5	0.3	0.057	0.13	0	0	0	0.11	0	0	0
FP05	MK-FP-10-0.0./0.5	1.2	0.176	0.506	0	0	0	0.506	0	0	0
FP05	MK-FP-101-0.0/0.5	0.068	0	0.047	0	0	0	0	0	0	0.021
FP05	MK-FP-102-0.0/1.0	0.85	0.12	0.31	0	0	0	0	0	0	0.42
FP05	MK-FP-11-0.0/0.5	0.61	0.12	0.302	0	0	0	0	0	0	0.188
FP05	MK-FP-53-0.0/0.5	0.66	0.11	0.36	0	0	0	0	0	0	0.19

Floodplain ID	Sample ID	Total PCBs	Aroclor 1260	Aroclor 1254	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclor 1248	Aroclor 1016	Aroclor 1262	Aroclor 1242
FP05	MK-FP-54-0.0/0.5	0.17	0.035	0.078	0	0	0	0	0	0	0.055
FP05	MK-FP-55-0.0/0.5	7.1	0.59	2.7	0	0	0	3.8	0	0	0
FP05	MK-FP-56-0.0/0.5	5.1	0.26	2.1	0	0	0	0	0	0	2.7
FP06	MK-FP-106-0.0/0.5	7.6	0.71	3.8	0	0	0	0	0	0	3.1
FP06	MK-FP-107-0.0/0.5	9.4	0.42	3	0	0	0	0	0	0	5.9
FP06	MK-FP-12-0.0./0.5	0.91	0.0873	0.421	0	0	0	0	0	0	0.399
FP06	MK-FP-13-0.0/0.5	12.4	0	3.05	0	0	0	0	0	0	9.31
FP06	MK-FP-14-0.0/0.5	5.3	0.346	1.81	0	0	0	0	0	0	3.09
FP06	MK-FP-57-0.0/0.5	0.83	0.12	0.45	0	0	0	0	0	0	0.26
FP06	MK-FP-58-0.0/0.5	3.1	0.34	1.4	0	0	0	0	0	0	1.4
FP06	MK-FP-59-0.0/0.5	0.9	0.12	0.41	0	0	0	0	0	0	0.37
FP06	MK-FP-60-0.0/0.5	4.7	0.4	1.8	0	0	0	0	0	0	2.5
FP06	MK-FP-61-0.0/0.5	5.9	0	2	0	0	0	0	0	0	3.9
FP06	MK-FP-76-0.0/0.5	1.2	0.2	0.81	0	0	0	0	0	0	0.22
FP06	MK-FP-77-0.0/0.5	1.6	0.15	0.83	0	0	0	0	0	0	0.66
FP06	MK-FP-78-0.0/0.5	1	0.14	0.46	0	0	0	0	0	0	0.4
FP06	MK-FP-79-0.0/0.5	9.7	0.48	3.8	0	0	0	0	0	0	5.4
FP06	MK-FP-80-0.0/0.5	3.6	0.41	1.5	0	0	0	0	0	0	1.7
FP07	MK-FP-113-0.0/0.5	0.53	0.094	0.21	0	0	0	0	0	0	0.23
FP07	MK-FP-114-0.0/0.5	0.89	0.19	0.51	0	0	0	0.19	0	0	0
FP07	MK-FP-115-0.0/0.5	2.2	0.23	1	0	0	0	0	0	0	0.91
FP07	MK-FP-122-0.0/0.5	6.2	0.55	2.1	0	0	0	0	0	0	3.6
FP07	MK-FP-123-0.0/0.5	2.5	0.18	1.1	0	0	0	0	0	0	1.3
FP07	MK-FP-125-0.0/0.5	1.2	0.096	0.5	0	0	0	0	0	0	0.61
FP07	MK-FP-15-0.0./0.5	7.9	0	1.59	0	0	0	0	0	0	6.29
FP07	MK-FP-16-0.0/0.5	0.39	0.0461	0.168	0	0	0	0	0	0	0.18
FP07	MK-FP-17-0.0./0.5	6.7	0	2.36	0	0	0	0	0	0	4.32
FP07	MK-FP-18-0.0/0.5	7.4	0	2.41	0	0	0	0	0	0	4.96
FP07	MK-FP-19-0.0/0.5	5.5	0.41	1.99	0	0	0	0	0	0	3.13
FP07	MK-FP-62-0.0/0.5	1.2	0.15	0.55	0	0	0	0	0	0	0.5
FP07 - HRUA Ravine	MK-FP-63-0.0/0.5	10.3	0.97	4.1	0	0	0	5.2	0	0	0
FP07	MK-FP-64-0.0/0.5	5.6	0.39	2.5	0	0	0	0	0	0	2.7

Floodplain ID	Sample ID	Total PCBs	Aroclor 1260	Aroclor 1254	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclor 1248	Aroclor 1016	Aroclor 1262	Aroclor 1242
FP07	MK-FP-65-0.0/0.5	8.5	0.57	3.1	0	0	0	0	0	0	4.8
FP07	MK-FP-66-0.0/0.5	18.4	1.2	6.2	0	0	0	0	0	0	11
FP07	MK-FP-67-0.0/0.5	5.4	0.3	2	0	0	0	0	0	0	3.1
FP07 - HRUA Canoe	MK-FP-116-0.0/0.5	2.3	0.19	1.3	0	0	0	0	0	0	0.85
FP07 - HRUA Canoe	MK-FP-117-0.0/0.5	1.4	0.14	0.59	0	0	0	0	0	0	0.63
FP07 - HRUA M. Flats	MK-FP-118-0.0/0.5	34	2	14	0	0	0	0	0	0	18
FP07 - HRUA M. Flats	MK-FP-119-0.0/0.5	31	1.5	12	0	0	0	0	0	0	18
FP07 - HRUA M. Flats	MK-FP-120-0.0/0.5	15	0.82	5.2	0	0	0	0	0	0	8.7
FP07 - HRUA M. Flats	MK-FP-121-0.0/0.5	7.9	0.66	4.2	0	0	0	0	0	0	3.1
FP07 - HRUA Ravine	MK-FP-108-0.0/0.5	0.51	0.081	0.23	0	0	0	0	0	0	0.2
FP07 - HRUA Ravine	MK-FP-109-0.0/0.5	0.61	0.12	0.26	0	0	0	0	0	0	0.23
FP07 - HRUA Ravine	MK-FP-110-0.0/0.5	2.8	0.3	1.6	0	0	0	0	0	0	0.96
FP07 - HRUA Ravine	MK-FP-111-0.0/0.5	0.18	0.042	0.11	0	0	0	0	0	0	0.028
FP07 - HRUA Ravine	MK-FP-112-0.0/0.5	0.024	0	0.024	0	0	0	0	0	0	0
FP08/09	MK-FP-124-0.0/0.5	2.1	0.27	0.9	0	0	0	0.94	0	0	0
FP08/09	MK-FP-127-0.0/0.5	2.3	0.25	1.1	0	0	0	0	0	0	0.91
FP08/09	MK-FP-128-0.0/0.5	1	0.095	0.48	0	0	0	0	0	0	0.45
FP08/09	MK-FP-131-0.0/0.5	0.43	0.047	0.22	0	0	0	0	0	0	0.17
FP08/09	MK-FP-20-0.0./0.5	24.6	0	6.49	0	0	0	0	0	0	18.1
FP08/09	MK-FP-21-0.0/0.5	3.5	0.324	1.48	0	0	0	0	0	0	1.7
FP08/09	MK-FP-22-0.0./0.5	4.1	0.43	1.79	0	0	0	0	0	0	1.89
FP08/09	MK-FP-23-0.0/0.5	2.8	0.353	1.12	0	0	0	0	0	0	1.36
FP08/09	MK-FP-24-0.0./0.5	4.8	0.539	1.92	0	0	0	0	0	0	2.33
FP08/09	MK-FP-25-0.0/0.5	3.3	0.306	1.23	0	0	0	0	0	0	1.73
FP08/09	MK-FP-26-0.0./0.5	2.1	0.199	0.969	0	0	0	0	0	0	0.931
FP08/09	MK-FP-28-0.0./0.5	1.5	0.143	0.688	0	0	0	0	0	0	0.629
FP08/09	MK-FP-31-0.0/0.5	0.73	0.0604	0.246	0	0	0	0	0	0	0.42
FP08/09	MK-FP-33-0.0/1.0	0.31	0.0388	0.144	0	0	0	0	0	0	0.127
FP08/09	MK-FP-68-0.0/0.5	1.7	0.21	0.73	0	0	0	0	0	0	0.78
FP08/09	MK-FP-69A-0.0/0.5	3.8	0.52	1.7	0	0	0	0	0	0	1.6
FP08/09	MK-FP-69B-0.0/0.5	0.082	0.034	0.048	0	0	0	0	0	0	0
FP08/09	MK-FP-69C-0.0/0.5	0.031	0	0.031	0	0	0	0	0	0	0

Floodplain ID	Sample ID	Total PCBs	Aroclor 1260	Aroclor 1254	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclor 1248	Aroclor 1016	Aroclor 1262	Aroclor 1242
FP08/09	MK-FP-70-0.0/0.5	6.2	1	2.5	0	0	0	0	0	0	2.7
FP08/09	MK-FP-71-0.0/0.5	2.5	0.49	0.86	0	0	0	0	0	0	1.1
FP08/09	MK-FP-81-0.0/0.5	1.8	0.15	0.87	0	0	0	0	0	0	0.77
FP08/09	MK-FP-82-0.0/0.5	4.6	0.36	1.9	0	0	0	0	0	0	2.3
FP08/09	MK-FP-83-0.0/0.5	6.7	0.4	2.5	0	0	0	0	0	0	3.8
FP08/09	MK-FP-84-0.0/0.5	4.8	0.42	2	0	0	0	0	0	0	2.4
FP08/09	MK-FP-85-0.0/0.5	8.7	0.72	3.3	0	0	0	0	0	0	4.7
FP10	MK-FP-126-0.0/0.5	0.73	0.093	0.4	0	0	0	0	0	0	0.23
FP10	MK-FP-129-0.0/0.5	1.3	0.12	0.59	0	0	0	0	0	0	0.54
FP10	MK-FP-130-0.0/0.5	5.5	0.61	2.4	0	0	0	0	0	0	2.5
FP10	MK-FP-132-0.0/0.5	2.3	0.19	1	0	0	0	0	0	0	1.1
FP10	MK-FP-133-0.0/0.5	4.4	0.35	1.7	0	0	0	0	0	0	2.4
FP10	MK-FP-27-0.0/0.5	0.32	0	0.155	0	0	0	0	0	0	0.162
FP10	MK-FP-29-0.0/0.5	3.3	0	1.22	0	0	0	0	0	0	2.07
FP10	MK-FP-30-0.0./0.5	5.2	0.36	1.73	0	0	0	0	0	0	3.13
FP10	MK-FP-30A-0.0./0.5	7.2	0.465	2.61	0	0	0	0	0	0	4.08
FP10	MK-FP-32-0.0./0.5	2.1	0.216	0.859	0	0	0	0	0	0	0.982
FP10	MK-FP-34-0.0./0.5	6.9	0	2.29	0	0	0	0	0	0	4.6
FP10	MK-FP-72-0.0/0.5	0.9	0.45	0.25	0	0	0	0	0	0	0.2
FP10	MK-FP-73-0.0/0.5	0.5	0.075	0.22	0	0	0	0	0	0	0.2
FP10	MK-FP-74-0.0/0.5	1.6	0.17	0.86	0	0	0	0	0	0	0.6
FP10	MK-FP-75A-0.0/0.5	1.5	0.12	0.61	0	0	0	0	0	0	0.72
FP10	MK-FP-75B-0.0/0.5	1.8	0.14	0.75	0	0	0	0	0	0	0.92
FP10	MK-FP-75C-0.0/0.5	1.6	0.19	0.79	0	0	0	0	0	0	0.61
FP11	MK-FP-47-0.0/0.5	1.2	0.086	0.46	0	0	0	0	0	0	0.64
FP11	MK-FP-48-0.0/0.5	1	0.094	0.43	0	0	0	0	0	0	0.49
FP11	MK-FP-49-0.0/0.5	0.21	0.027	0.092	0	0	0	0	0	0	0.094
FP11	MK-FP-50-0.0/0.5	1.4	0.18	0.77	0	0	0	0	0	0	0.45
FP11	MK-FP-51A-0.0/0.5	0.42	0.04	0.18	0	0	0	0.2	0	0	0
FP11	MK-FP-51B-0.0/0.5	0.034	0	0.034	0	0	0	0	0	0	0
FP11	MK-FP-51C-0.0/0.5	0	0	0	0	0	0	0	0	0	0
FP11	MK-FP-52-0.0/0.5	0.37	0.068	0.15	0	0	0	0	0	0	0.15

Floodplain ID	Sample ID	Total PCBs	Aroclor 1260	Aroclor 1254	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclor 1248	Aroclor 1016	Aroclor 1262	Aroclor 1242
FP11	MK-FP-89-0.0/0.5	1.2	0.2	0.68	0	0	0	0	0	0	0.37
FP11	MK-FP-90-0.0/0.5	0.24	0.038	0.11	0	0	0	0	0	0	0.094
FP11	MK-FP-91-0.0/0.5	0.68	0.076	0.3	0	0	0	0	0	0	0.3
FP11	MK-FP-92-0.0/0.5	0.56	0.084	0.24	0	0	0	0	0	0	0.24
FP11	MK-FP-93-0.0/0.5	0.23	0.033	0.12	0	0	0	0	0	0	0.077
FP11	MK-FP-97-0.0/0.5	0.58	0.099	0.29	0	0	0	0.19	0	0	0
FP11 - HRUA 1	MK-FP-94-0.0/0.5	2.1	0.22	1.1	0	0	0	0	0	0	0.82
FP11 - HRUA 1	MK-FP-95-0.0/0.5	1.1	0.15	0.68	0	0	0	0	0	0	0.27
FP11 - HRUA 1	MK-FP-96-0.0/0.5	0.45	0.053	0.21	0	0	0	0.19	0	0	0
FP11 - HRUA 2	MK-FP-98-0.0/0.5	3.1	0.49	1.9	0	0	0	0	0	0	0.7
FP11 - HRUA 2	MK-FP-99-0.0/0.5	0.27	0.053	0.12	0	0	0	0.096	0	0	0
FP11 - HRUA 2	MK-FP-100-0.0/0.5	4.5	0.5	2.4	0	0	0	0	0	0	1.6
FP11 - HRUA 3	MK-FP-103-0.0/0.5	0.48	0.077	0.22	0	0	0	0	0	0	0.19
FP11 - HRUA 3	MK-FP-104-0.0/0.5	0.4	0.064	0.17	0	0	0	0	0	0	0.17
FP11 - HRUA 3	MK-FP-105-0.0/0.5	2.3	0.32	1.2	0	0	0	0	0	0	0.81

Table 1b. Floodplain PAH Levels (mg/kg)

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP01	MK-FP-01-0.0/0.5	0.477	0.593	0.916	0.271	0.547	0.0698	0.245	0	0.0222
FP01	MK-FP-02-0.0/0.5	1.38	1.14	2.04	0.954	1.91	0.252	0.853	0	0.126
FP01	MK-FP-35-0.0/0.5	1.7	1.8	2.6	0.95	2	0.37	1.2	0	0.13
FP01	MK-FP-36-0.0/0.5	0	0	0	0	0	0	0	0	0
FP01	MK-FP-86-0.0/0.5	1.4	1.6	2.1	0.93	1.9	0.26	0.85	0	0.27
FP02	MK-FP-03-0.0/0.5	0.933	0.998	1.71	0.733	1.01	0.111	0.327	0	0.0639
FP02	MK-FP-04-0.0./0.5	0.356	0.454	0.821	0.275	0.42	0.0554	0.183	0	0.0202
FP02	MK-FP-37-0.0/0.5	0	0	0	0	0	0	0	0	0
FP02	MK-FP-38-0.0/0.5	1.4	1.4	1.9	0.91	1.8	0.25	0.87	0	0.13
FP02	MK-FP-87-0.0/0.5	16	20	27	9.7	22	3.2	12	0	1.2
FP03	MK-FP-05-0.0./0.5	1.29	1.44	1.91	0.768	1.45	0	0.806	0.0095	0.103
FP03	MK-FP-06-0.0/0.5	3.12	3.62	6.02	1.8	3.62	0.749	2.1	0.0132	0.227
FP03	MK-FP-39-0.0/0.5	1.4	1.4	1.9	0.82	1.7	0.24	0.84	0	0.14
FP03	MK-FP-40A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP03	MK-FP-40B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP03	MK-FP-40C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP03	MK-FP-41-0.0/0.5	0.24	0.26	0.35	0.14	0.29	0.048	0.16	0	0.018
FP03	MK-FP-88-0.0/0.5	0.91	1	1.5	0.52	1.1	0.17	0.6	0	0
FP04	MK-FP-07-0.0/0.5	2.76	3.04	4.06	1.89	3.1	0.59	1.67	0.0232	0.212
FP04	MK-FP-08-0.0/0.5	2.83	1.91	3.92	1.02	2.22	0.601	1.56	0.0334	0.186
FP04	MK-FP-09-0.0./0.5	1.59	1.87	2.65	1.1	1.93	0.322	1.27	0.0131	0.0959
FP04	MK-FP-42-0.0/0.5	0.21	0.22	0.32	0.12	0.25	0.039	0.14	0.057	0.011

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP04	MK-FP-43-0.0/0.5	0	0	0	0	0	0	0	0	0
FP04	MK-FP-44-0.0/0.5	0	0	0	0	0	0	0	0	0
FP04	MK-FP-45-0.0/0.5	0	0	0	0	0	0	0	0	0
FP04	MK-FP-46-0.0/0.5	1.8	1.9	2.7	1.1	2.2	0.34	1.4	0	0.13
FP05	MK-FP-10-0.0./0.5	1.88	2.15	3.12	1.53	2.4	0.518	1.44	0.0183	0.0947
FP05	MK-FP-101-0.0/0.5	0.25	0.3	0.52	0.18	0.36	0.065	0.2	0.031	0.014
FP05	MK-FP-102-0.0/1.0	2.2	2.8	3.6	1.6	3	0.53	1.9	0.069	0.12
FP05	MK-FP-11-0.0/0.5	1.99	1.97	3.76	1.44	3.37	0.424	1.33	0	0.137
FP05	MK-FP-53-0.0/0.5	1.2	1.3	1.8	0.76	1.5	0.23	0.93	0	0.086
FP05	MK-FP-54-0.0/0.5	0	0	0	0	0	0	0	0	0
FP05	MK-FP-55-0.0/0.5	0	0	0	0	0	0	0	0	0
FP05	MK-FP-56-0.0/0.5	3.5	3.1	4.1	1.6	3.5	0.51	1.8	0	0.2
FP06	MK-FP-106-0.0/0.5	2	2.6	4.1	1.5	2.8	0.72	2.1	0.083	0.085
FP06	MK-FP-107-0.0/0.5	4.4	5.4	7.9	2.9	6.1	0.98	3.5	0	0.26
FP06	MK-FP-12-0.0./0.5	1.57	1.6	2.82	1.21	2.67	0.338	1.11	0	0.138
FP06	MK-FP-13-0.0/0.5	4.18	3.5	6.57	2.12	3.75	1.05	2.91	0.0475	0.292
FP06	MK-FP-14-0.0/0.5	0.422	0.448	0.896	0.361	0.821	0.105	0.335	0	0.0304
FP06	MK-FP-57-0.0/0.5	1.4	1.5	2.1	0.99	1.8	0.25	0.96	0	0.069
FP06	MK-FP-58-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-59-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-60-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-61-0.0/0.5	1.5	1.8	2.6	1.1	2	0.41	1.4	0	0.074
FP06	MK-FP-76-0.0/0.5	0	0	0	0	0	0	0	0	0

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP06	MK-FP-77-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-78-0.0/0.5	1.7	1.8	2.4	1.1	2.1	0.39	1.2	0	0.058
FP06	MK-FP-79-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-80-0.0/0.5	0	0	0	0	0	0	0	0	0
FP07	MK-FP-113-0.0/0.5	0.74	1	1.5	0.56	1.2	0.21	0.76	0	0
FP07	MK-FP-114-0.0/0.5	1	1.3	1.7	0.72	1.5	0.23	0.87	0	0
FP07	MK-FP-115-0.0/0.5	1	1.5	2.2	0.86	1.6	0.27	0.98	0	0
FP07	MK-FP-122-0.0/0.5	3.2	3.3	4.9	1.7	3.9	0.5	1.6	0	0.23
FP07	MK-FP-123-0.0/0.5	1.4	1.6	2.4	0.79	1.8	0.31	1.1	0	0.1
FP07	MK-FP-125-0.0/0.5	1.6	1.8	2.6	0.88	1.8	0.38	1.3	0	0.092
FP07	MK-FP-15-0.0./0.5	1.87	2.34	3.23	1.51	2.36	0.5	1.39	0.0156	0.116
FP07	MK-FP-16-0.0/0.5	1.05	1.19	1.5	0.572	1.44	0.319	0.88	0.0448	0.177
FP07	MK-FP-17-0.0./0.5	1	1.16	2.61	0.971	2.23	0.291	0.884	0	0
FP07	MK-FP-18-0.0/0.5	1.22	1.04	2.1	0.881	1.99	0.283	0.97	0	0.107
FP07	MK-FP-19-0.0/0.5	1.84	2.11	3.77	1.63	3.36	0.48	1.7	0	0.154
FP07	MK-FP-62-0.0/0.5	1.3	1.5	2.1	0.88	1.6	0.25	1	0	0.068
FP07 - HRUA Ravine	MK-FP-63-0.0/0.5	1.6	1.9	2.8	1.1	2.1	0.42	1.5	0	0.08
FP07	MK-FP-64-0.0/0.5	0	0	0	0	0	0	0	0	0
FP07	MK-FP-65-0.0/0.5	3.5	4.1	5.3	2.2	4.5	0.76	2.7	0	0.22
FP07	MK-FP-66-0.0/0.5	0	0	0	0	0	0	0	0	0
FP07	MK-FP-67-0.0/0.5	3.5	3.9	5.4	2.1	4.5	0.79	2.6	0.076	0.42
FP07 - HRUA Canoe	MK-FP-116-0.0/0.5	4.7	5.4	5.4	1.7	8.6	1.1	2.2	0.33	0.14
FP07 - HRUA Canoe	MK-FP-117-0.0/0.5	11	17	19	6	16	3.6	8.5	0.26	0.34

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP07 - HRUA M. Flats	MK-FP-118-0.0/0.5	3.5	4.2	6	2.7	4.3	0.83	3.1	0.076	0.15
FP07 - HRUA M. Flats	MK-FP-119-0.0/0.5	2.7	3.2	4.9	1.9	3.5	0.8	2.5	0.088	0.16
FP07 - HRUA M. Flats	MK-FP-120-0.0/0.5	3.9	4.8	7.5	3.4	4.9	0.95	3.5	0.09	0.18
FP07 - HRUA M. Flats	MK-FP-121-0.0/0.5	3.4	3.8	5.6	2.1	4.1	0.81	2.6	0	0.22
FP07 - HRUA Ravine	MK-FP-108-0.0/0.5	1	1.5	2.1	0.76	1.6	0.24	0.89	0	0.056
FP07 - HRUA Ravine	MK-FP-109-0.0/0.5	1	1.3	1.9	0.65	1.5	0.24	0.8	0.057	0.063
FP07 - HRUA Ravine	MK-FP-110-0.0/0.5	2.4	2.6	3.7	1.3	2.8	0.43	1.5	0.06	0.13
FP07 - HRUA Ravine	MK-FP-111-0.0/0.5	2.6	2.6	3.8	1.2	2.8	0.53	1.5	0.13	0.11
FP07 - HRUA Ravine	MK-FP-112-0.0/0.5	9.3	9.7	13	5.3	11	1.6	5.3	0	0.58
FP08/09	MK-FP-124-0.0/0.5	5.4	4.6	7.5	2.5	5.4	0.74	2.6	0	0.64
FP08/09	MK-FP-127-0.0/0.5	1.9	2	2.5	1.1	2.1	0.35	1.2	0	0.15
FP08/09	MK-FP-128-0.0/0.5	0.67	0.75	1.1	0.51	0.89	0.14	0.51	0.26	0.036
FP08/09	MK-FP-131-0.0/0.5	0.55	0.58	0.79	0.35	0.62	0.12	0.39	0.1	0.041
FP08/09	MK-FP-20-0.0./0.5	2.48	3.09	4.43	1.78	2.96	0	2.2	0.0227	0.136
FP08/09	MK-FP-21-0.0/0.5	2.84	3.31	4.34	1.79	3.83	0.885	2.49	0.174	0.318
FP08/09	MK-FP-22-0.0./0.5	2.4	2.67	4.82	1.77	3.8	0.61	2.15	0	0.198
FP08/09	MK-FP-23-0.0/0.5	1.74	2.19	3.99	1.49	3.22	0.479	1.53	0	0.101
FP08/09	MK-FP-24-0.0./0.5	0.982	0.984	2.18	0.942	1.94	0.224	0.782	0	0
FP08/09	MK-FP-25-0.0/0.5	2.28	2.01	3.81	1.19	2.07	0.65	1.68	0.0299	0.163
FP08/09	MK-FP-26-0.0./0.5	0.858	0.855	1.91	0.788	1.74	0.25	0.815	0	0
FP08/09	MK-FP-28-0.0./0.5	0.952	1.15	1.75	0.62	1.24	0.236	0.862	0.0397	0.0597
FP08/09	MK-FP-31-0.0/0.5	0.327	0.342	0.638	0.241	0.586	0.0726	0.232	0.0848	0.0438

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP08/09	MK-FP-33-0.0/1.0	0.216	0.259	0.434	0.168	0.332	0.0552	0.179	0.0328	0.0143
FP08/09	MK-FP-68-0.0/0.5	1.1	1.3	1.8	0.7	1.4	0.24	0.82	0	0.059
FP08/09	MK-FP-69A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-69B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-69C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-70-0.0/0.5	2.1	2.5	3.5	1.5	2.7	0.5	1.8	0	0.11
FP08/09	MK-FP-71-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-81-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-82-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-83-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-84-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-85-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-126-0.0/0.5	1	1.1	1.6	0.65	1.2	0.23	0.68	0	0.08
FP10	MK-FP-129-0.0/0.5	1.1	1.4	2.3	0.74	1.5	0.23	0.89	0	0.074
FP10	MK-FP-130-0.0/0.5	1.7	2	3.1	1.3	2.2	0.41	1.5	0	0.081
FP10	MK-FP-132-0.0/0.5	1.3	1.1	1.5	0.72	1.5	0.15	0.42	0.072	0.074
FP10	MK-FP-133-0.0/0.5	1.7	1.9	2.8	1.1	2	0.35	1.3	0	0.091
FP10	MK-FP-27-0.0/0.5	0.921	1.01	1.77	0.658	1.02	0.131	0.421	0	0.0603
FP10	MK-FP-29-0.0/0.5	0.729	0.834	1.14	0.484	1.03	0.242	0.701	0.014	0.054
FP10	MK-FP-30-0.0./0.5	1.6	1.82	2.48	1.16	1.83	0.328	1.15	0.0135	0.0882
FP10	MK-FP-30A-0.0./0.5	1.39	1.57	2.06	0.918	1.51	0	1.04	0.0101	0.0706
FP10	MK-FP-32-0.0./0.5	0.987	1.17	2.02	0.72	1.57	0.257	0.906	0	0.0515
FP10	MK-FP-34-0.0./0.5	1.6	1.37	1.83	0.875	1.62	0.536	1.36	0.0326	0.103

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP10	MK-FP-72-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-73-0.0/0.5	1.5	2	3.1	0.96	2.2	0.39	1.5	0.062	0.059
FP10	MK-FP-74-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-75A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-75B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-75C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-47-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-48-0.0/0.5	2.7	2.7	3.8	1.5	3.1	0.47	1.8	0	0.3
FP11	MK-FP-49-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-50-0.0/0.5	2.6	2.5	3.3	1.5	3	0.5	1.5	0	0.23
FP11	MK-FP-51A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-51B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-51C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-52-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-89-0.0/0.5	1.9	2.2	2.8	1.4	2.6	0.37	1.4	0	0.11
FP11	MK-FP-90-0.0/0.5	1.7	1.7	2.2	0.95	1.8	0.29	0.92	0	0.1
FP11	MK-FP-91-0.0/0.5	1.1	1.4	2.2	0.78	1.5	0.32	1	0	0.056
FP11	MK-FP-92-0.0/0.5	0.88	1.1	1.9	0.61	1.3	0.25	0.87	0	0
FP11	MK-FP-93-0.0/0.5	0.65	0.65	1.1	0.43	0.95	0.15	0.5	0	0
FP11	MK-FP-97-0.0/0.5	0.64	0.71	0.94	0.44	0.82	0.11	0.42	0	0.04
FP11 - HRUA 1	MK-FP-94-0.0/0.5	6.2	6	8.4	3.1	6.3	1.1	3.4	0.11	0.42
FP11 - HRUA 1	MK-FP-95-0.0/0.5	1.8	2.2	3.2	1.2	2.5	0.41	1.5	0	0.068
FP11 - HRUA 1	MK-FP-96-0.0/0.5	1.9	2.1	2.9	1.1	2.3	0.39	1.3	0	0.14

Floodplain ID	Sample ID	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-Cd) Pyrene	2-Methyl-naphthalene	Acenaphthene
FP11 - HRUA 2	MK-FP-98-0.0/0.5	2.9	3.3	4.7	1.7	3.5	0.88	2.6	0.1	0.18
FP11 - HRUA 2	MK-FP-99-0.0/0.5	0.3	0.37	0.58	0.19	0.4	0.071	0.25	0.012	0.014
FP11 - HRUA 2	MK-FP-100-0.0/0.5	3.2	3.9	5.2	2.3	4.1	0.64	2.5	0	0.18
FP11 - HRUA 3	MK-FP-103-0.0/0.5	2.3	2.6	3.7	1.4	2.8	0.43	1.6	0	0.16
FP11 - HRUA 3	MK-FP-104-0.0/0.5	1.1	1.3	1.9	0.62	1.3	0.22	0.87	0	0.079
FP11 - HRUA 3	MK-FP-105-0.0/0.5	1.5	1.5	1.9	1	1.9	0.32	1.1	0	0.14

Table 1c. Floodplain PAH Levels (mg/kg) continued

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoran-thene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP01	MK-FP-01-0.0/0.5	0.0255	0.123	0	0.298	1.18	0.0308	0	0.501	0.842
FP01	MK-FP-02-0.0/0.5	0	0.24	0	0.995	3.83	0.175	0	2.17	2.69
FP01	MK-FP-35-0.0/0.5	0.073	0.42	1.4	1.5	3.9	0.13	0.079	1.7	2.9
FP01	MK-FP-36-0.0/0.5	0	0	0	0	0	0	0	0	0
FP01	MK-FP-86-0.0/0.5	0	0.49	1.1	1	4.8	0.23	0.21	2.5	3.2
FP02	MK-FP-03-0.0/0.5	0	0.28	0	0.324	2.22	0.0769	0	0.977	1.92
FP02	MK-FP-04-0.0./0.5	0.0115	0.0867	0	0.2	0.811	0.024	0	0.345	0.698
FP02	MK-FP-37-0.0/0.5	0	0	0	0	0	0	0	0	0
FP02	MK-FP-38-0.0/0.5	0	0.39	1	1.1	3.6	0.13	0	1.8	2.5
FP02	MK-FP-87-0.0/0.5	0	5.5	13	14	46	1.2	0	16	33
FP03	MK-FP-05-0.0./0.5	0.0512	0.29	0	0.955	2.87	0.13	0.0118	1.46	2.36
FP03	MK-FP-06-0.0/0.5	0.177	0.691	0	2.17	8.06	0.294	0.0114	2.83	5.11
FP03	MK-FP-39-0.0/0.5	0	0.6	1	0.99	3.6	0.15	0.066	1.9	2.6

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP03	MK-FP-40A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP03	MK-FP-40B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP03	MK-FP-40C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP03	MK-FP-41-0.0/0.5	0.008	0.061	0.19	0.18	0.58	0.016	0.01	0.25	0.46
FP03	MK-FP-88-0.0/0.5	0	0.23	0.79	0.76	2.3	0.066	0	0.88	1.6
FP04	MK-FP-07-0.0/0.5	0.108	0.721	0	1.73	6.66	0.28	0.0295	2.54	4.46
FP04	MK-FP-08-0.0/0.5	0.251	0.827	1.52	1.76	4.95	0.208	0.0492	1.93	3.95
FP04	MK-FP-09-0.0./0.5	0.0703	0.295	0	1.4	3.51	0.119	0.0216	1.44	2.81
FP04	MK-FP-42-0.0/0.5	0.012	0.038	0.18	0.16	0.47	0.011	0.047	0.21	0.36
FP04	MK-FP-43-0.0/0.5	0	0	0	0	0	0	0	0	0
FP04	MK-FP-44-0.0/0.5	0	0	0	0	0	0	0	0	0
FP04	MK-FP-45-0.0/0.5	0	0	0	0	0	0	0	0	0
FP04	MK-FP-46-0.0/0.5	0.1	0.55	1.4	1.5	4.2	0.15	0.076	2	3.3
FP05	MK-FP-10-0.0./0.5	0.108	0.4	0	1.72	4.02	0.121	0.0196	1.52	3.13
FP05	MK-FP-101-0.0/0.5	0.02	0.05	0.27	0.22	0.64	0.014	0.028	0.28	0.49
FP05	MK-FP-102-0.0/1.0	0.096	0.65	2	2.2	5.7	0.14	0.12	2	4.2
FP05	MK-FP-11-0.0/0.5	0	0.739	0	1.55	5.87	0.154	0	2.62	4.31
FP05	MK-FP-53-0.0/0.5	0.081	0.27	0.99	1.1	2.6	0.093	0.045	1.2	2
FP05	MK-FP-54-0.0/0.5	0	0	0	0	0	0	0	0	0
FP05	MK-FP-55-0.0/0.5	0	0	0	0	0	0	0	0	0
FP05	MK-FP-56-0.0/0.5	0.32	1.5	2.1	2	7.7	0.33	0.053	4.2	6.1
FP06	MK-FP-106-0.0/0.5	0.16	0.56	2.3	2.4	5.1	0.11	0.11	1.7	3.6

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP06	MK-FP-107-0.0/0.5	0.13	1.2	3.9	4.1	12	0.29	0.11	4.2	8.5
FP06	MK-FP-12-0.0./0.5	0	0.685	0	1.27	4.86	0.166	0	2.34	3.38
FP06	MK-FP-13-0.0/0.5	0.542	1.51	2.71	3.3	7.61	0.347	0.0588	3.1	6.38
FP06	MK-FP-14-0.0/0.5	0	0.16	0	0.377	1.23	0.0423	0	0.532	0.967
FP06	MK-FP-57-0.0/0.5	0.073	0.31	1.2	1.2	3.5	0.081	0.05	1.2	2.4
FP06	MK-FP-58-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-59-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-60-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-61-0.0/0.5	0.086	0.35	1.5	1.6	3.5	0.093	0.066	1.4	2.7
FP06	MK-FP-76-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-77-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-78-0.0/0.5	0.11	0.39	1.4	1.5	3.5	0.091	0.058	1.4	2.7
FP06	MK-FP-79-0.0/0.5	0	0	0	0	0	0	0	0	0
FP06	MK-FP-80-0.0/0.5	0	0	0	0	0	0	0	0	0
FP07	MK-FP-113-0.0/0.5	0	0.22	0.82	0.95	2.3	0.056	0.057	0.8	1.6
FP07	MK-FP-114-0.0/0.5	0.069	0.21	1.1	1.2	2.5	0.053	0.05	0.89	1.5
FP07	MK-FP-115-0.0/0.5	0	0.28	1.2	1.2	2.8	0.057	0.05	0.94	2
FP07	MK-FP-122-0.0/0.5	0.11	0.73	2.3	1.6	7	0.27	0.11	3.5	5.9
FP07	MK-FP-123-0.0/0.5	0	0.34	1.2	1.3	3.3	0.095	0.081	1.3	2.4
FP07	MK-FP-125-0.0/0.5	0.071	0.49	1.4	1.7	3.7	0.1	0.095	1.6	3.2
FP07	MK-FP-15-0.0./0.5	0.108	0.425	0	1.47	3.77	0.152	0.0156	1.53	3.05
FP07	MK-FP-16-0.0/0.5	0.216	0.564	0.88	1	4	0.215	0.0562	1.6	3.08

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP07	MK-FP-17-0.0./0.5	0	0.377	0	1.01	3.23	0	0	1.39	2.46
FP07	MK-FP-18-0.0/0.5	0	0.397	0	1.15	3.11	0.138	0	1.57	2.78
FP07	MK-FP-19-0.0/0.5	0	0.613	0	2.06	5.71	0.176	0	2.66	4.5
FP07	MK-FP-62-0.0/0.5	0.067	0.3	1.1	1.2	3	0.077	0.06	1.2	2.2
FP07 - HRUA Ravine	MK-FP-63-0.0/0.5	0.095	0.33	1.5	1.7	3.7	0.09	0.062	1.4	3.1
FP07	MK-FP-64-0.0/0.5	0	0	0	0	0	0	0	0	0
FP07	MK-FP-65-0.0/0.5	0.17	0.93	3	3.1	7.5	0.25	0.093	3.3	6.2
FP07	MK-FP-66-0.0/0.5	0	0	0	0	0	0	0	0	0
FP07	MK-FP-67-0.0/0.5	0.13	1.2	2.9	3.1	8.7	0.41	0.24	5.1	7
FP07 - HRUA Canoe	MK-FP-116-0.0/0.5	0	0.46	5.3	3.3	4.1	0.12	0.11	2.2	4.3
FP07 - HRUA Canoe	MK-FP-117-0.0/0.5	0	1.1	13	12	9.9	0.29	0	3.6	9.6
FP07 - HRUA M. Flats	MK-FP-118-0.0/0.5	0.12	0.58	3.5	3.6	6.7	0.18	0.097	2.7	6
FP07 - HRUA M. Flats	MK-FP-119-0.0/0.5	0.1	0.51	2.6	3	6.3	0.16	0.11	2.5	4.6
FP07 - HRUA M. Flats	MK-FP-120-0.0/0.5	0.17	0.76	3.8	4	8.6	0.2	0.13	3.4	6.9
FP07 - HRUA M. Flats	MK-FP-121-0.0/0.5	0.079	0.75	2.8	2.9	8	0.22	0.073	3.2	5.6
FP07 - HRUA Ravine	MK-FP-108-0.0/0.5	0	0.36	1.1	1.2	2.7	0.072	0.049	0.97	2.1
FP07 - HRUA Ravine	MK-FP-109-0.0/0.5	0.044	0.25	1	0.98	2.5	0.09	0.082	1.1	2.1
FP07 - HRUA Ravine	MK-FP-110-0.0/0.5	0.081	0.45	1.9	1.8	5.4	0.12	0.083	2	4.2
FP07 - HRUA Ravine	MK-FP-111-0.0/0.5	0.12	0.58	1.9	1.7	5.7	0.15	0.14	2	4.1
FP07 - HRUA Ravine	MK-FP-112-0.0/0.5	0.38	4.1	6.6	5.9	25	0.59	0.4	9	19
FP08/09	MK-FP-124-0.0/0.5	0	2	3.3	2.8	15	0.71	0.17	8.8	9.4
FP08/09	MK-FP-127-0.0/0.5	0	0.68	1.4	1.3	3.7	0.22	0.052	2.3	2.7

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP08/09	MK-FP-128-0.0/0.5	0.035	0.16	0.62	0.62	1.6	0.037	0.21	0.69	1.2
FP08/09	MK-FP-131-0.0/0.5	0.021	0.12	0.44	0.45	1.3	0.037	0.11	0.54	0.95
FP08/09	MK-FP-20-0.0./0.5	0.126	0.428	0	2.55	5.29	0.166	0.0205	2.2	4.29
FP08/09	MK-FP-21-0.0/0.5	0.402	1.26	2.4	2.8	7.12	0.366	0.127	3.45	4.2
FP08/09	MK-FP-22-0.0./0.5	0	0.924	0	2.75	6.77	0.23	0	3.41	4.8
FP08/09	MK-FP-23-0.0/0.5	0	0.544	0	1.98	5.29	0.122	0	2.2	4.14
FP08/09	MK-FP-24-0.0./0.5	0	0.339	0	0.822	3.06	0	0	1.32	2.59
FP08/09	MK-FP-25-0.0/0.5	0.327	0.822	1.56	1.86	4.25	0.189	0.0324	1.69	3.61
FP08/09	MK-FP-26-0.0./0.5	0	0.383	0	0.938	2.67	0	0	1.21	2.08
FP08/09	MK-FP-28-0.0./0.5	0.0514	0.294	0	1.07	2.1	0.0668	0.0538	0.976	1.6
FP08/09	MK-FP-31-0.0/0.5	0	0.153	0	0.273	0.893	0.042	0.112	0.552	0.75
FP08/09	MK-FP-33-0.0/1.0	0.0107	0.0636	0	0.214	0.528	0.0167	0.047	0.251	0.411
FP08/09	MK-FP-68-0.0/0.5	0	0.23	0.96	1.1	2.7	0.062	0	0.98	2
FP08/09	MK-FP-69A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-69B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-69C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-70-0.0/0.5	0.1	0.42	1.9	2	5.2	0.12	0.079	1.9	3.8
FP08/09	MK-FP-71-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-81-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-82-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-83-0.0/0.5	0	0	0	0	0	0	0	0	0
FP08/09	MK-FP-84-0.0/0.5	0	0	0	0	0	0	0	0	0

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP08/09	MK-FP-85-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-126-0.0/0.5	0	0.19	0.79	0.8	2.1	0.079	0	1.2	1.9
FP10	MK-FP-129-0.0/0.5	0	0.24	1.2	1.2	2.7	0.086	0.073	1.2	2.1
FP10	MK-FP-130-0.0/0.5	0.083	0.32	1.7	1.6	4.2	0.096	0.098	1.7	3.3
FP10	MK-FP-132-0.0/0.5	0	0.34	0.77	0.44	2.7	0.093	0.12	1.3	2.6
FP10	MK-FP-133-0.0/0.5	0.058	0.31	1.4	1.5	4.3	0.082	0.039	1.5	3.1
FP10	MK-FP-27-0.0/0.5	0.0325	0.277	0	0.455	2.02	0.07	0	1.02	1.68
FP10	MK-FP-29-0.0/0.5	0.12	0.301	0.655	0.769	1.99	0.0599	0.0147	0.765	1
FP10	MK-FP-30-0.0./0.5	0.0787	0.327	0	1.33	3.4	0.104	0.013	1.31	2.66
FP10	MK-FP-30A-0.0./0.5	0.0608	0.31	0	1.17	2.71	0.0719	0.0108	1.05	2.24
FP10	MK-FP-32-0.0./0.5	0	0.279	0	1.12	2.62	0.0671	0	1.11	1.88
FP10	MK-FP-34-0.0./0.5	0.24	0.589	1.19	1.52	3.23	0.116	0.0325	1.25	2.77
FP10	MK-FP-72-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-73-0.0/0.5	0.097	0.3	1.8	1.9	3.6	0.075	0.12	1.2	2.8
FP10	MK-FP-74-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-75A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-75B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP10	MK-FP-75C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-47-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-48-0.0/0.5	0.14	0.71	2.1	2	6.7	0.31	0.14	4	5.2
FP11	MK-FP-49-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-50-0.0/0.5	0.087	0.82	1.8	1.8	6.2	0.27	0.088	2.8	4.4

Floodplain ID	Sample ID	Acenaphthylene	Anthracene	Benzo(e) pyrene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
FP11	MK-FP-51A-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-51B-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-51C-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-52-0.0/0.5	0	0	0	0	0	0	0	0	0
FP11	MK-FP-89-0.0/0.5	0.086	0.55	1.6	1.7	5.5	0.12	0.066	2	3.7
FP11	MK-FP-90-0.0/0.5	0	0.52	1.2	1.1	3.8	0.14	0.042	1.9	2.8
FP11	MK-FP-91-0.0/0.5	0.062	0.31	1.1	1.2	2.8	0.079	0.051	1.1	2
FP11	MK-FP-92-0.0/0.5	0.058	0.25	0.92	1.1	2.3	0	0.047	0.85	1.8
FP11	MK-FP-93-0.0/0.5	0	0.19	0.6	0.63	1.7	0	0.076	0.67	1.3
FP11	MK-FP-97-0.0/0.5	0	0.13	0.53	0.52	1.7	0.043	0.035	0.68	1.5
FP11 - HRUA 1	MK-FP-94-0.0/0.5	0.12	1.8	4.1	3.8	13	0.6	0.18	6.2	10
FP11 - HRUA 1	MK-FP-95-0.0/0.5	0.14	0.37	1.8	1.9	4.1	0.096	0.073	1.6	3.2
FP11 - HRUA 1	MK-FP-96-0.0/0.5	0	0.66	1.6	1.7	5.3	0.15	0.068	2	3.5
FP11 - HRUA 2	MK-FP-98-0.0/0.5	0.19	0.87	2.6	3	6.4	0.2	0.16	2.8	4.3
FP11 - HRUA 2	MK-FP-99-0.0/0.5	0.015	0.068	0.29	0.3	0.83	0.014	0.016	0.28	0.57
FP11 - HRUA 2	MK-FP-100-0.0/0.5	0.17	0.69	2.9	3	8	0.21	0.1	3.3	6.1
FP11 - HRUA 3	MK-FP-103-0.0/0.5	0.058	0.65	1.9	1.9	5.7	0.22	0.079	2.9	4.1
FP11 - HRUA 3	MK-FP-104-0.0/0.5	0	0.24	1	1.1	2.6	0.091	0.05	1.2	1.9
FP11 - HRUA 3	MK-FP-105-0.0/0.5	0	0.43	1.1	1.3	3.7	0.11	0.046	1.8	3

Table 1c. Floodplain Heavy Metal Levels (mg/kg)

Floodplain ID	Sample ID	Lead	Arsenic	Nickel	Cadmium	Chromium	Copper	Zinc	Mercury
FP01	MK-FP-01-0.0/0.5	24.5	2.4	5.8	0.22	13.9	12.9	59.7	0
FP01	MK-FP-02-0.0/0.5	40.3	3.2	8.8	0.5	19.9	19.8	88.7	0.096
FP01	MK-FP-35-0.0/0.5	73.6	3	15	1.3	39.9	40.7	179	0.13
FP01	MK-FP-36-0.0/0.5	76.4	3.5	14.9	1.5	37.9	40.7	164	1.2
FP01	MK-FP-86-0.0/0.5	56	4	0	0	0	0	0	0
FP02	MK-FP-03-0.0/0.5	85.3	6	19.9	1.3	44.3	58	233	0.21
FP02	MK-FP-04-0.0./0.5	87	5.1	20	1.7	43.5	48.3	222	0.2
FP02	MK-FP-37-0.0/0.5	54.1	7.4	15.8	0.81	74.3	23.8	142	0.098
FP02	MK-FP-38-0.0/0.5	49.2	2.9	13.5	0.97	28	28.9	135	0.091
FP02	MK-FP-87-0.0/0.5	231	10	0	0	0	0	0	0
FP03	MK-FP-05-0.0./0.5	77.6	4.4	14.5	1.8	66.6	37.8	144	0.14
FP03	MK-FP-06-0.0/0.5	68.3	3.3	10.8	0.74	29.3	26.7	131	0.079
FP03	MK-FP-39-0.0/0.5	89.8	5.8	19.6	1.2	39.4	37.3	151	0.1
FP03	MK-FP-40A-0.0/0.5	69.8	5.9	22.2	0.99	36.4	54.9	339	0.055
FP03	MK-FP-40B-0.0/0.5	67.2	6	17.9	1	34.3	37.7	340	0.054
FP03	MK-FP-40C-0.0/0.5	49.9	5.9	19.1	0.45	20.1	23.9	103	0.018
FP03	MK-FP-41-0.0/0.5	54.8	6.9	18.6	0.59	26.7	32.7	111	0.042
FP03	MK-FP-88-0.0/0.5	96	5	0	0	0	0	0	0
FP04	MK-FP-07-0.0/0.5	77.1	3.6	14.4	1.4	36.7	63.7	190	0.15
FP04	MK-FP-08-0.0/0.5	88.5	4.6	17.4	1.9	39.8	64.7	223	0.17
FP04	MK-FP-09-0.0./0.5	109	5.7	20.4	2.7	45	82.1	273	0.17
FP04	MK-FP-42-0.0/0.5	85.3	8.4	20.1	0.68	19.2	37.6	133	0.097
FP04	MK-FP-43-0.0/0.5	29.1	9.7	43.8	0.44	39.7	38	146	0.054
FP04	MK-FP-44-0.0/0.5	85.5	6.5	19.5	1.3	44.3	43.5	147	0.12
FP04	MK-FP-45-0.0/0.5	117	7.5	21.4	0.9	23.7	50.6	130	0.097
FP04	MK-FP-46-0.0/0.5	180	6.6	18.3	1.1	27.2	54.3	138	0.11
FP05	MK-FP-10-0.0./0.5	125	5.8	17.8	2.9	49	243	663	0.33
FP05	MK-FP-101-0.0/0.5	675	5	0	0	0	0	0	0
FP05	MK-FP-102-0.0/1.0	127	4	0	0	0	0	0	0
FP05	MK-FP-11-0.0/0.5	101	3.7	14.5	1.7	38.1	38.5	192	0.18
FP05	MK-FP-53-0.0/0.5	106	3.4	17.8	2.1	41.8	41.2	205	0.16

Floodplain ID	Sample ID	Lead	Arsenic	Nickel	Cadmium	Chromium	Copper	Zinc	Mercury
FP05	MK-FP-54-0.0/0.5	183	7.1	19.7	1.1	28.2	39.5	155	0.21
FP05	MK-FP-55-0.0/0.5	277	6	24.6	2.9	73.3	70.2	272	0.28
FP05	MK-FP-56-0.0/0.5	172	4.3	25	3.4	97.2	64.2	251	0.28
FP06	MK-FP-106-0.0/0.5	318	7	0	0	0	0	0	0
FP06	MK-FP-107-0.0/0.5	357	6	0	0	0	0	0	0
FP06	MK-FP-12-0.0./0.5	170	4.1	18.2	1.4	51.2	53.9	206	0.24
FP06	MK-FP-13-0.0/0.5	430	6.7	40.5	5	186	118	471	0.58
FP06	MK-FP-14-0.0/0.5	171	6	23	3.4	86.1	66	272	0.36
FP06	MK-FP-57-0.0/0.5	177	5.1	22.4	2.9	64.5	70.7	322	0.33
FP06	MK-FP-58-0.0/0.5	491	5.5	26.6	4.4	85.6	89.9	359	0.35
FP06	MK-FP-59-0.0/0.5	216	3.4	18.1	1.6	42.5	44.1	186	0.27
FP06	MK-FP-60-0.0/0.5	350	4.6	27.2	4.4	90.1	87.7	359	0.42
FP06	MK-FP-61-0.0/0.5	163	6.2	22.7	3	72.1	71.7	286	0.26
FP06	MK-FP-76-0.0/0.5	174	4.9	21.7	3.3	62.7	57.7	286	0.26
FP06	MK-FP-77-0.0/0.5	155	4.5	14.8	1.6	39.8	42.8	172	0.2
FP06	MK-FP-78-0.0/0.5	213	5.8	19	2.6	48.7	45.2	226	0.21
FP06	MK-FP-79-0.0/0.5	211	4.7	30.9	3.4	93.8	68.1	301	0.3
FP06	MK-FP-80-0.0/0.5	489	7.4	41.3	9.3	175	124	473	0.35
FP07	MK-FP-113-0.0/0.5	90	4	0	0	0	0	0	0
FP07	MK-FP-114-0.0/0.5	90	5	0	0	0	0	0	0
FP07	MK-FP-115-0.0/0.5	122	4	0	0	0	0	0	0
FP07	MK-FP-122-0.0/0.5	239	5	0	0	0	0	0	0
FP07	MK-FP-123-0.0/0.5	183	5	0	0	0	0	0	0
FP07	MK-FP-125-0.0/0.5	335	6	0	0	0	0	0	0
FP07	MK-FP-15-0.0./0.5	133	5.1	18.5	2.3	72.5	65.3	212	0.25
FP07	MK-FP-16-0.0/0.5	96.5	4.5	17.3	0.96	35.6	43.6	177	0.18
FP07	MK-FP-17-0.0./0.5	169	5.7	22.9	2.2	74.4	60.1	261	0.54
FP07	MK-FP-18-0.0/0.5	244	7.8	29.8	4.4	134	90.1	360	0.47
FP07	MK-FP-19-0.0/0.5	255	6.7	27.7	3.8	98.1	90.8	351	1
FP07	MK-FP-62-0.0/0.5	152	2.7	18.3	2.2	47.5	56.3	271	0.25
FP07 - HRUA Ravine	MK-FP-63-0.0/0.5	371	8.5	38.4	6.5	145	98.9	422	0.34
FP07	MK-FP-64-0.0/0.5	266	8.5	29.7	6.9	103	81.3	467	0.079

Floodplain ID	Sample ID	Lead	Arsenic	Nickel	Cadmium	Chromium	Copper	Zinc	Mercury
FP07	MK-FP-65-0.0/0.5	244	4.3	26.7	4.4	96.8	79.7	325	0.3
FP07	MK-FP-66-0.0/0.5	281	5.6	28.1	4.7	109	91.1	351	0.48
FP07	MK-FP-67-0.0/0.5	523	8.2	24.6	3.2	79.3	117	328	0.52
FP07 - HRUA Canoe	MK-FP-116-0.0/0.5	123	7	0	0	0	0	0	0
FP07 - HRUA Canoe	MK-FP-117-0.0/0.5	273	5	0	0	0	0	0	0
FP07 - HRUA M. Flats	MK-FP-118-0.0/0.5	356	10	0	0	0	0	0	0
FP07 - HRUA M. Flats	MK-FP-119-0.0/0.5	394	9	0	0	0	0	0	0
FP07 - HRUA M. Flats	MK-FP-120-0.0/0.5	313	8	0	0	0	0	0	0
FP07 - HRUA M. Flats	MK-FP-121-0.0/0.5	345	9	0	0	0	0	0	0
FP07 - HRUA Ravine	MK-FP-108-0.0/0.5	83	4	0	0	0	0	0	0
FP07 - HRUA Ravine	MK-FP-109-0.0/0.5	115	5	0	0	0	0	0	0
FP07 - HRUA Ravine	MK-FP-110-0.0/0.5	243	6	0	0	0	0	0	0
FP07 - HRUA Ravine	MK-FP-111-0.0/0.5	63	6	0	0	0	0	0	0
FP07 - HRUA Ravine	MK-FP-112-0.0/0.5	92	5	0	0	0	0	0	0
FP08/09	MK-FP-124-0.0/0.5	230	6	0	0	0	0	0	0
FP08/09	MK-FP-127-0.0/0.5	122	4	0	0	0	0	0	0
FP08/09	MK-FP-128-0.0/0.5	82	9	0	0	0	0	0	0
FP08/09	MK-FP-131-0.0/0.5	99	5	0	0	0	0	0	0
FP08/09	MK-FP-20-0.0./0.5	264	7.1	29.2	4.4	129	92.4	357	0.48
FP08/09	MK-FP-21-0.0/0.5	228	6.6	22.3	3.2	78.7	80.5	287	0.34
FP08/09	MK-FP-22-0.0./0.5	234	7.7	28.6	4.4	106	76.3	360	0.39
FP08/09	MK-FP-23-0.0/0.5	210	7.8	27.6	3.5	87	65.1	276	0.32
FP08/09	MK-FP-24-0.0./0.5	85.7	6.3	23.5	1.1	44.6	38.8	137	0.2
FP08/09	MK-FP-25-0.0/0.5	149	5.1	21.5	2.7	75.7	53.5	199	0.26
FP08/09	MK-FP-26-0.0./0.5	135	5.2	22.5	2.2	69.1	51.3	209	0.25
FP08/09	MK-FP-28-0.0./0.5	107	4.5	14.6	1.5	46.8	37.4	145	0.19
FP08/09	MK-FP-31-0.0/0.5	57.4	5.7	16.4	0.64	24	38.1	124	0.19
FP08/09	MK-FP-33-0.0/1.0	78.7	5.8	16.7	0.88	33.5	64.9	158	0.16
FP08/09	MK-FP-68-0.0/0.5	98.3	3.1	16.4	1.5	36.6	40.7	166	0.16
FP08/09	MK-FP-69A-0.0/0.5	241	7.7	29	4.4	78.8	81	394	0.32
FP08/09	MK-FP-69B-0.0/0.5	166	3.4	10.9	3.1	17.4	110	2030	0.2
FP08/09	MK-FP-69C-0.0/0.5	213	3.1	17.1	0.94	22.5	131	420	0.45

Floodplain ID	Sample ID	Lead	Arsenic	Nickel	Cadmium	Chromium	Copper	Zinc	Mercury
FP08/09	MK-FP-70-0.0/0.5	360	9	32.1	6.2	119	94.2	393	0.35
FP08/09	MK-FP-71-0.0/0.5	253	5.5	23.2	3.5	81.8	82.5	337	0.34
FP08/09	MK-FP-81-0.0/0.5	83.1	5.9	15.6	1.5	39.2	32	168	0.24
FP08/09	MK-FP-82-0.0/0.5	293	8.6	32.6	5.6	127	90.3	387	0.36
FP08/09	MK-FP-83-0.0/0.5	214	4.7	23.1	3	88	70.8	293	0.35
FP08/09	MK-FP-84-0.0/0.5	191	6.4	28.4	3.2	91.8	64.3	254	0.33
FP08/09	MK-FP-85-0.0/0.5	254	6.6	27.9	4.1	100	83.5	318	0.32
FP10	MK-FP-126-0.0/0.5	150	4	0	0	0	0	0	0
FP10	MK-FP-129-0.0/0.5	77	4	0	0	0	0	0	0
FP10	MK-FP-130-0.0/0.5	329	7	0	0	0	0	0	0
FP10	MK-FP-132-0.0/0.5	95	5	0	0	0	0	0	0
FP10	MK-FP-133-0.0/0.5	274	6	0	0	0	0	0	0
FP10	MK-FP-27-0.0/0.5	64.9	4.4	15.1	0.77	34.3	33.3	188	0.17
FP10	MK-FP-29-0.0/0.5	246	8.1	26.1	4.5	99.4	74.5	329	0.5
FP10	MK-FP-30-0.0./0.5	179	7	21.2	3.2	77.3	60.9	289	0.39
FP10	MK-FP-30A-0.0./0.5	34.1	5.7	19.6	0.66	27.8	25.5	86.5	0.28
FP10	MK-FP-32-0.0./0.5	135	6.9	23	1.9	77.9	55.2	254	0.32
FP10	MK-FP-34-0.0./0.5	198	6.9	22.3	3.2	88.8	66.2	253	0.45
FP10	MK-FP-72-0.0/0.5	105	3.5	16.8	1.6	50.2	45.7	197	0.19
FP10	MK-FP-73-0.0/0.5	173	4.4	25.3	3.4	92.8	69	289	0.31
FP10	MK-FP-74-0.0/0.5	257	7.7	30.6	5.9	99.4	73	369	0.27
FP10	MK-FP-75A-0.0/0.5	81.6	4	18	1.3	46.5	37.8	147	0.18
FP10	MK-FP-75B-0.0/0.5	126	3.2	20.7	2	63.6	45.8	197	0.17
FP10	MK-FP-75C-0.0/0.5	208	7.1	25.2	4.3	81.5	56.8	290	0.2
FP11	MK-FP-47-0.0/0.5	641	2.1	11.4	2	36.9	54.5	184	0.19
FP11	MK-FP-48-0.0/0.5	109	4.5	14.2	1.7	30.4	49.4	168	0.11
FP11	MK-FP-49-0.0/0.5	70.5	3.6	11.2	0.78	20	26.4	101	0.072
FP11	MK-FP-50-0.0/0.5	262	6	21.5	4.1	62.9	80.4	329	0.39
FP11	MK-FP-51A-0.0/0.5	126	7.8	18	0.94	47.4	34	115	0.11
FP11	MK-FP-51B-0.0/0.5	424	6.1	15.7	0.7	15.6	37.6	175	0.3
FP11	MK-FP-51C-0.0/0.5	27.9	3.9	22.5	0.27	25.9	24	74.9	0.044
FP11	MK-FP-52-0.0/0.5	167	6.2	22.8	3.8	59.7	54.5	261	0.27

Floodplain ID	Sample ID	Lead	Arsenic	Nickel	Cadmium	Chromium	Copper	Zinc	Mercury
FP11	MK-FP-89-0.0/0.5	241	6	0	0	0	0	0	0
FP11	MK-FP-90-0.0/0.5	195	6	0	0	0	0	0	0
FP11	MK-FP-91-0.0/0.5	172	3	0	0	0	0	0	0
FP11	MK-FP-92-0.0/0.5	155	4	0	0	0	0	0	0
FP11	MK-FP-93-0.0/0.5	177	6	0	0	0	0	0	0
FP11	MK-FP-97-0.0/0.5	74	5	0	0	0	0	0	0
FP11 - HRUA 1	MK-FP-94-0.0/0.5	211	6	0	0	0	0	0	0
FP11 - HRUA 1	MK-FP-95-0.0/0.5	175	6	0	0	0	0	0	0
FP11 - HRUA 1	MK-FP-96-0.0/0.5	147	9	0	0	0	0	0	0
FP11 - HRUA 2	MK-FP-98-0.0/0.5	288	6	0	0	0	0	0	0
FP11 - HRUA 2	MK-FP-99-0.0/0.5	66	6	0	0	0	0	0	0
FP11 - HRUA 2	MK-FP-100-0.0/0.5	475	8	0	0	0	0	0	0
FP11 - HRUA 3	MK-FP-103-0.0/0.5	267	3	0	0	0	0	0	0
FP11 - HRUA 3	MK-FP-104-0.0/0.5	63	4	0	0	0	0	0	0
FP11 - HRUA 3	MK-FP-105-0.0/0.5	173	5	0	0	0	0	0	0

Table 2. Exposure Point Concentrations

	FP1		FP2		FP3		FP4		FP5		FP6		FP7		FP8/9		FP10		FP11	
Contaminant	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**
PCBS	0.89	Max	1.2	Max	1.11	95% UCL	0.744	95% UCL	12.1	95% UCL	6.83	95% UCL	9.45	95% UCL	5.54	95% UCL	4.69	95% UCL	1.45	95% UCL
Aroclor 1260	0.097	Max	0.12	Max	0.13	Max	0.15	Max	0.284	95% UCL	0.375	95% UCL	0.562	95% UCL	0.389	95% UCL	0.302	95% UCL	0.180	95% UCL
Aroclor 1254	0.37	Max	0.5	Max	0.317	95% UCL	0.284	95% UCL	3.61	95% UCL	2.41	95% UCL	3.68	95% UCL	1.86	95% UCL	1.51	95% UCL	0.759	95% UCL
Aroclor 1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	0.574	Max	0.099	Max	0.67	Max	0.549	Max	3.8	Max	NA	NA	5.2	Max	0.94	Max	NA	NA	0.2	Max
Aroclor 1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	0.32	Max	0.6	Max	0.29	Max	0.409	Max	18.4	95% UCL	4.26	95% UCL	5.28	95% UCL	3.40	95% UCL	2.92	95% UCL	0.466	95% UCL
Benzo(a)anthracene	1.7	Max	16	Max	3.12	Max	2.83	Max	3.5	Max	3.35	95% UCL	3.56	95% UCL	2.35	95% UCL	1.47	95% UCL	2.61	95% UCL
Benzo(a)pyrene	1.8	Max	20	Max	3.62	Max	3.04	Max	3.1	Max	3.63	95% UCL	4.45	95% UCL	2.49	95% UCL	1.69	95% UCL	2.80	95% UCL
Benzo(b)fluoranthene	2.6	Max	27	Max	6.02	Max	4.06	Max	4.1	Max	6.36	95% UCL	5.79	95% UCL	3.93	95% UCL	2.50	95% UCL	3.87	95% UCL
Benzo(k)fluoranthene	0.954	Max	9.7	Max	1.8	Max	1.89	Max	1.6	Max	2.06	95% UCL	2.16	95% UCL	1.49	95% UCL	0.990	95% UCL	1.56	95% UCL
Chrysene	2	Max	22	Max	3.62	Max	3.1	Max	3.5	Max	3.98	95% UCL	4.88	95% UCL	2.97	95% UCL	1.81	95% UCL	3.07	95% UCL
Dibenz(a,h)anthracene	0.37	Max	3.2	Max	0.749	Max	0.601	Max	0.53	Max	0.843	95% UCL	0.896	95% UCL	0.478	95% UCL	0.368	95% UCL	0.536	95% UCL
Indeno(1,2,3-cd)pyrene	1.2	Max	12	Max	2.1	Max	1.67	Max	1.9	Max	2.64	95% UCL	2.61	95% UCL	1.76	95% UCL	1.23	95% UCL	1.80	95% UCL
2-Methyl-naphthalene	NA	NA	NA	NA	0.0132	Max	0.057	Max	0.069	Max	0.083	Max	0.0859	95% UCL	0.152	95% UCL	0.0398	95% UCL	0.11	Max
Acenaphthene	0.27	Max	1.2	Max	0.227	Max	0.212	Max	0.2	Max	0.233	95% UCL	0.198	95% UCL	0.310	95% UCL	0.0825	95% UCL	0.181	95% UCL
Acenaphthylene	0.073	Max	0.0115	Max	0.177	Max	0.251	Max	0.32	Max	0.922	95% UCL	0.120	95% UCL	0.742	95% UCL	0.288	95% UCL	0.134	95% UCL
Anthracene	0.49	Max	5.5	Max	0.691	Max	0.827	Max	1.5	Max	1.17	95% UCL	0.943	95% UCL	0.930	95% UCL	0.362	95% UCL	0.742	95% UCL
Benzo(e) pyrene	1.4	Max	13	Max	1	Max	1.52	Max	2.1	Max	3.9	Max	3.84	95% UCL	2.39	95% UCL	1.52	95% UCL	2.07	95% UCL
Benzo(g,h,i) perylene	1.5	Max	14	Max	2.17	Max	1.76	Max	2.2	Max	3.07	95% UCL	3.27	95% UCL	2.04	95% UCL	1.63	95% UCL	2.21	95% UCL

	FP1		FP2		FP3		FP4		FP5		FP6		FP7		FP8/9		FP10		FP11	
Contaminant	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**	**EPC mg/kg**	**EPC Type**
Fluoranthene	4.8	Max	46	Max	8.06	Max	6.66	Max	7.7	Max	7.80	95% UCL	7.36	95% UCL	6.86	95% UCL	3.42	95% UCL	6.18	95% UCL
Fluorene	0.23	Max	1.2	Max	0.294	Max	0.28	Max	0.33	Max	0.263	95% UCL	0.208	95% UCL	0.220	95% UCL	0.0923	95% UCL	0.220	95% UCL
Naphthalene	0.21	Max	NA	NA	0.066	Max	0.076	Max	0.12	Max	0.160	95% UCL	0.116	95% UCL	0.128	95% UCL	0.877	95% UCL	0.0984	95% UCL
Phenanthrene	2.5	Max	16	Max	2.83	Max	2.54	Max	4.2	Max	2.95	95% UCL	2.95	95% UCL	3.23	95% UCL	1.34	95% UCL	2.86	95% UCL
Pyrene	3.2	Max	33	Max	5.11	Max	4.46	Max	6.1	Max	5.77	95% UCL	5.82	95% UCL	4.19	95% UCL	2.68	95% UCL	4.55	95% UCL
Lead	76.4	Max	231	Max	83.0	95% UCL	132.5	95% UCL	344.2	95% UCL	334	95% UCL	257.892	95% UCL	204	95% UCL	204	95% UCL	257	95% UCL
Arsenic	4	Max	10	Max	6.15	95% UCL	7.9	95% UCL	5.88	95% UCL	5.97	95% UCL	6.66	95% UCL	6.56	95% UCL	6.32	95% UCL	5.92	95% UCL
Nickel	15	Max	20	Max	22.2	Max	27.4	95% UCL	25	Max	30.0	95% UCL	28.1	Max	25.0	95% UCL	24.4	95% UCL	20.7	95% UCL
Cadmium	1.5	Max	1.7	Max	1.8	Max	2.0	95% UCL	3.4	Max	4.71	95% UCL	5.05	95% UCL	3.49	95% UCL	3.81	95% UCL	4.05	95% UCL
Chromium	39.9	Max	74.3	Max	66.6	Max	41.0	95% UCL	97.2	Max	109	95% UCL	112.3699	95% UCL	83.7	95% UCL	86.1	95% UCL	54.5	95% UCL
Copper	40.7	Max	58	Max	54.9	Max	65.9	95% UCL	243	Max	86.6	95% UCL	91.14938	95% UCL	79.9	95% UCL	62.0	95% UCL	60.5	95% UCL
Zinc	179	Max	233	Max	340	Max	208.5	95% UCL	663	Max	356	95% UCL	367.3424	95% UCL	519	95% UCL	292	95% UCL	253	95% UCL
Mercury	1.2	Max	0.21	Max	0.14	Max	0.2	95% UCL	0.33	Max	0.369	95% UCL	0.562325	95% UCL	0.326	95% UCL	0.353	95% UCL	0.296	95% UCL

Table 3a. Comparison Value Exceedances

Floodplain	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8/9**	**10**	**11**
Contaminant Name	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**	**≥ CV?**
PCBs	Yes [1]	Yes [1]	Yes [1]	Yes [1]	Yes [1]	Yes [1]	Yes [1]	Yes [1]	Yes [1]	Yes [1]
Aroclor 1254	No	No	No	No		Yes [1, 2]	Yes [1, 2]	Yes [1, 2]	Yes [1, 2]	Yes [1, 2]
Aroclor 1016					No		No	Yes [1, 2]		
Benzo(a)pyrene	Yes [1]	Yes [1, 2]	Yes [1, 2]	Yes [1]	Yes [1]	Yes [1]	Yes [1, 2]	Yes [1]	Yes [1]	Yes [1]
Acenaphthene	No	No	No	No	No	No	No	No	No	No
Anthracene	No	No	No	No	No	No	No	No	No	No
Fluoranthene	No	No	No	No	No	No	No	No	No	No
Fluorene	No	No	No	No	No	No	No	No	No	No
Naphthalene	No			No	No	No	No	No	No	No
Pyrene	No	No	No	No	No	No	No	No	No	No
Arsenic	Yes [2]	Yes [2]	Yes [2]	Yes [2]	Yes [2]	Yes [2]	Yes [2]	Yes [2]	Yes [2]	Yes [2]
Nickel	No	No	No	No	No	No	No	No	No	No
Cadmium	No	No	No	No	No	Yes [1]	Yes [1]	Yes [1]	Yes [1]	No
Copper	No	No	No	No	No	No	No	No	No	No
Zinc	No	No	No	No	No	No	No	No	No	No

[1] Above or equal to ATSDR CV
[2] Above or equal to other CV
Empty cells were non-detects

Table 3b. ATSDR/Other Comparison Values and Non-Industrial Residual Contaminant Levels

Contaminant Name	**CV (mg/kg)**	**RCL (mg/kg)**
PCBs	0.19	0.234
Aroclor 1254	1.0	0.239
Aroclor 1016	3.6	4.11
Benzo(a)pyrene	0.65	0.115
Acenaphthene	3100	3590
Anthracene	16000	NA
Fluoranthene	2100	2390

Fluorene	2100	2390
Naphthalene	1000	5.52
Pyrene	1600	1790
Arsenic	0.26	0.677
Nickel	1000	1550
Cadmium	5.2	71.1
Copper	1000	3130
Zinc	16000	23500

Table 4. Acute Exposure to PCBs

		FP1		FP2		FP3		FP4		FP5		FP6		FP7		FP8/9		FP10		FP11	
Contaminant Name	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Aroclor 1221	Birth to < 1 year													6.80 E-06	1.80 E-05	5.60 E-06	1.10 E-05				
	1 to < 2 years													6.80 E-06	1.60 E-05	5.60 E-06	9.70 E-06				
	2 to < 6 years													3.80 E-06	1.10 E-05	3.20 E-06	6.50 E-06				
	6 to < 11 years													2.70 E-06	6.60 E-06	2.20 E-06	4.00 E-06				
	11 to < 16 years													1.60 E-06	3.00 E-06	1.30 E-06	1.90 E-06				
	16 to < 21 years													1.40 E-06	2.60 E-06	1.20 E-06	1.60 E-06				
	Adult													5.60 E-07	1.40 E-06	4.60 E-07	8.30 E-07				
Aroclor 1232	Birth to < 1 year													6.80 E-06	6.20 E-05	5.60 E-06	1.10 E-05	3.90 E-05	7.50 E-05		
	1 to < 2 years													6.80 E-06	5.60 E-05	5.60 E-06	9.70 E-06	3.90 E-05	6.80 E-05		
	2 to < 6 years													3.80 E-06	3.80 E-05	3.20 E-06	6.50 E-06	2.20 E-05	4.60 E-05		
	6 to < 11 years													2.70 E-06	2.30 E-05	2.20 E-06	4.00 E-06	1.50 E-05	2.80 E-05		
	11 to < 16 years													1.60 E-06	1.10 E-05	1.30 E-06	1.90 E-06	9.40 E-06	1.30 E-05		
	16 to < 21 years													1.40 E-06	9.10 E-06	1.20 E-06	1.60 E-06	8.20 E-06	1.10 E-05		
	Adult													5.60 E-07	4.80 E-06	4.60 E-07	8.30 E-07	3.20 E-06	5.80 E-06		
Aroclor 1242	Birth to < 1 year	4.30 E-06	8.20 E-06	8.00 E-06	1.50 E-05	3.90 E-06	7.40 E-06	5.50 E-06	1.00 E-05	5.50 E-06	1.00 E-05	5.70 E-05	0.00 011	7.10 E-05	1.10 E-05	4.60 E-05	8.70 E-05			6.30 E-06	1.20 E-05
	1 to < 2 years	4.30 E-06	7.40 E-06	8.10 E-06	1.40 E-05	3.90 E-06	6.70 E-06	5.50 E-06	9.50 E-06	5.50 E-06	9.50 E-06	5.80 E-05	9.90 E-05	7.10 E-05	9.70 E-06	4.60 E-05	7.90 E-05			6.30 E-06	1.10 E-05
	2 to < 6 years	2.40 E-06	5.00 E-06	4.60 E-06	9.40 E-06	2.20 E-06	4.50 E-06	3.10 E-06	6.40 E-06	3.10 E-06	6.40 E-06	3.20 E-05	6.70 E-05	4.00 E-05	6.50 E-06	2.60 E-05	5.30 E-05			3.60 E-06	7.30 E-06
	6 to < 11 years	1.70 E-06	3.10 E-06	3.20 E-06	5.80 E-06	1.50 E-06	2.80 E-06	2.10 E-06	3.90 E-06	2.10 E-06	3.90 E-06	2.20 E-05	4.10 E-05	2.80 E-05	4.00 E-06	1.80 E-05	3.30 E-05			2.40 E-06	4.50 E-06

Contaminant Name	Exposure Group	FP1		FP2		FP3		FP4		FP5		FP6		FP7		FP8/9		FP10		FP11	
		Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Aroclor 1242	11 to < 16 years	1.00E-06	1.40E-06	1.90E-06	2.70E-06	9.30E-07	1.30E-06	1.30E-06	1.80E-06	1.30E-06	1.80E-06	1.40E-05	1.90E-05	1.70E-05	1.90E-06	1.10E-05	1.50E-05			1.50E-06	2.10E-06
	16 to < 21 years	9.00E-07	1.20E-06	1.70E-06	2.30E-06	8.10E-07	1.10E-06	1.10E-06	1.50E-06	1.10E-06	1.50E-06	1.20E-05	1.60E-05	1.50E-05	1.60E-06	9.50E-06	1.30E-05			1.30E-06	1.80E-06
	Adult	3.60E-07	6.40E-07	6.70E-07	1.20E-06	3.20E-07	5.80E-07	4.60E-07	8.10E-07	4.60E-07	8.10E-07	4.70E-06	8.50E-06	5.90E-06	8.30E-07	3.80E-06	6.80E-06			5.20E-07	9.30E-07
Aroclor 1248	Birth to < 1 year	7.70E-06	1.50E-05	1.30E-06	2.50E-06	9.00E-06	1.70E-05	7.40E-06	1.40E-05	7.40E-06	1.40E-05	9.20E-06	1.80E-05	7.00E-05	1.30E-05	5.20E-06	1.00E-05			2.70E-06	5.10E-06
	1 to < 2 years	7.80E-06	1.30E-05	1.30E-06	2.30E-06	9.10E-06	1.60E-05	7.40E-06	1.30E-05	7.40E-06	1.30E-05	9.30E-06	1.60E-05	7.00E-05	1.20E-05	5.30E-06	9.00E-06			2.70E-06	4.60E-06
	2 to < 6 years	4.40E-06	9.00E-06	7.50E-07	1.60E-06	5.10E-06	1.00E-05	4.20E-06	8.60E-06	4.20E-06	8.60E-06	5.20E-06	1.10E-05	4.00E-05	7.90E-06	3.00E-06	6.10E-06			1.50E-06	3.10E-06
	6 to < 11 years	3.00E-06	5.50E-06	5.20E-07	9.60E-07	3.50E-06	6.50E-06	2.90E-06	5.30E-06	2.90E-06	5.30E-06	3.60E-06	6.60E-06	2.70E-05	4.90E-06	2.00E-06	3.80E-06			1.10E-06	1.90E-06
	11 to < 16 years	1.80E-06	2.60E-06	3.20E-07	4.40E-07	2.20E-06	3.00E-06	1.80E-06	2.40E-06	1.80E-06	2.40E-06	2.20E-06	3.00E-06	1.70E-05	2.20E-06	1.30E-06	1.70E-06			6.40E-07	8.90E-07
	16 to < 21 years	1.60E-06	2.20E-06	2.80E-07	3.70E-07	1.90E-06	2.50E-06	1.50E-06	2.10E-06	1.50E-06	2.10E-06	1.90E-06	2.60E-06	1.50E-05	1.90E-06	1.10E-06	1.50E-06			5.60E-07	7.60E-07
	Adult	6.40E-07	1.10E-06	1.10E-07	2.00E-07	7.50E-07	1.30E-06	6.10E-07	1.10E-06	6.10E-07	1.10E-06	7.60E-07	1.40E-06	5.80E-06	1.00E-06	4.30E-07	7.70E-07			2.20E-07	4.00E-07
Aroclor 1254	Birth to < 1 year											3.20E-05	6.20E-05	4.90E-05	1.30E-05	2.50E-05	4.80E-05	2.00E-05	3.90E-05	1.00E-05	1.90E-05
	1 to < 2 years											3.30E-05	5.60E-05	5.00E-05	1.20E-05	2.50E-05	4.30E-05	2.00E-05	3.50E-05	1.00E-05	1.80E-05
	2 to < 6 years											1.80E-05	3.80E-05	2.80E-05	7.90E-06	1.40E-05	2.90E-05	1.10E-05	2.40E-05	5.80E-06	1.20E-05
	6 to < 11 years											1.30E-05	2.30E-05	1.90E-05	4.90E-06	9.80E-06	1.80E-05	7.90E-06	1.50E-05	4.00E-06	7.30E-06
	11 to < 16 years											7.70E-06	1.10E-05	1.20E-05	2.20E-06	6.00E-06	8.30E-06	4.80E-06	6.70E-06	2.40E-06	3.40E-06
	16 to < 21 years											6.70E-06	9.10E-06	1.00E-05	1.90E-06	5.20E-06	7.00E-06	4.20E-06	5.70E-06	2.10E-06	2.90E-06
	Adult											2.70E-06	4.80E-06	4.10E-06	1.00E-06	2.10E-06	3.70E-06	1.70E-06	3.00E-06	8.50E-07	1.50E-06
Aroclor 1260	Birth to < 1 year	1.30E-06	2.50E-06	1.60E-06	3.10E-06	1.70E-06	3.30E-06	2.00E-06	3.80E-06	2.00E-06	3.80E-06	5.00E-06	9.60E-06	7.50E-06	1.40E-05	1.30E-05	2.40E-05	4.10E-06	7.70E-06	2.40E-06	4.60E-06
	1 to < 2 years	1.30E-06	2.20E-06	1.60E-06	2.80E-06	1.80E-06	3.00E-06	2.00E-06	3.50E-06	2.00E-06	3.50E-06	5.10E-06	8.70E-06	7.60E-06	1.30E-05	1.30E-05	2.20E-05	4.10E-06	7.00E-06	2.40E-06	4.20E-06

		FP1		FP2		FP3		FP4		FP5		FP6		FP7		FP8/9		FP10		FP11	
Contaminant Name	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Aroclor 1260	2 to < 6 years	7.40 E-07	1.50 E-06	9.10 E-07	1.90 E-06	9.90 E-07	2.00 E-06	1.10 E-06	2.30 E-06	1.10 E-06	2.30 E-06	2.90 E-06	5.90 E-06	4.30 E-06	8.80 E-06	7.20 E-06	1.50 E-05	2.30 E-06	4.70 E-06	1.40 E-06	2.80 E-06
	6 to < 11 years	5.10 E-07	9.40 E-07	6.30 E-07	1.20 E-06	6.80 E-07	1.30 E-06	7.90 E-07	1.40 E-06	7.90 E-07	1.40 E-06	2.00 E-06	3.60 E-06	3.00 E-06	5.40 E-06	4.90 E-06	9.10 E-06	1.60 E-06	2.90 E-06	9.50 E-07	1.70 E-06
	11 to < 16 years	3.10 E-07	4.30 E-07	3.90 E-07	5.30 E-07	4.20 E-07	5.80 E-07	4.80 E-07	6.70 E-07	4.80 E-07	6.70 E-07	1.20 E-06	1.70 E-06	1.80 E-06	2.50 E-06	3.00 E-06	4.20 E-06	9.70 E-07	1.30 E-06	5.80 E-07	8.00 E-07
	16 to < 21 years	2.70 E-07	3.70 E-07	3.40 E-07	4.50 E-07	3.60 E-07	4.90 E-07	4.20 E-07	5.70 E-07	4.20 E-07	5.70 E-07	1.00 E-06	1.40 E-06	1.60 E-06	2.10 E-06	2.60 E-06	3.50 E-06	8.50 E-07	1.10 E-06	5.00 E-07	6.80 E-07
	Adult	1.10 E-07	1.90 E-07	1.30 E-07	2.40 E-07	1.40 E-07	2.60 E-07	1.70 E-07	3.00 E-07	1.70 E-07	3.00 E-07	4.20 E-07	7.50 E-07	6.30 E-07	1.10 E-06	1.00 E-06	1.90 E-06	3.40 E-07	6.00 E-07	2.00 E-07	3.60 E-07

Table 5a.Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 1

		Aroclor 1242				Aroclor 1248				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	1.80E-06	0.06	3.50E-06	0.12	3.30E-06	0.11	6.30E-06	0.21	5.60E-07	0.02	1.10E-06	0.04
	1 to < 2 years	1.90E-06	0.06	3.20E-06	0.11	3.30E-06	0.11	5.70E-06	0.19	5.60E-07	0.02	9.60E-07	0.03
	2 to < 6 years	1.00E-06	0.03	2.10E-06	0.07	1.90E-06	0.06	3.90E-06	0.13	3.20E-07	0.01	6.50E-07	0.02
	6 to < 11 years	7.20E-07	0.02	1.30E-06	0.04	1.30E-06	0.04	2.40E-06	0.08	2.20E-07	0.01	4.00E-07	0.01
	11 to < 16 years	4.40E-07	0.01	6.10E-07	0.02	7.90E-07	0.03	1.10E-06	0.04	1.30E-07	0.00	1.80E-07	0.01
	16 to < 21 years	3.80E-07	0.01	5.20E-07	0.02	6.90E-07	0.02	9.30E-07	0.03	1.20E-07	0.00	1.60E-07	0.01
	Adult	1.50E-07	0.01	2.70E-07	0.01	2.70E-07	0.01	4.90E-07	0.02	4.60E-08	0.00	8.30E-08	0.00
Chronic	Birth to < 1 year	1.20E-06	0.06	2.40E-06	0.12	2.20E-06	0.11	4.20E-06	0.21	3.70E-07	0.02	7.10E-07	0.04
	1 to < 2 years	1.20E-06	0.06	2.10E-06	0.11	2.20E-06	0.11	3.80E-06	0.19	3.80E-07	0.02	6.50E-07	0.03
	2 to < 6 years	7.00E-07	0.04	1.40E-06	0.07	1.30E-06	0.07	2.60E-06	0.13	2.10E-07	0.01	4.40E-07	0.02
	6 to < 11 years	4.80E-07	0.02	8.90E-07	0.04	8.70E-07	0.04	1.60E-06	0.08	1.50E-07	0.01	2.70E-07	0.01
	11 to < 16 years	3.00E-07	0.02	4.10E-07	0.02	5.30E-07	0.03	7.30E-07	0.04	9.00E-08	0.00	1.20E-07	0.01
	16 to < 21 years	2.60E-07	0.01	3.50E-07	0.02	4.60E-07	0.02	6.20E-07	0.03	7.80E-08	0.00	1.10E-07	0.01
	Adult	1.00E-07	0.01	1.80E-07	0.01	1.80E-07	0.01	3.30E-07	0.02	3.10E-08	0.00	5.50E-08	0.00

Table 5b. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 2

		Aroclor 1242				Aroclor 1248				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	3.40E-06	0.11	6.60E-06	0.22	5.70E-07	0.02	1.10E-06	0.04	6.90E-07	0.02	1.30E-06	0.04
	1 to < 2 years	3.50E-06	0.12	6.00E-06	0.20	5.70E-07	0.02	9.80E-07	0.03	7.00E-07	0.02	1.20E-06	0.04
	2 to < 6 years	2.00E-06	0.07	4.00E-06	0.13	3.20E-07	0.01	6.60E-07	0.02	3.90E-07	0.01	8.10E-07	0.03
	6 to < 11 years	1.40E-06	0.05	2.50E-06	0.08	2.20E-07	0.01	4.10E-07	0.01	2.70E-07	0.01	5.00E-07	0.02
	11 to < 16 years	8.30E-07	0.03	1.10E-06	0.04	1.40E-07	0.00	1.90E-07	0.01	1.70E-07	0.01	2.30E-07	0.01
	16 to < 21 years	7.20E-07	0.02	9.70E-07	0.03	1.20E-07	0.00	1.60E-07	0.01	1.40E-07	0.00	1.90E-07	0.01
	Adult	2.90E-07	0.01	5.10E-07	0.02	4.70E-08	0.00	8.40E-08	0.00	5.70E-08	0.00	1.00E-07	0.00
Chronic	Birth to < 1 year	2.30E-06	0.12	4.40E-06	0.22	3.80E-07	0.02	7.30E-07	0.04	4.60E-07	0.02	8.80E-07	0.04
	1 to < 2 years	2.30E-06	0.12	4.00E-06	0.20	3.90E-07	0.02	6.60E-07	0.03	4.70E-07	0.02	8.00E-07	0.04
	2 to < 6 years	1.30E-06	0.07	2.70E-06	0.14	2.20E-07	0.01	4.50E-07	0.02	2.60E-07	0.01	5.40E-07	0.03
	6 to < 11 years	9.10E-07	0.05	1.70E-06	0.09	1.50E-07	0.01	2.80E-07	0.01	1.80E-07	0.01	3.30E-07	0.02
	11 to < 16 years	5.60E-07	0.03	7.70E-07	0.04	9.20E-08	0.00	1.30E-07	0.01	1.10E-07	0.01	1.50E-07	0.01
	16 to < 21 years	4.80E-07	0.02	6.50E-07	0.03	8.00E-08	0.00	1.10E-07	0.01	9.70E-08	0.00	1.30E-07	0.01
	Adult	1.90E-07	0.01	3.40E-07	0.02	3.20E-08	0.00	5.70E-08	0.00	3.80E-08	0.00	6.90E-08	0.00

Table 5c. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 3

		Aroclor 1242				Aroclor 1248				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	1.70E-06	0.06	3.20E-06	0.11	3.90E-06	0.13	7.30E-06	0.24	7.50E-07	0.03	1.40E-06	0.05
	1 to < 2 years	1.70E-06	0.06	2.90E-06	0.10	3.90E-06	0.13	6.70E-06	0.22	7.50E-07	0.03	1.30E-06	0.04
	2 to < 6 years	9.50E-07	0.03	1.90E-06	0.06	2.20E-06	0.07	4.50E-06	0.15	4.20E-07	0.01	8.70E-07	0.03
	6 to < 11 years	6.50E-07	0.02	1.20E-06	0.04	1.50E-06	0.05	2.80E-06	0.09	2.90E-07	0.01	5.40E-07	0.02
	11 to < 16 years	4.00E-07	0.01	5.50E-07	0.02	9.20E-07	0.03	1.30E-06	0.04	1.80E-07	0.01	2.50E-07	0.01
	16 to < 21 years	3.50E-07	0.01	4.70E-07	0.02	8.00E-07	0.03	1.10E-06	0.04	1.60E-07	0.01	2.10E-07	0.01
	Adult	1.40E-07	0.00	2.50E-07	0.01	3.20E-07	0.01	5.70E-07	0.02	6.20E-08	0.00	1.10E-07	0.00
Chronic	Birth to < 1 year	1.10E-06	0.06	2.10E-06	0.11	2.60E-06	0.13	4.90E-06	0.25	5.00E-07	0.03	9.60E-07	0.05
	1 to < 2 years	1.10E-06	0.06	1.90E-06	0.10	2.60E-06	0.13	4.50E-06	0.23	5.10E-07	0.03	8.70E-07	0.04
	2 to < 6 years	6.40E-07	0.03	1.30E-06	0.07	1.50E-06	0.08	3.00E-06	0.15	2.80E-07	0.01	5.90E-07	0.03
	6 to < 11 years	4.40E-07	0.02	8.10E-07	0.04	1.00E-06	0.05	1.90E-06	0.10	2.00E-07	0.01	3.60E-07	0.02
	11 to < 16 years	2.70E-07	0.01	3.70E-07	0.02	6.20E-07	0.03	8.60E-07	0.04	1.20E-07	0.01	1.70E-07	0.01
	16 to < 21 years	2.30E-07	0.01	3.10E-07	0.02	5.40E-07	0.03	7.30E-07	0.04	1.00E-07	0.01	1.40E-07	0.01
	Adult	9.30E-08	0.00	1.70E-07	0.01	2.10E-07	0.01	3.80E-07	0.02	4.20E-08	0.00	7.40E-08	0.00

Table 5d. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 4

		Aroclor 1242				Aroclor 1248				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	2.40E-06	0.08	4.50E-06	0.15	3.20E-06	0.11	6.00E-06	0.20	8.60E-07	0.03	1.60E-06	0.05
	1 to < 2 years	2.40E-06	0.08	4.10E-06	0.14	3.20E-06	0.11	5.50E-06	0.18	8.70E-07	0.03	1.50E-06	0.05
	2 to < 6 years	1.30E-06	0.04	2.70E-06	0.09	1.80E-06	0.06	3.70E-06	0.12	4.90E-07	0.02	1.00E-06	0.03
	6 to < 11 years	9.20E-07	0.03	1.70E-06	0.06	1.20E-06	0.04	2.30E-06	0.08	3.40E-07	0.01	6.20E-07	0.02
	11 to < 16 years	5.60E-07	0.02	7.80E-07	0.03	7.60E-07	0.03	1.00E-06	0.03	2.10E-07	0.01	2.90E-07	0.01
	16 to < 21 years	4.90E-07	0.02	6.60E-07	0.02	6.60E-07	0.02	8.90E-07	0.03	1.80E-07	0.01	2.40E-07	0.01
	Adult	2.00E-07	0.01	3.50E-07	0.01	2.60E-07	0.01	4.70E-07	0.02	7.20E-08	0.00	1.30E-07	0.00
Chronic	Birth to < 1 year	1.60E-06	0.08	3.00E-06	0.15	2.10E-06	0.11	4.00E-06	0.20	5.80E-07	0.03	1.10E-06	0.06
	1 to < 2 years	1.60E-06	0.08	2.70E-06	0.14	2.10E-06	0.11	3.70E-06	0.19	5.80E-07	0.03	1.00E-06	0.05
	2 to < 6 years	9.00E-07	0.05	1.80E-06	0.09	1.20E-06	0.06	2.50E-06	0.13	3.30E-07	0.02	6.80E-07	0.03
	6 to < 11 years	6.20E-07	0.03	1.10E-06	0.06	8.30E-07	0.04	1.50E-06	0.08	2.30E-07	0.01	4.20E-07	0.02
	11 to < 16 years	3.80E-07	0.02	5.20E-07	0.03	5.10E-07	0.03	7.00E-07	0.04	1.40E-07	0.01	1.90E-07	0.01
	16 to < 21 years	3.30E-07	0.02	4.40E-07	0.02	4.40E-07	0.02	6.00E-07	0.03	1.20E-07	0.01	1.60E-07	0.01
	Adult	1.30E-07	0.01	2.30E-07	0.01	1.80E-07	0.01	3.10E-07	0.02	4.80E-08	0.00	8.60E-08	0.00

Table 5e. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 5

		Aroclor 1242				Aroclor 1248				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	2.40E-06	0.08	4.50E-06	0.15	3.20E-06	0.11	6.00E-06	0.20	8.60E-07	0.03	1.60E-06	0.05
	1 to < 2 years	2.40E-06	0.08	4.10E-06	0.14	3.20E-06	0.11	5.50E-06	0.18	8.70E-07	0.03	1.50E-06	0.05
	2 to < 6 years	1.30E-06	0.04	2.70E-06	0.09	1.80E-06	0.06	3.70E-06	0.12	4.90E-07	0.02	1.00E-06	0.03
	6 to < 11 years	9.20E-07	0.03	1.70E-06	0.06	1.20E-06	0.04	2.30E-06	0.08	3.40E-07	0.01	6.20E-07	0.02
	11 to < 16 years	5.60E-07	0.02	7.80E-07	0.03	7.60E-07	0.03	1.00E-06	0.03	2.10E-07	0.01	2.90E-07	0.01
	16 to < 21 years	4.90E-07	0.02	6.60E-07	0.02	6.60E-07	0.02	8.90E-07	0.03	1.80E-07	0.01	2.40E-07	0.01
	Adult	2.00E-07	0.01	3.50E-07	0.01	2.60E-07	0.01	4.70E-07	0.02	7.20E-08	0.00	1.30E-07	0.00
Chronic	Birth to < 1 year	1.60E-06	0.08	3.00E-06	0.15	2.10E-06	0.11	4.00E-06	0.20	5.80E-07	0.03	1.10E-06	0.06
	1 to < 2 years	1.60E-06	0.08	2.70E-06	0.14	2.10E-06	0.11	3.70E-06	0.19	5.80E-07	0.03	1.00E-06	0.05
	2 to < 6 years	9.00E-07	0.05	1.80E-06	0.09	1.20E-06	0.06	2.50E-06	0.13	3.30E-07	0.02	6.80E-07	0.03
	6 to < 11 years	6.20E-07	0.03	1.10E-06	0.06	8.30E-07	0.04	1.50E-06	0.08	2.30E-07	0.01	4.20E-07	0.02
	11 to < 16 years	3.80E-07	0.02	5.20E-07	0.03	5.10E-07	0.03	7.00E-07	0.04	1.40E-07	0.01	1.90E-07	0.01
	16 to < 21 years	3.30E-07	0.02	4.40E-07	0.02	4.40E-07	0.02	6.00E-07	0.03	1.20E-07	0.01	1.60E-07	0.01
	Adult	1.30E-07	0.01	2.30E-07	0.01	1.80E-07	0.01	3.10E-07	0.02	4.80E-08	0.00	8.60E-08	0.00

Table 5f. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 6

		Aroclor 1242				Aroclor 1248				Aroclor 1254				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	2.40E-05	0.80	4.70E-05	1.57	3.90E-06	0.13	7.50E-06	0.25	1.40E-05	0.47	2.60E-05	0.87	2.20E-06	0.07	4.10E-06	0.14
	1 to < 2 years	2.50E-05	0.83	4.20E-05	1.40	4.00E-06	0.13	6.80E-06	0.23	1.40E-05	0.47	2.40E-05	0.80	2.20E-06	0.07	3.70E-06	0.12
	2 to < 6 years	1.40E-05	0.47	2.90E-05	0.97	2.20E-06	0.07	4.60E-06	0.15	7.90E-06	0.26	1.60E-05	0.53	1.20E-06	0.04	2.50E-06	0.08
	6 to < 11 years	9.60E-06	0.32	1.80E-05	0.60	1.50E-06	0.05	2.80E-06	0.09	5.40E-06	0.18	1.00E-05	0.33	8.40E-07	0.03	1.60E-06	0.05
	11 to < 16 years	5.90E-06	0.20	8.10E-06	0.27	9.40E-07	0.03	1.30E-06	0.04	3.30E-06	0.11	4.60E-06	0.15	5.20E-07	0.02	7.10E-07	0.02
	16 to < 21 years	5.10E-06	0.17	6.90E-06	0.23	8.20E-07	0.03	1.10E-06	0.04	2.90E-06	0.10	3.90E-06	0.13	4.50E-07	0.02	6.10E-07	0.02
	Adult	2.00E-06	0.07	3.60E-06	0.12	3.30E-07	0.01	5.80E-07	0.02	1.10E-06	0.04	2.00E-06	0.07	1.80E-07	0.01	3.20E-07	0.01
Chronic	Birth to < 1 year	1.60E-05	0.80	3.10E-05	1.55	2.60E-06	0.13	5.00E-06	0.25	9.30E-06	0.47	1.80E-05	0.90	1.40E-06	0.07	2.80E-06	0.14
	1 to < 2 years	1.70E-05	0.85	2.80E-05	1.40	2.70E-06	0.14	4.60E-06	0.23	9.40E-06	0.47	1.60E-05	0.80	1.50E-06	0.08	2.50E-06	0.13
	2 to < 6 years	9.30E-06	0.47	1.90E-05	0.95	1.50E-06	0.08	3.10E-06	0.16	5.30E-06	0.27	1.10E-05	0.55	8.20E-07	0.04	1.70E-06	0.09
	6 to < 11 years	6.40E-06	0.32	1.20E-05	0.60	1.00E-06	0.05	1.90E-06	0.10	3.60E-06	0.18	6.70E-06	0.34	5.70E-07	0.03	1.00E-06	0.05
	11 to < 16 years	3.90E-06	0.20	5.50E-06	0.28	6.30E-07	0.03	8.80E-07	0.04	2.20E-06	0.11	3.10E-06	0.16	3.50E-07	0.02	4.80E-07	0.02
	16 to < 21 years	3.40E-06	0.11	4.60E-06	0.15	5.50E-07	0.03	7.40E-07	0.04	1.90E-06	0.10	2.60E-06	0.13	3.00E-07	0.02	4.10E-07	0.02
	Adult	1.40E-06	0.07	2.40E-06	0.12	2.20E-07	0.01	3.90E-07	0.02	7.70E-07	0.03	1.40E-06	0.05	1.20E-07	0.01	2.10E-07	0.01

Table 5g. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 7

		Aroclor 1221				Aroclor 1232				Aroclor 1242			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	2.90E-06	0.10	5.50E-06	0.18	2.90E-06	0.10	5.50E-06	0.18	3.00E-05	1.00	5.80E-05	1.93
	1 to < 2 years	2.90E-06	0.10	5.00E-06	0.17	2.90E-06	0.10	5.00E-06	0.17	3.10E-05	1.03	5.20E-05	1.73
	2 to < 6 years	1.60E-06	0.05	3.40E-06	0.11	1.60E-06	0.05	3.40E-06	0.11	1.70E-05	0.57	3.50E-05	1.17
	6 to < 11 years	1.10E-06	0.04	2.10E-06	0.07	1.10E-06	0.04	2.10E-06	0.07	1.20E-05	0.40	2.20E-05	0.73
	11 to < 16 years	7.00E-07	0.02	9.60E-07	0.03	7.00E-07	0.02	9.60E-07	0.03	7.30E-06	0.24	1.00E-05	0.33
	16 to < 21 years	6.10E-07	0.02	8.20E-07	0.03	6.10E-07	0.02	8.20E-07	0.03	6.30E-06	0.21	8.50E-06	0.28
	Adult	2.40E-07	0.01	4.30E-07	0.01	2.40E-07	0.01	4.30E-07	0.01	2.50E-06	0.08	4.50E-06	0.15
Chronic	Birth to < 1 year	1.90E-06	0.10	3.70E-06	0.19	1.90E-06	0.10	3.70E-06	0.19	2.00E-05	1.00	3.90E-05	1.95
	1 to < 2 years	2.00E-06	0.10	3.40E-06	0.17	2.00E-06	0.10	3.40E-06	0.17	2.10E-05	1.05	3.50E-05	1.75
	2 to < 6 years	1.10E-06	0.06	2.30E-06	0.12	1.10E-06	0.06	2.30E-06	0.12	1.20E-05	0.60	2.40E-05	1.20
	6 to < 11 years	7.60E-07	0.04	1.40E-06	0.07	7.60E-07	0.04	1.40E-06	0.07	8.00E-06	0.40	1.50E-05	0.75
	11 to < 16 years	4.70E-07	0.02	6.50E-07	0.03	4.70E-07	0.02	6.50E-07	0.03	4.90E-06	0.25	6.80E-06	0.34
	16 to < 21 years	4.10E-07	0.02	5.50E-07	0.03	4.10E-07	0.02	5.50E-07	0.03	4.20E-06	0.21	5.70E-06	0.29
	Adult	1.60E-07	0.01	2.90E-07	0.01	1.60E-07	0.01	2.90E-07	0.01	1.70E-06	0.09	3.00E-06	0.15

		Aroclor 1248				Aroclor 1254				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	3.00E-05	1.00	5.70E-05	1.90	2.10E-05	0.70	4.00E-05	1.33	3.20E-06	0.11	6.20E-06	0.21
	1 to < 2 years	3.00E-05	1.00	5.20E-05	1.73	2.10E-05	0.70	3.70E-05	1.23	3.30E-06	0.11	5.60E-06	0.19
	2 to < 6 years	1.70E-05	0.57	3.50E-05	1.17	1.20E-05	0.40	2.50E-05	0.83	1.80E-06	0.06	3.80E-06	0.13
	6 to < 11 years	1.20E-05	0.40	2.20E-05	0.73	8.30E-06	0.28	1.50E-05	0.50	1.30E-06	0.04	2.30E-06	0.08

	11 to < 16 years	7.20E-06	0.24	9.90E-06	0.33	5.10E-06	0.17	7.00E-06	0.23	7.70E-07	0.03	1.10E-06	0.04
	16 to < 21 years	6.20E-06	0.21	8.40E-06	0.28	4.40E-06	0.15	6.00E-06	0.20	6.70E-07	0.02	9.10E-07	0.03
	Adult	2.50E-06	0.08	4.40E-06	0.15	1.80E-06	0.06	3.10E-06	0.10	2.70E-07	0.01	4.80E-07	0.02
Chronic	Birth to < 1 year	2.00E-05	1.00	3.80E-05	1.90	1.40E-05	0.70	2.70E-05	1.35	2.20E-06	0.11	4.10E-06	0.21
	1 to < 2 years	2.00E-05	1.00	3.50E-05	1.75	1.40E-05	0.70	2.50E-05	1.25	2.20E-06	0.11	3.80E-06	0.19
	2 to < 6 years	1.10E-05	0.55	2.30E-05	1.15	8.10E-06	0.41	1.70E-05	0.85	1.20E-06	0.06	2.50E-06	0.13
	6 to < 11 years	7.90E-06	0.40	1.40E-05	0.70	5.60E-06	0.28	1.00E-05	0.50	8.50E-07	0.04	1.60E-06	0.08
	11 to < 16 years	4.80E-06	0.24	6.70E-06	0.34	3.40E-06	0.17	4.70E-06	0.24	5.20E-07	0.03	7.20E-07	0.04
	16 to < 21 years	4.20E-06	0.21	5.60E-06	0.28	3.00E-06	0.15	4.00E-06	0.20	4.50E-07	0.02	6.10E-07	0.03
	Adult	1.70E-06	0.09	3.00E-06	0.15	1.20E-06	0.06	2.10E-06	0.11	1.80E-07	0.01	3.20E-07	0.02

Table 5h. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 8/9

		Aroclor 1016				Aroclor 1221				Aroclor 1232				Aroclor 1242			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	2.40E-06	NC	4.60E-06	NC	2.40E-06	0.08	4.60E-06	0.15	2.40E-06	0.08	4.60E-06	0.15	2.00E-05	0.67	3.70E-05	1.23
	1 to < 2 years	2.40E-06	NC	4.10E-06	NC	2.40E-06	0.08	4.10E-06	0.14	2.40E-06	0.08	4.10E-06	0.14	2.00E-05	0.67	3.40E-05	1.13
	2 to < 6 years	1.40E-06	NC	2.80E-06	NC	1.40E-06	0.05	2.80E-06	0.09	1.40E-06	0.05	2.80E-06	0.09	1.10E-05	0.37	2.30E-05	0.77
	6 to < 11 years	9.40E-07	NC	1.70E-06	NC	9.40E-07	0.03	1.70E-06	0.06	9.40E-07	0.03	1.70E-06	0.06	7.70E-06	0.26	1.40E-05	0.47
	11 to < 16 years	5.70E-07	NC	7.90E-07	NC	5.70E-07	0.02	7.90E-07	0.03	5.70E-07	0.02	7.90E-07	0.03	4.70E-06	0.16	6.50E-06	0.22
	16 to < 21 years	5.00E-07	NC	6.70E-07	NC	5.00E-07	0.02	6.70E-07	0.02	5.00E-07	0.02	6.70E-07	0.02	4.10E-06	0.14	5.50E-06	0.18
	Adult	2.00E-07	NC	3.60E-07	NC	2.00E-07	0.01	3.60E-07	0.01	2.00E-07	0.01	3.60E-07	0.01	1.60E-06	0.05	2.90E-06	0.10
Chronic	Birth to < 1 year	1.60E-06	0.023	3.10E-06	0.044	1.60E-06	0.08	3.10E-06	0.16	1.60E-06	0.08	3.10E-06	0.16	1.30E-05	0.65	2.50E-05	1.25
	1 to < 2 years	1.60E-06	0.023	2.80E-06	0.04	1.60E-06	0.08	2.80E-06	0.14	1.60E-06	0.08	2.80E-06	0.14	1.30E-05	0.65	2.30E-05	1.15
	2 to < 6 years	9.10E-07	0.013	1.90E-06	0.027	9.10E-07	0.05	1.90E-06	0.10	9.10E-07	0.05	1.90E-06	0.10	7.40E-06	0.37	1.50E-05	0.75
	6 to < 11 years	6.30E-07	0.009	1.20E-06	0.017	6.30E-07	0.03	1.20E-06	0.06	6.30E-07	0.03	1.20E-06	0.06	5.10E-06	0.26	9.40E-06	0.47
	11 to < 16 years	3.90E-07	0.0055	5.30E-07	0.0076	3.90E-07	0.02	5.30E-07	0.03	3.90E-07	0.02	5.30E-07	0.03	3.10E-06	0.16	4.30E-06	0.22
	16 to < 21 years	3.40E-07	0.0048	4.50E-07	0.0065	3.40E-07	0.02	4.50E-07	0.02	3.40E-07	0.02	4.50E-07	0.02	2.70E-06	0.14	3.70E-06	0.19
	Adult	1.30E-07	0.0019	2.40E-07	0.0034	1.30E-07	0.01	2.40E-07	0.01	1.30E-07	0.01	2.40E-07	0.01	1.10E-06	0.06	1.90E-06	0.10

		Aroclor 1248				Aroclor 1254				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	5.40E-06	0.18	1.00E-05	0.33	1.10E-05	0.37	2.00E-05	0.67	2.20E-06	0.07	4.30E-06	0.14
	1 to < 2 years	5.50E-06	0.18	9.30E-06	0.31	1.10E-05	0.37	1.80E-05	0.60	2.30E-06	0.08	3.90E-06	0.13
	2 to < 6 years	3.10E-06	0.10	6.30E-06	0.21	6.10E-06	0.20	1.20E-05	0.40	1.30E-06	0.04	2.60E-06	0.09
	6 to < 11 years	2.10E-06	0.07	3.90E-06	0.13	4.20E-06	0.14	7.70E-06	0.26	8.80E-07	0.03	1.60E-06	0.05

	11 to < 16 years	1.30E-06	0.04	1.80E-06	0.06	2.60E-06	0.09	3.50E-06	0.12	5.40E-07	0.02	7.40E-07	0.02
	16 to < 21 years	1.10E-06	0.04	1.50E-06	0.05	2.20E-06	0.07	3.00E-06	0.10	4.70E-07	0.02	6.30E-07	0.02
	Adult	4.50E-07	0.02	8.00E-07	0.03	8.90E-07	0.03	1.60E-06	0.05	1.90E-07	0.01	3.30E-07	0.01
Chronic	Birth to < 1 year	3.60E-06	0.18	6.90E-06	0.35	7.20E-06	0.36	1.40E-05	0.70	1.50E-06	0.08	2.90E-06	0.15
	1 to < 2 years	3.70E-06	0.19	6.30E-06	0.32	7.20E-06	0.36	1.20E-05	0.60	1.50E-06	0.08	2.60E-06	0.13
	2 to < 6 years	2.10E-06	0.11	4.20E-06	0.21	4.10E-06	0.21	8.40E-06	0.42	8.50E-07	0.04	1.80E-06	0.09
	6 to < 11 years	1.40E-06	0.07	2.60E-06	0.13	2.80E-06	0.14	5.20E-06	0.26	5.90E-07	0.03	1.10E-06	0.06
	11 to < 16 years	8.70E-07	0.04	1.20E-06	0.06	1.70E-06	0.09	2.40E-06	0.12	3.60E-07	0.02	5.00E-07	0.03
	16 to < 21 years	7.60E-07	0.04	1.00E-06	0.05	1.50E-06	0.08	2.00E-06	0.10	3.10E-07	0.02	4.20E-07	0.02
	Adult	3.00E-07	0.02	5.40E-07	0.03	6.00E-07	0.03	1.10E-06	0.06	1.20E-07	0.01	2.20E-07	0.01

Table 5i. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 10

		Aroclor 1242				Aroclor 1254				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	1.70E-05	0.57	3.20E-05	1.07	8.70E-06	0.29	1.70E-05	0.57	1.70E-06	0.06	3.30E-06	0.11
	1 to < 2 years	1.70E-05	0.57	2.90E-05	0.97	8.70E-06	0.29	1.50E-05	0.50	1.80E-06	0.06	3.00E-06	0.10
	2 to < 6 years	9.50E-06	0.32	2.00E-05	0.67	4.90E-06	0.16	1.00E-05	0.33	9.90E-07	0.03	2.00E-06	0.07
	6 to < 11 years	6.60E-06	0.22	1.20E-05	0.40	3.40E-06	0.11	6.20E-06	0.21	6.80E-07	0.02	1.30E-06	0.04
	11 to < 16 years	4.00E-06	0.13	5.60E-06	0.19	2.10E-06	0.07	2.90E-06	0.10	4.20E-07	0.01	5.80E-07	0.02
	16 to < 21 years	3.50E-06	0.12	4.70E-06	0.16	1.80E-06	0.06	2.40E-06	0.08	3.60E-07	0.01	4.90E-07	0.02
	Adult	1.40E-06	0.05	2.50E-06	0.08	7.20E-07	0.02	1.30E-06	0.04	1.40E-07	0.00	2.60E-07	0.01
Chronic	Birth to < 1 year	1.10E-05	0.55	2.10E-05	1.05	5.80E-06	0.29	1.10E-05	0.55	1.20E-06	0.06	2.20E-06	0.11
	1 to < 2 years	1.10E-05	0.55	1.90E-05	0.95	5.90E-06	0.30	1.00E-05	0.50	1.20E-06	0.06	2.00E-06	0.10
	2 to < 6 years	6.40E-06	0.32	1.30E-05	0.65	3.30E-06	0.17	6.80E-06	0.34	6.60E-07	0.03	1.40E-06	0.07

	6 to < 11 years	4.40E-06	0.22	8.10E-06	0.41	2.30E-06	0.12	4.20E-06	0.21	4.60E-07	0.02	8.40E-07	0.04
	11 to < 16 years	2.70E-06	0.14	3.70E-06	0.19	1.40E-06	0.07	1.90E-06	0.10	2.80E-07	0.01	3.90E-07	0.02
	16 to < 21 years	2.30E-06	0.12	3.20E-06	0.16	1.20E-06	0.06	1.60E-06	0.08	2.40E-07	0.01	3.30E-07	0.02
	Adult	9.30E-07	0.05	1.70E-06	0.09	4.80E-07	0.02	8.60E-07	0.04	9.70E-08	0.00	1.70E-07	0.01

Table 5j. Intermediate and Chronic PCB Exposure Levels and Risk for Floodplain 11

		Aroclor 1242				Aroclor 1248				Aroclor 1254				Aroclor 1260			
Duration	Exposure Group	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME	Dose CTE (mg/kg/day)	HQ CTE	Dose RME (mg/kg/day)	HQ RME
Intermediate	Birth to < 1 year	2.70E-06	0.09	5.10E-06	0.17	1.10E-06	0.04	2.20E-06	0.07	4.40E-06	0.15	8.30E-06	0.28	1.00E-06	0.03	2.00E-06	0.07
	1 to < 2 years	2.70E-06	0.09	4.60E-06	0.15	1.20E-06	0.04	2.00E-06	0.07	4.40E-06	0.15	7.50E-06	0.25	1.00E-06	0.03	1.80E-06	0.06
	2 to < 6 years	1.50E-06	0.05	3.10E-06	0.10	6.50E-07	0.02	1.30E-06	0.04	2.50E-06	0.08	5.10E-06	0.17	5.90E-07	0.02	1.20E-06	0.04
	6 to < 11 years	1.00E-06	0.03	1.90E-06	0.06	4.50E-07	0.02	8.30E-07	0.03	1.70E-06	0.06	3.10E-06	0.10	4.10E-07	0.01	7.40E-07	0.02
	11 to < 16 years	6.40E-07	0.02	8.90E-07	0.03	2.80E-07	0.01	3.80E-07	0.01	1.00E-06	0.03	1.40E-06	0.05	2.50E-07	0.01	3.40E-07	0.01
	16 to < 21 years	5.60E-07	0.02	7.50E-07	0.03	2.40E-07	0.01	3.20E-07	0.01	9.10E-07	0.03	1.20E-06	0.04	2.20E-07	0.01	2.90E-07	0.01
	Adult	2.20E-07	0.01	4.00E-07	0.01	9.50E-08	0.00	1.70E-07	0.01	3.60E-07	0.01	6.50E-07	0.02	8.60E-08	0.00	1.50E-07	0.01
Chronic	Birth to < 1 year	1.80E-06	0.09	3.40E-06	0.17	7.70E-07	0.04	1.50E-06	0.08	2.90E-06	0.15	5.60E-06	0.28	6.90E-07	0.03	1.30E-06	0.07
	1 to < 2 years	1.80E-06	0.09	3.10E-06	0.16	7.80E-07	0.04	1.30E-06	0.07	3.00E-06	0.15	5.10E-06	0.26	7.00E-07	0.04	1.20E-06	0.06
	2 to < 6 years	1.00E-06	0.05	2.10E-06	0.11	4.40E-07	0.02	9.00E-07	0.05	1.70E-06	0.09	3.40E-06	0.17	3.90E-07	0.02	8.10E-07	0.04
	6 to < 11 years	7.00E-07	0.04	1.30E-06	0.07	3.00E-07	0.02	5.60E-07	0.03	1.10E-06	0.06	2.10E-06	0.11	2.70E-07	0.01	5.00E-07	0.03
	11 to < 16 years	4.30E-07	0.02	6.00E-07	0.03	1.90E-07	0.01	2.60E-07	0.01	7.00E-07	0.04	9.70E-07	0.05	1.70E-07	0.01	2.30E-07	0.01
	16 to < 21 years	3.80E-07	0.02	5.10E-07	0.03	1.60E-07	0.01	2.20E-07	0.01	6.10E-07	0.03	8.20E-07	0.04	1.40E-07	0.01	2.00E-07	0.01
	Adult	1.50E-07	0.01	2.70E-07	0.01	6.40E-08	0.00	1.10E-07	0.01	2.40E-07	0.01	4.30E-07	0.02	5.80E-08	0.00	1.00E-07	0.01

Table 6. BAP Exposure Level Risk

	FP1		FP2		FP3		FP4		FP5		FP6		FP7		FP8/9		FP10		FP11	
	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME
Birth to < 1 year	0.022	0.043	0.25	0.48	0.045	0.087	0.038	0.073	0.038	0.073	0.045	0.087	0.055	0.11	0.031	0.06	0.021	0.041	0.035	0.068
1 to < 2 years	0.023	0.039	0.25	0.44	0.046	0.079	0.038	0.066	0.038	0.066	0.046	0.079	0.056	0.097	0.031	0.054	0.021	0.037	0.035	0.061
2 to < 6 years	0.013	0.027	0.14	0.29	0.025	0.053	0.021	0.045	0.021	0.045	0.025	0.053	0.031	0.066	0.018	0.037	0.012	0.025	0.02	0.041
6 to < 11 years	0.0087	0.016	0.096	0.18	0.017	0.033	0.015	0.027	0.015	0.027	0.017	0.033	0.021	0.04	0.012	0.023	0.0081	0.015	0.013	0.025
11 to < 16 years	0.0052	0.0073	0.058	0.082	0.011	0.015	0.0088	0.012	0.0088	0.012	0.011	0.015	0.013	0.018	0.0072	0.01	0.0049	0.0069	0.0081	0.011
16 to < 21 years	0.0045	0.0062	0.05	0.069	0.0091	0.013	0.0077	0.011	0.0077	0.011	0.0091	0.013	0.011	0.015	0.0063	0.0086	0.0043	0.0058	0.0071	0.0097
Adult	0.0018	0.0033	0.02	0.037	0.0037	0.0067	0.0031	0.0056	0.0031	0.0056	0.0037	0.0067	0.0045	0.0083	0.0025	0.0046	0.0017	0.0031	0.0029	0.0052

Table 7a. PAH Exposure Levels for Floodplain 1

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	2.20E-05	4.30E-05	2.30E-05	4.50E-05	3.40E-05	6.50E-05	1.20E-05	2.40E-05	2.60E-05	5.00E-05	4.80E-06	9.30E-06	1.60E-05	3.00E-05	1.90E-05	3.80E-05	3.20E-05	6.30E-05
	1 to < 2 years	2.20E-05	3.90E-05	2.40E-05	4.10E-05	3.40E-05	5.90E-05	1.30E-05	2.20E-05	2.60E-05	4.60E-05	4.90E-06	8.40E-06	1.60E-05	2.70E-05	2.00E-05	3.40E-05	3.30E-05	5.70E-05
	2 to < 6 years	1.20E-05	2.60E-05	1.30E-05	2.80E-05	1.90E-05	4.00E-05	7.00E-06	1.50E-05	1.50E-05	3.10E-05	2.70E-06	5.70E-06	8.80E-06	1.80E-05	1.10E-05	2.30E-05	1.80E-05	3.80E-05
	6 to < 11 years	8.50E-06	1.60E-05	9.00E-06	1.70E-05	1.30E-05	2.40E-05	4.80E-06	9.00E-06	1.00E-05	1.90E-05	1.90E-06	3.50E-06	6.00E-06	1.10E-05	7.50E-06	1.40E-05	1.30E-05	2.40E-05
	11 to < 16 years	5.10E-06	7.20E-06	5.40E-06	7.70E-06	7.90E-06	1.10E-05	2.90E-06	4.10E-06	6.00E-06	8.50E-06	1.10E-06	1.60E-06	3.60E-06	5.10E-06	4.50E-06	6.40E-06	7.60E-06	1.10E-05
	16 to < 21 years	4.50E-06	6.10E-06	4.70E-06	6.50E-06	6.80E-06	9.40E-06	2.50E-06	3.40E-06	5.30E-06	7.20E-06	9.70E-07	1.30E-06	3.20E-06	4.30E-06	3.90E-06	5.40E-06	6.60E-06	9.00E-06
	Adult	1.80E-06	3.30E-06	1.90E-06	3.50E-06	2.80E-06	5.00E-06	1.00E-06	1.80E-06	2.10E-06	3.90E-06	3.90E-07	7.20E-07	1.30E-06	2.30E-06	1.60E-06	2.90E-06	2.70E-06	4.80E-06
Intermediate	Birth to < 1 year	9.40E-06	1.80E-05	1.00E-05	1.90E-05	1.40E-05	2.80E-05	5.30E-06	1.00E-05	1.10E-05	2.20E-05	2.10E-06	4.00E-06	6.70E-06	1.30E-05	8.30E-06	1.60E-05	1.40E-05	2.70E-05
	1 to < 2 years	9.60E-06	1.70E-05	1.00E-05	1.80E-05	1.50E-05	2.50E-05	5.40E-06	9.30E-06	1.10E-05	2.00E-05	2.10E-06	3.60E-06	6.80E-06	1.20E-05	8.40E-06	1.50E-05	1.40E-05	2.40E-05
	2 to < 6 years	5.30E-06	1.10E-05	5.60E-06	1.20E-05	8.20E-06	1.70E-05	3.00E-06	6.30E-06	6.30E-06	1.30E-05	1.20E-06	2.40E-06	3.80E-06	7.90E-06	4.70E-06	9.90E-06	7.80E-06	1.60E-05

	6 to < 11 years	3.70E-06	6.90E-06	3.90E-06	7.30E-06	5.60E-06	1.00E-05	2.00E-06	3.80E-06	4.30E-06	8.10E-06	7.90E-07	1.50E-06	2.60E-06	4.80E-06	3.20E-06	6.10E-06	5.40E-06	1.00E-05
	11 to < 16 years	2.20E-06	3.10E-06	2.30E-06	3.30E-06	3.40E-06	4.70E-06	1.20E-06	1.70E-06	2.60E-06	3.60E-06	4.80E-07	6.80E-07	1.60E-06	2.20E-06	1.90E-06	2.70E-06	3.20E-06	4.60E-06
	16 to < 21 years	1.90E-06	2.60E-06	2.00E-06	2.80E-06	2.90E-06	4.00E-06	1.10E-06	1.50E-06	2.30E-06	3.10E-06	4.20E-07	5.70E-07	1.40E-06	1.90E-06	1.70E-06	2.30E-06	2.80E-06	3.90E-06
	Adult	7.70E-07	1.40E-06	8.20E-07	1.50E-06	1.20E-06	2.20E-06	4.30E-07	7.90E-07	9.10E-07	1.70E-06	1.70E-07	3.10E-07	5.50E-07	1.00E-06	6.80E-07	1.20E-06	1.10E-06	2.10E-06
Chronic	Birth to < 1 year	6.30E-06	1.20E-05	6.70E-06	1.30E-05	9.70E-06	1.90E-05	3.60E-06	6.90E-06	7.50E-06	1.40E-05	1.40E-06	2.70E-06	4.50E-06	8.70E-06	5.60E-06	1.10E-05	9.30E-06	1.80E-05
	1 to < 2 years	6.40E-06	1.10E-05	6.80E-06	1.20E-05	9.80E-06	1.70E-05	3.60E-06	6.30E-06	7.60E-06	1.30E-05	1.40E-06	2.40E-06	4.50E-06	7.90E-06	5.70E-06	9.80E-06	9.40E-06	1.60E-05
	2 to < 6 years	3.60E-06	7.50E-06	3.80E-06	8.00E-06	5.50E-06	1.10E-05	2.00E-06	4.20E-06	4.20E-06	8.80E-06	7.80E-07	1.60E-06	2.50E-06	5.30E-06	3.20E-06	6.60E-06	5.30E-06	1.10E-05
	6 to < 11 years	2.50E-06	4.60E-06	2.60E-06	4.90E-06	3.70E-06	7.00E-06	1.40E-06	2.60E-06	2.90E-06	5.40E-06	5.30E-07	1.00E-06	1.70E-06	3.30E-06	2.20E-06	4.10E-06	3.60E-06	6.80E-06
	11 to < 16 years	1.50E-06	2.10E-06	1.60E-06	2.20E-06	2.30E-06	3.20E-06	8.30E-07	1.20E-06	1.70E-06	2.40E-06	3.20E-07	4.50E-07	1.00E-06	1.50E-06	1.30E-06	1.80E-06	2.20E-06	3.10E-06
	16 to < 21 years	1.30E-06	1.80E-06	1.40E-06	1.90E-06	2.00E-06	2.70E-06	7.20E-07	9.90E-07	1.50E-06	2.10E-06	2.80E-07	3.80E-07	9.10E-07	1.20E-06	1.10E-06	1.60E-06	1.90E-06	2.60E-06
	Adult	5.20E-07	9.50E-07	5.50E-07	1.00E-06	7.90E-07	1.40E-06	2.90E-07	5.30E-07	6.10E-07	1.10E-06	1.10E-07	2.10E-07	3.70E-07	6.70E-07	4.60E-07	8.40E-07	7.60E-07	1.40E-06

Table 7b. PAH Exposure Levels for Floodplain 2

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	2.10E-04	4.00E-04	2.60E-04	5.00E-04	3.50E-04	6.80E-04	1.30E-04	2.40E-04	2.90E-04	5.50E-04	4.10E-05	8.00E-05	1.60E-04	3.00E-04	1.80E-04	3.50E-04	2.10E-04	4.00E-04
	1 to < 2 years	2.10E-04	3.60E-04	2.60E-04	4.60E-04	3.50E-04	6.20E-04	1.30E-04	2.20E-04	2.90E-04	5.00E-04	4.20E-05	7.30E-05	1.60E-04	2.70E-04	1.80E-04	3.20E-04	2.10E-04	3.60E-04
	2 to < 6 years	1.20E-04	2.50E-04	1.50E-04	3.10E-04	2.00E-04	4.10E-04	7.10E-05	1.50E-04	1.60E-04	3.40E-04	2.30E-05	4.90E-05	8.80E-05	1.80E-04	1.00E-04	2.20E-04	1.20E-04	2.50E-04
	6 to < 11 years	8.00E-05	1.50E-04	1.00E-04	1.90E-04	1.40E-04	2.50E-04	4.90E-05	9.10E-05	1.10E-04	2.10E-04	1.60E-05	3.00E-05	6.00E-05	1.10E-04	7.00E-05	1.30E-04	8.00E-05	1.50E-04
	11 to < 16 years	4.80E-05	6.80E-05	6.00E-05	8.50E-05	8.20E-05	1.10E-04	2.90E-05	4.10E-05	6.70E-05	9.40E-05	9.70E-06	1.40E-05	3.60E-05	5.10E-05	4.20E-05	6.00E-05	4.80E-05	6.80E-05
	16 to < 21 years	4.20E-05	5.80E-05	5.30E-05	7.20E-05	7.10E-05	9.70E-05	2.50E-05	3.50E-05	5.80E-05	7.90E-05	8.40E-06	1.20E-05	3.20E-05	4.30E-05	3.70E-05	5.00E-05	4.20E-05	5.80E-05

	Adult	1.70E-05	3.10E-05	2.10E-05	3.90E-05	2.90E-05	5.20E-05	1.00E-05	1.90E-05	2.30E-05	4.30E-05	3.40E-06	6.20E-06	1.30E-05	2.30E-05	1.50E-05	2.70E-05	1.70E-05	3.10E-05
Intermediate	Birth to < 1 year	8.90E-05	1.70E-04	1.10E-04	2.20E-04	1.50E-04	2.90E-04	5.40E-05	1.00E-04	1.20E-04	2.40E-04	1.80E-05	3.40E-05	6.70E-05	1.30E-04	7.80E-05	1.50E-04	8.90E-05	1.70E-04
	1 to < 2 years	9.00E-05	1.60E-04	1.10E-04	2.00E-04	1.50E-04	2.60E-04	5.50E-05	9.50E-05	1.20E-04	2.10E-04	1.80E-05	3.10E-05	6.80E-05	1.20E-04	7.90E-05	1.40E-04	9.00E-05	1.60E-04
	2 to < 6 years	5.00E-05	1.10E-04	6.30E-05	1.30E-04	8.50E-05	1.80E-04	3.00E-05	6.40E-05	6.90E-05	1.40E-04	1.00E-05	2.10E-05	3.80E-05	7.90E-05	4.40E-05	9.20E-05	5.00E-05	1.10E-04
	6 to < 11 years	3.40E-05	6.50E-05	4.30E-05	8.10E-05	5.80E-05	1.10E-04	2.10E-05	3.90E-05	4.70E-05	8.90E-05	6.90E-06	1.30E-05	2.60E-05	4.80E-05	3.00E-05	5.60E-05	3.40E-05	6.50E-05
	11 to < 16 years	2.10E-05	2.90E-05	2.60E-05	3.60E-05	3.50E-05	4.90E-05	1.30E-05	1.80E-05	2.90E-05	4.00E-05	4.10E-06	5.80E-06	1.60E-05	2.20E-05	1.80E-05	2.60E-05	2.10E-05	2.90E-05
	16 to < 21 years	1.80E-05	2.50E-05	2.30E-05	3.10E-05	3.00E-05	4.20E-05	1.10E-05	1.50E-05	2.50E-05	3.40E-05	3.60E-06	4.90E-06	1.40E-05	1.90E-05	1.60E-05	2.20E-05	1.80E-05	2.50E-05
	Adult	7.30E-06	1.30E-05	9.10E-06	1.70E-05	1.20E-05	2.20E-05	4.40E-06	8.00E-06	1.00E-05	1.80E-05	1.50E-06	2.70E-06	5.50E-06	1.00E-05	6.40E-06	1.20E-05	7.30E-06	1.30E-05
Chronic	Birth to < 1 year	6.00E-05	1.20E-04	7.50E-05	1.40E-04	1.00E-04	2.00E-04	3.60E-05	7.00E-05	8.20E-05	1.60E-04	1.20E-05	2.30E-05	4.50E-05	8.70E-05	5.20E-05	1.00E-04	6.00E-05	1.20E-04
	1 to < 2 years	6.00E-05	1.00E-04	7.60E-05	1.30E-04	1.00E-04	1.80E-04	3.70E-05	6.40E-05	8.30E-05	1.40E-04	1.20E-05	2.10E-05	4.50E-05	7.90E-05	5.30E-05	9.20E-05	6.00E-05	1.00E-04
	2 to < 6 years	3.40E-05	7.10E-05	4.20E-05	8.80E-05	5.70E-05	1.20E-04	2.00E-05	4.30E-05	4.60E-05	9.70E-05	6.70E-06	1.40E-05	2.50E-05	5.30E-05	2.90E-05	6.20E-05	3.40E-05	7.10E-05
	6 to < 11 years	2.30E-05	4.30E-05	2.90E-05	5.40E-05	3.90E-05	7.30E-05	1.40E-05	2.60E-05	3.20E-05	6.00E-05	4.60E-06	8.70E-06	1.70E-05	3.30E-05	2.00E-05	3.80E-05	2.30E-05	4.30E-05
	11 to < 16 years	1.40E-05	2.00E-05	1.70E-05	2.40E-05	2.30E-05	3.30E-05	8.40E-06	1.20E-05	1.90E-05	2.70E-05	2.80E-06	3.90E-06	1.00E-05	1.50E-05	1.20E-05	1.70E-05	1.40E-05	2.00E-05
	16 to < 21 years	1.20E-05	1.70E-05	1.50E-05	2.10E-05	2.00E-05	2.80E-05	7.30E-06	1.00E-05	1.70E-05	2.30E-05	2.40E-06	3.30E-06	9.10E-06	1.20E-05	1.10E-05	1.50E-05	1.20E-05	1.70E-05
	Adult	4.90E-06	8.90E-06	6.10E-06	1.10E-05	8.20E-06	1.50E-05	3.00E-06	5.40E-06	6.70E-06	1.20E-05	9.80E-07	1.80E-06	3.70E-06	6.70E-06	4.30E-06	7.80E-06	4.90E-06	8.90E-06

Table 7c. PAH Exposure Levels for Floodplain 3

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	4.00E-05	7.80E-05	4.70E-05	9.10E-05	7.80E-05	1.50E-04	2.30E-05	4.50E-05	4.70E-05	9.10E-05	9.70E-06	1.90E-05	2.70E-05	5.30E-05	2.80E-05	5.50E-05	3.70E-05	7.10E-05
	1 to < 2 years	4.10E-05	7.10E-05	4.80E-05	8.20E-05	7.90E-05	1.40E-04	2.40E-05	4.10E-05	4.80E-05	8.20E-05	9.80E-06	1.70E-05	2.80E-05	4.80E-05	2.90E-05	4.90E-05	3.70E-05	6.40E-05

	2 to < 6 years	2.30E-05	4.80E-05	2.70E-05	5.60E-05	4.40E-05	9.30E-05	1.30E-05	2.80E-05	2.70E-05	5.60E-05	5.50E-06	1.20E-05	1.50E-05	3.20E-05	1.60E-05	3.30E-05	2.10E-05	4.30E-05
	6 to < 11 years	1.60E-05	2.90E-05	1.80E-05	3.40E-05	3.00E-05	5.70E-05	9.00E-06	1.70E-05	1.80E-05	3.40E-05	3.80E-06	7.10E-06	1.10E-05	2.00E-05	1.10E-05	2.00E-05	1.40E-05	2.70E-05
	11 to < 16 years	9.40E-06	1.30E-05	1.10E-05	1.50E-05	1.80E-05	2.60E-05	5.40E-06	7.70E-06	1.10E-05	1.50E-05	2.30E-06	3.20E-06	6.40E-06	8.90E-06	6.60E-06	9.20E-06	8.60E-06	1.20E-05
	16 to < 21 years	8.20E-06	1.10E-05	9.50E-06	1.30E-05	1.60E-05	2.20E-05	4.70E-06	6.50E-06	9.50E-06	1.30E-05	2.00E-06	2.70E-06	5.50E-06	7.60E-06	5.70E-06	7.80E-06	7.40E-06	1.00E-05
	Adult	3.30E-06	6.00E-06	3.80E-06	7.00E-06	6.40E-06	1.20E-05	1.90E-06	3.50E-06	3.80E-06	7.00E-06	7.90E-07	1.40E-06	2.20E-06	4.10E-06	2.30E-06	4.20E-06	3.00E-06	5.50E-06
Intermediate	Birth to < 1 year	1.70E-05	3.40E-05	2.00E-05	3.90E-05	3.30E-05	6.50E-05	1.00E-05	1.90E-05	2.00E-05	3.90E-05	4.20E-06	8.10E-06	1.20E-05	2.30E-05	1.20E-05	2.30E-05	1.60E-05	3.00E-05
	1 to < 2 years	1.80E-05	3.00E-05	2.00E-05	3.50E-05	3.40E-05	5.90E-05	1.00E-05	1.80E-05	2.00E-05	3.50E-05	4.20E-06	7.30E-06	1.20E-05	2.10E-05	1.20E-05	2.10E-05	1.60E-05	2.80E-05
	2 to < 6 years	9.80E-06	2.10E-05	1.10E-05	2.40E-05	1.90E-05	4.00E-05	5.60E-06	1.20E-05	1.10E-05	2.40E-05	2.40E-06	4.90E-06	6.60E-06	1.40E-05	6.80E-06	1.40E-05	8.90E-06	1.90E-05
	6 to < 11 years	6.70E-06	1.30E-05	7.80E-06	1.50E-05	1.30E-05	2.40E-05	3.90E-06	7.30E-06	7.80E-06	1.50E-05	1.60E-06	3.00E-06	4.50E-06	8.50E-06	4.70E-06	8.80E-06	6.10E-06	1.10E-05
	11 to < 16 years	4.00E-06	5.70E-06	4.70E-06	6.60E-06	7.80E-06	1.10E-05	2.30E-06	3.30E-06	4.70E-06	6.60E-06	9.70E-07	1.40E-06	2.70E-06	3.80E-06	2.80E-06	4.00E-06	3.70E-06	5.20E-06
	16 to < 21 years	3.50E-06	4.80E-06	4.10E-06	5.60E-06	6.80E-06	9.30E-06	2.00E-06	2.80E-06	4.10E-06	5.60E-06	8.40E-07	1.20E-06	2.40E-06	3.20E-06	2.40E-06	3.40E-06	3.20E-06	4.40E-06
	Adult	1.40E-06	2.60E-06	1.60E-06	3.00E-06	2.70E-06	5.00E-06	8.20E-07	1.50E-06	1.60E-06	3.00E-06	3.40E-07	6.20E-07	9.50E-07	1.70E-06	9.90E-07	1.80E-06	1.30E-06	2.30E-06
Chronic	Birth to < 1 year	1.20E-05	2.30E-05	1.30E-05	2.60E-05	2.20E-05	4.40E-05	6.70E-06	1.30E-05	1.30E-05	2.60E-05	2.80E-06	5.40E-06	7.80E-06	1.50E-05	8.10E-06	1.60E-05	1.10E-05	2.00E-05
	1 to < 2 years	1.20E-05	2.00E-05	1.40E-05	2.40E-05	2.30E-05	3.90E-05	6.80E-06	1.20E-05	1.40E-05	2.40E-05	2.80E-06	4.90E-06	7.90E-06	1.40E-05	8.20E-06	1.40E-05	1.10E-05	1.90E-05
	2 to < 6 years	6.60E-06	1.40E-05	7.60E-06	1.60E-05	1.30E-05	2.70E-05	3.80E-06	8.00E-06	7.60E-06	1.60E-05	1.60E-06	3.30E-06	4.40E-06	9.30E-06	4.60E-06	9.60E-06	6.00E-06	1.30E-05
	6 to < 11 years	4.50E-06	8.50E-06	5.20E-06	9.80E-06	8.70E-06	1.60E-05	2.60E-06	4.90E-06	5.20E-06	9.80E-06	1.10E-06	2.00E-06	3.00E-06	5.70E-06	3.10E-06	5.90E-06	4.10E-06	7.70E-06
	11 to < 16 years	2.70E-06	3.80E-06	3.20E-06	4.40E-06	5.20E-06	7.40E-06	1.60E-06	2.20E-06	3.20E-06	4.40E-06	6.50E-07	9.20E-07	1.80E-06	2.60E-06	1.90E-06	2.70E-06	2.50E-06	3.50E-06
	16 to < 21 years	2.40E-06	3.20E-06	2.70E-06	3.80E-06	4.60E-06	6.20E-06	1.40E-06	1.90E-06	2.70E-06	3.80E-06	5.70E-07	7.80E-07	1.60E-06	2.20E-06	1.60E-06	2.30E-06	2.10E-06	2.90E-06
	Adult	9.50E-07	1.70E-06	1.10E-06	2.00E-06	1.80E-06	3.40E-06	5.50E-07	1.00E-06	1.10E-06	2.00E-06	2.30E-07	4.20E-07	6.40E-07	1.20E-06	6.60E-07	1.20E-06	8.60E-07	1.60E-06

Table 7d. PAH Exposure Levels for Floodplain 4

		Benz(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenz(a,h)anthracene		Indeno(1,2,3-cd)pyrene		Benzo(ghi)perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	3.70E-05	7.10E-05	3.90E-05	7.60E-05	5.30E-05	1.00E-04	2.40E-05	4.80E-05	4.00E-05	7.80E-05	7.80E-06	1.50E-05	2.20E-05	4.20E-05	2.30E-05	4.40E-05	3.30E-05	6.40E-05
	1 to < 2 years	3.70E-05	6.40E-05	4.00E-05	6.90E-05	5.30E-05	9.30E-05	2.50E-05	4.30E-05	4.10E-05	7.10E-05	7.90E-06	1.40E-05	2.20E-05	3.80E-05	2.30E-05	4.00E-05	3.30E-05	5.80E-05
	2 to < 6 years	2.10E-05	4.30E-05	2.20E-05	4.70E-05	3.00E-05	6.20E-05	1.40E-05	2.90E-05	2.30E-05	4.80E-05	4.40E-06	9.20E-06	1.20E-05	2.60E-05	1.30E-05	2.70E-05	1.90E-05	3.90E-05
	6 to < 11 years	1.40E-05	2.70E-05	1.50E-05	2.90E-05	2.00E-05	3.80E-05	9.50E-06	1.80E-05	1.60E-05	2.90E-05	3.00E-06	5.70E-06	8.40E-06	1.60E-05	8.80E-06	1.70E-05	1.30E-05	2.40E-05
	11 to < 16 years	8.60E-06	1.20E-05	9.20E-06	1.30E-05	1.20E-05	1.70E-05	5.70E-06	8.00E-06	9.40E-06	1.30E-05	1.80E-06	2.60E-06	5.10E-06	7.10E-06	5.30E-06	7.50E-06	7.70E-06	1.10E-05
	16 to < 21 years	7.40E-06	1.00E-05	8.00E-06	1.10E-05	1.10E-05	1.50E-05	5.00E-06	6.80E-06	8.10E-06	1.10E-05	1.60E-06	2.20E-06	4.40E-06	6.00E-06	4.60E-06	6.30E-06	6.70E-06	9.20E-06
	Adult	3.00E-06	5.50E-06	3.20E-06	5.90E-06	4.30E-06	7.90E-06	2.00E-06	3.70E-06	3.30E-06	6.00E-06	6.40E-07	1.20E-06	1.80E-06	3.20E-06	1.90E-06	3.40E-06	2.70E-06	4.90E-06
Intermediate	Birth to < 1 year	1.60E-05	3.00E-05	1.70E-05	3.30E-05	2.30E-05	4.40E-05	1.00E-05	2.00E-05	1.70E-05	3.30E-05	3.30E-06	6.50E-06	9.30E-06	1.80E-05	9.80E-06	1.90E-05	1.40E-05	2.70E-05
	1 to < 2 years	1.60E-05	2.80E-05	1.70E-05	3.00E-05	2.30E-05	4.00E-05	1.10E-05	1.80E-05	1.70E-05	3.00E-05	3.40E-06	5.90E-06	9.40E-06	1.60E-05	9.90E-06	1.70E-05	1.40E-05	2.50E-05
	2 to < 6 years	8.90E-06	1.90E-05	9.50E-06	2.00E-05	1.30E-05	2.70E-05	5.90E-06	1.20E-05	9.70E-06	2.00E-05	1.90E-06	4.00E-06	5.20E-06	1.10E-05	5.50E-06	1.20E-05	8.00E-06	1.70E-05
	6 to < 11 years	6.10E-06	1.10E-05	6.50E-06	1.20E-05	8.70E-06	1.60E-05	4.10E-06	7.60E-06	6.70E-06	1.30E-05	1.30E-06	2.40E-06	3.60E-06	6.70E-06	3.80E-06	7.10E-06	5.50E-06	1.00E-05
	11 to < 16 years	3.70E-06	5.20E-06	3.90E-06	5.50E-06	5.30E-06	7.40E-06	2.50E-06	3.40E-06	4.00E-06	5.70E-06	7.80E-07	1.10E-06	2.20E-06	3.00E-06	2.30E-06	3.20E-06	3.30E-06	4.60E-06
	16 to < 21 years	3.20E-06	4.40E-06	3.40E-06	4.70E-06	4.60E-06	6.30E-06	2.10E-06	2.90E-06	3.50E-06	4.80E-06	6.80E-07	9.30E-07	1.90E-06	2.60E-06	2.00E-06	2.70E-06	2.90E-06	3.90E-06
	Adult	1.30E-06	2.30E-06	1.40E-06	2.50E-06	1.80E-06	3.40E-06	8.60E-07	1.60E-06	1.40E-06	2.60E-06	2.70E-07	5.00E-07	7.60E-07	1.40E-06	8.00E-07	1.50E-06	1.20E-06	2.10E-06
Chronic	Birth to < 1 year	1.10E-05	2.00E-05	1.10E-05	2.20E-05	1.50E-05	2.90E-05	7.00E-06	1.40E-05	1.20E-05	2.20E-05	2.20E-06	4.30E-06	6.20E-06	1.20E-05	6.60E-06	1.30E-05	9.50E-06	1.80E-05
	1 to < 2 years	1.10E-05	1.90E-05	1.10E-05	2.00E-05	1.50E-05	2.70E-05	7.10E-06	1.20E-05	1.20E-05	2.00E-05	2.30E-06	3.90E-06	6.30E-06	1.10E-05	6.70E-06	1.20E-05	9.60E-06	1.70E-05

	2 to < 6 years	6.00E-06	1.30E-05	6.40E-06	1.30E-05	8.60E-06	1.80E-05	4.00E-06	8.40E-06	6.50E-06	1.40E-05	1.30E-06	2.70E-06	3.50E-06	7.40E-06	3.70E-06	7.80E-06	5.30E-06	1.10E-05
	6 to < 11 years	4.10E-06	7.70E-06	4.40E-06	8.20E-06	5.90E-06	1.10E-05	2.70E-06	5.10E-06	4.50E-06	8.40E-06	8.70E-07	1.60E-06	2.40E-06	4.50E-06	2.50E-06	4.80E-06	3.70E-06	6.90E-06
	11 to < 16 years	2.50E-06	3.50E-06	2.60E-06	3.70E-06	3.50E-06	5.00E-06	1.60E-06	2.30E-06	2.70E-06	3.80E-06	5.20E-07	7.40E-07	1.50E-06	2.00E-06	1.50E-06	2.20E-06	2.20E-06	3.10E-06
	16 to < 21 years	2.10E-06	2.90E-06	2.30E-06	3.20E-06	3.10E-06	4.20E-06	1.40E-06	2.00E-06	2.30E-06	3.20E-06	4.50E-07	6.20E-07	1.30E-06	1.70E-06	1.30E-06	1.80E-06	1.90E-06	2.60E-06
	Adult	8.60E-07	1.60E-06	9.30E-07	1.70E-06	1.20E-06	2.30E-06	5.80E-07	1.10E-06	9.50E-07	1.70E-06	1.80E-07	3.30E-07	5.10E-07	9.30E-07	5.40E-07	9.80E-07	7.80E-07	1.40E-06

Table 7e. PAH Exposure Levels for Floodplain 5

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	3.70E-05	7.10E-05	3.90E-05	7.60E-05	5.30E-05	1.00E-04	2.40E-05	4.80E-05	4.00E-05	7.80E-05	7.80E-06	1.50E-05	2.20E-05	4.20E-05	2.30E-05	4.40E-05	3.30E-05	6.40E-05
	1 to < 2 years	3.70E-05	6.40E-05	4.00E-05	6.90E-05	5.30E-05	9.30E-05	2.50E-05	4.30E-05	4.10E-05	7.10E-05	7.90E-06	1.40E-05	2.20E-05	3.80E-05	2.30E-05	4.00E-05	3.30E-05	5.80E-05
	2 to < 6 years	2.10E-05	4.30E-05	2.20E-05	4.70E-05	3.00E-05	6.20E-05	1.40E-05	2.90E-05	2.30E-05	4.80E-05	4.40E-06	9.20E-06	1.20E-05	2.60E-05	1.30E-05	2.70E-05	1.90E-05	3.90E-05
	6 to < 11 years	1.40E-05	2.70E-05	1.50E-05	2.90E-05	2.00E-05	3.80E-05	9.50E-06	1.80E-05	1.60E-05	2.90E-05	3.00E-06	5.70E-06	8.40E-06	1.60E-05	8.80E-06	1.70E-05	1.30E-05	2.40E-05
	11 to < 16 years	8.60E-06	1.20E-05	9.20E-06	1.30E-05	1.20E-05	1.70E-05	5.70E-06	8.00E-06	9.40E-06	1.30E-05	1.80E-06	2.60E-06	5.10E-06	7.10E-06	5.30E-06	7.50E-06	7.70E-06	1.10E-05
	16 to < 21 years	7.40E-06	1.00E-05	8.00E-06	1.10E-05	1.10E-05	1.50E-05	5.00E-06	6.80E-06	8.10E-06	1.10E-05	1.60E-06	2.20E-06	4.40E-06	6.00E-06	4.60E-06	6.30E-06	6.70E-06	9.20E-06
	Adult	3.00E-06	5.50E-06	3.20E-06	5.90E-06	4.30E-06	7.90E-06	2.00E-06	3.70E-06	3.30E-06	6.00E-06	6.40E-07	1.20E-06	1.80E-06	3.20E-06	1.90E-06	3.40E-06	2.70E-06	4.90E-06
Intermediate	Birth to < 1 year	1.60E-05	3.00E-05	1.70E-05	3.30E-05	2.30E-05	4.40E-05	1.00E-05	2.00E-05	1.70E-05	3.30E-05	3.30E-06	6.50E-06	9.30E-06	1.80E-05	9.80E-06	1.90E-05	1.40E-05	2.70E-05
	1 to < 2 years	1.60E-05	2.80E-05	1.70E-05	3.00E-05	2.30E-05	4.00E-05	1.10E-05	1.80E-05	1.70E-05	3.00E-05	3.40E-06	5.90E-06	9.40E-06	1.60E-05	9.90E-06	1.70E-05	1.40E-05	2.50E-05
	2 to < 6 years	8.90E-06	1.90E-05	9.50E-06	2.00E-05	1.30E-05	2.70E-05	5.90E-06	1.20E-05	9.70E-06	2.00E-05	1.90E-06	4.00E-06	5.20E-06	1.10E-05	5.50E-06	1.20E-05	8.00E-06	1.70E-05
	6 to < 11 years	6.10E-06	1.10E-05	6.50E-06	1.20E-05	8.70E-06	1.60E-05	4.10E-06	7.60E-06	6.70E-06	1.30E-05	1.30E-06	2.40E-06	3.60E-06	6.70E-06	3.80E-06	7.10E-06	5.50E-06	1.00E-05

	11 to < 16 years	3.70E-06	5.20E-06	3.90E-06	5.50E-06	5.30E-06	7.40E-06	2.50E-06	3.40E-06	4.00E-06	5.70E-06	7.80E-07	1.10E-06	2.20E-06	3.00E-06	2.30E-06	3.20E-06	3.30E-06	4.60E-06
	16 to < 21 years	3.20E-06	4.40E-06	3.40E-06	4.70E-06	4.60E-06	6.30E-06	2.10E-06	2.90E-06	3.50E-06	4.80E-06	6.80E-07	9.30E-07	1.90E-06	2.60E-06	2.00E-06	2.70E-06	2.90E-06	3.90E-06
	Adult	1.30E-06	2.30E-06	1.40E-06	2.50E-06	1.80E-06	3.40E-06	8.60E-07	1.60E-06	1.40E-06	2.60E-06	2.70E-07	5.00E-07	7.60E-07	1.40E-06	8.00E-07	1.50E-06	1.20E-06	2.10E-06
Chronic	Birth to < 1 year	1.10E-05	2.00E-05	1.10E-05	2.20E-05	1.50E-05	2.90E-05	7.00E-06	1.40E-05	1.20E-05	2.20E-05	2.20E-06	4.30E-06	6.20E-06	1.20E-05	6.60E-06	1.30E-05	9.50E-06	1.80E-05
	1 to < 2 years	1.10E-05	1.90E-05	1.10E-05	2.00E-05	1.50E-05	2.70E-05	7.10E-06	1.20E-05	1.20E-05	2.00E-05	2.30E-06	3.90E-06	6.30E-06	1.10E-05	6.70E-06	1.20E-05	9.60E-06	1.70E-05
	2 to < 6 years	6.00E-06	1.30E-05	6.40E-06	1.30E-05	8.60E-06	1.80E-05	4.00E-06	8.40E-06	6.50E-06	1.40E-05	1.30E-06	2.70E-06	3.50E-06	7.40E-06	3.70E-06	7.80E-06	5.30E-06	1.10E-05
	6 to < 11 years	4.10E-06	7.70E-06	4.40E-06	8.20E-06	5.90E-06	1.10E-05	2.70E-06	5.10E-06	4.50E-06	8.40E-06	8.70E-07	1.60E-06	2.40E-06	4.50E-06	2.50E-06	4.80E-06	3.70E-06	6.90E-06
	11 to < 16 years	2.50E-06	3.50E-06	2.60E-06	3.70E-06	3.50E-06	5.00E-06	1.60E-06	2.30E-06	2.70E-06	3.80E-06	5.20E-07	7.40E-07	1.50E-06	2.00E-06	1.50E-06	2.20E-06	2.20E-06	3.10E-06
	16 to < 21 years	2.10E-06	2.90E-06	2.30E-06	3.20E-06	3.10E-06	4.20E-06	1.40E-06	2.00E-06	2.30E-06	3.20E-06	4.50E-07	6.20E-07	1.30E-06	1.70E-06	1.30E-06	1.80E-06	1.90E-06	2.60E-06
	Adult	8.60E-07	1.60E-06	9.30E-07	1.70E-06	1.20E-06	2.30E-06	5.80E-07	1.10E-06	9.50E-07	1.70E-06	1.80E-07	3.30E-07	5.10E-07	9.30E-07	5.40E-07	9.80E-07	7.80E-07	1.40E-06

Table 7f. PAH Exposure Levels for Floodplain 6

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	4.30E-05	8.40E-05	4.70E-05	9.10E-05	8.20E-05	1.60E-04	2.70E-05	5.20E-05	5.20E-05	1.00E-04	1.10E-05	2.10E-05	3.40E-05	6.60E-05	4.00E-05	7.70E-05	3.80E-05	7.40E-05
	1 to < 2 years	4.40E-05	7.60E-05	4.80E-05	8.30E-05	8.40E-05	1.50E-04	2.70E-05	4.70E-05	5.20E-05	9.10E-05	1.10E-05	1.90E-05	3.50E-05	6.00E-05	4.00E-05	7.00E-05	3.90E-05	6.70E-05
	2 to < 6 years	2.50E-05	5.10E-05	2.70E-05	5.60E-05	4.70E-05	9.80E-05	1.50E-05	3.20E-05	2.90E-05	6.10E-05	6.20E-06	1.30E-05	1.90E-05	4.10E-05	2.20E-05	4.70E-05	2.20E-05	4.50E-05
	6 to < 11 years	1.70E-05	3.20E-05	1.80E-05	3.40E-05	3.20E-05	6.00E-05	1.00E-05	1.90E-05	2.00E-05	3.70E-05	4.20E-06	7.90E-06	1.30E-05	2.50E-05	1.50E-05	2.90E-05	1.50E-05	2.80E-05
	11 to < 16 years	1.00E-05	1.40E-05	1.10E-05	1.50E-05	1.90E-05	2.70E-05	6.20E-06	8.80E-06	1.20E-05	1.70E-05	2.60E-06	3.60E-06	8.00E-06	1.10E-05	9.30E-06	1.30E-05	8.90E-06	1.30E-05
	16 to < 21 years	8.80E-06	1.20E-05	9.50E-06	1.30E-05	1.70E-05	2.30E-05	5.40E-06	7.40E-06	1.00E-05	1.40E-05	2.20E-06	3.00E-06	6.90E-06	9.50E-06	8.10E-06	1.10E-05	7.70E-06	1.10E-05

	Adult	3.60E-06	6.50E-06	3.80E-06	7.00E-06	6.80E-06	1.20E-05	2.20E-06	4.00E-06	4.20E-06	7.70E-06	8.90E-07	1.60E-06	2.80E-06	5.10E-06	3.30E-06	5.90E-06	3.10E-06	5.70E-06
Intermediate	Birth to < 1 year	1.90E-05	3.60E-05	2.00E-05	3.90E-05	3.50E-05	6.90E-05	1.10E-05	2.20E-05	2.20E-05	4.30E-05	4.70E-06	9.10E-06	1.50E-05	2.80E-05	1.70E-05	3.30E-05	1.60E-05	3.20E-05
	1 to < 2 years	1.90E-05	3.30E-05	2.00E-05	3.50E-05	3.60E-05	6.20E-05	1.20E-05	2.00E-05	2.20E-05	3.90E-05	4.70E-06	8.20E-06	1.50E-05	2.60E-05	1.70E-05	3.00E-05	1.70E-05	2.90E-05
	2 to < 6 years	1.10E-05	2.20E-05	1.10E-05	2.40E-05	2.00E-05	4.20E-05	6.50E-06	1.40E-05	1.20E-05	2.60E-05	2.60E-06	5.60E-06	8.30E-06	1.70E-05	9.60E-06	2.00E-05	9.20E-06	1.90E-05
	6 to < 11 years	7.20E-06	1.40E-05	7.80E-06	1.50E-05	1.40E-05	2.60E-05	4.40E-06	8.30E-06	8.60E-06	1.60E-05	1.80E-06	3.40E-06	5.70E-06	1.10E-05	6.60E-06	1.20E-05	6.30E-06	1.20E-05
	11 to < 16 years	4.30E-06	6.10E-06	4.70E-06	6.60E-06	8.30E-06	1.20E-05	2.70E-06	3.80E-06	5.20E-06	7.30E-06	1.10E-06	1.50E-06	3.40E-06	4.80E-06	4.00E-06	5.60E-06	3.80E-06	5.40E-06
	16 to < 21 years	3.80E-06	5.20E-06	4.10E-06	5.60E-06	7.20E-06	9.80E-06	2.30E-06	3.20E-06	4.50E-06	6.10E-06	9.50E-07	1.30E-06	3.00E-06	4.10E-06	3.50E-06	4.70E-06	3.30E-06	4.60E-06
	Adult	1.50E-06	2.80E-06	1.60E-06	3.00E-06	2.90E-06	5.30E-06	9.40E-07	1.70E-06	1.80E-06	3.30E-06	3.80E-07	7.00E-07	1.20E-06	2.20E-06	1.40E-06	2.50E-06	1.30E-06	2.40E-06
Chronic	Birth to < 1 year	1.20E-05	2.40E-05	1.40E-05	2.60E-05	2.40E-05	4.60E-05	7.70E-06	1.50E-05	1.50E-05	2.90E-05	3.10E-06	6.10E-06	9.80E-06	1.90E-05	1.10E-05	2.20E-05	1.10E-05	2.10E-05
	1 to < 2 years	1.30E-05	2.20E-05	1.40E-05	2.40E-05	2.40E-05	4.20E-05	7.80E-06	1.30E-05	1.50E-05	2.60E-05	3.20E-06	5.50E-06	1.00E-05	1.70E-05	1.20E-05	2.00E-05	1.10E-05	1.90E-05
	2 to < 6 years	7.00E-06	1.50E-05	7.60E-06	1.60E-05	1.30E-05	2.80E-05	4.30E-06	9.10E-06	8.40E-06	1.80E-05	1.80E-06	3.70E-06	5.60E-06	1.20E-05	6.50E-06	1.40E-05	6.20E-06	1.30E-05
	6 to < 11 years	4.80E-06	9.10E-06	5.20E-06	9.80E-06	9.20E-06	1.70E-05	3.00E-06	5.60E-06	5.70E-06	1.10E-05	1.20E-06	2.30E-06	3.80E-06	7.10E-06	4.40E-06	8.30E-06	4.30E-06	8.00E-06
	11 to < 16 years	2.90E-06	4.10E-06	3.20E-06	4.40E-06	5.50E-06	7.80E-06	1.80E-06	2.50E-06	3.50E-06	4.90E-06	7.30E-07	1.00E-06	2.30E-06	3.20E-06	2.70E-06	3.80E-06	2.60E-06	3.60E-06
	16 to < 21 years	2.50E-06	3.50E-06	2.70E-06	3.80E-06	4.80E-06	6.60E-06	1.60E-06	2.10E-06	3.00E-06	4.10E-06	6.40E-07	8.70E-07	2.00E-06	2.70E-06	2.30E-06	3.20E-06	2.20E-06	3.10E-06
	Adult	1.00E-06	1.90E-06	1.10E-06	2.00E-06	1.90E-06	3.50E-06	6.30E-07	1.10E-06	1.20E-06	2.20E-06	2.60E-07	4.70E-07	8.10E-07	1.50E-06	9.40E-07	1.70E-06	9.00E-07	1.60E-06

Table 7g. PAH Exposure Levels for Floodplain 7

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h)anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	4.60E-05	8.90E-05	5.80E-05	0.00011	7.50E-05	0.00015	2.80E-05	5.40E-05	6.30E-05	0.00012	1.20E-05	2.30E-05	3.40E-05	6.60E-05	4.20E-05	8.20E-05	3.80E-05	7.40E-05
	1 to < 2 years	4.70E-05	8.10E-05	5.90E-05	0.0001	7.60E-05	0.00013	2.80E-05	4.90E-05	6.40E-05	0.00011	1.20E-05	2.00E-05	3.40E-05	5.90E-05	4.30E-05	7.50E-05	3.90E-05	6.70E-05

	2 to < 6 years	2.60E-05	5.50E-05	3.30E-05	6.80E-05	4.20E-05	8.90E-05	1.60E-05	3.30E-05	3.60E-05	7.50E-05	6.60E-06	1.40E-05	1.90E-05	4.00E-05	2.40E-05	5.00E-05	2.20E-05	4.50E-05
	6 to < 11 years	1.80E-05	3.30E-05	2.20E-05	4.20E-05	2.90E-05	5.50E-05	1.10E-05	2.00E-05	2.40E-05	4.60E-05	4.50E-06	8.40E-06	1.30E-05	2.50E-05	1.60E-05	3.10E-05	1.50E-05	2.80E-05
	11 to < 16 years	1.10E-05	1.50E-05	1.30E-05	1.90E-05	1.80E-05	2.50E-05	6.50E-06	9.20E-06	1.50E-05	2.10E-05	2.70E-06	3.80E-06	7.90E-06	1.10E-05	9.90E-06	1.40E-05	8.90E-06	1.30E-05
	16 to < 21 years	9.30E-06	1.30E-05	1.20E-05	1.60E-05	1.50E-05	2.10E-05	5.70E-06	7.80E-06	1.30E-05	1.80E-05	2.40E-06	3.20E-06	6.90E-06	9.40E-06	8.60E-06	1.20E-05	7.70E-06	1.10E-05
	Adult	3.80E-06	6.90E-06	4.70E-06	8.60E-06	6.10E-06	1.10E-05	2.30E-06	4.20E-06	5.20E-06	9.40E-06	9.50E-07	1.70E-06	2.80E-06	5.10E-06	3.50E-06	6.30E-06	3.10E-06	5.70E-06
Intermediate	Birth to < 1 year	2.00E-05	3.80E-05	2.50E-05	4.80E-05	3.20E-05	6.20E-05	1.20E-05	2.30E-05	2.70E-05	5.30E-05	5.00E-06	9.70E-06	1.40E-05	2.80E-05	1.80E-05	3.50E-05	1.60E-05	3.20E-05
Intermediate	1 to < 2 years	2.00E-05	3.50E-05	2.50E-05	4.30E-05	3.30E-05	5.70E-05	1.20E-05	2.10E-05	2.70E-05	4.80E-05	5.00E-06	8.80E-06	1.50E-05	2.50E-05	1.80E-05	3.20E-05	1.70E-05	2.90E-05
Intermediate	2 to < 6 years	1.10E-05	2.30E-05	1.40E-05	2.90E-05	1.80E-05	3.80E-05	6.80E-06	1.40E-05	1.50E-05	3.20E-05	2.80E-06	5.90E-06	8.20E-06	1.70E-05	1.00E-05	2.20E-05	9.20E-06	1.90E-05
Intermediate	6 to < 11 years	7.60E-06	1.40E-05	9.60E-06	1.80E-05	1.20E-05	2.30E-05	4.60E-06	8.70E-06	1.00E-05	2.00E-05	1.90E-06	3.60E-06	5.60E-06	1.10E-05	7.00E-06	1.30E-05	6.30E-06	1.20E-05
Intermediate	11 to < 16 years	4.60E-06	6.50E-06	5.80E-06	8.10E-06	7.50E-06	1.10E-05	2.80E-06	3.90E-06	6.30E-06	8.90E-06	1.20E-06	1.60E-06	3.40E-06	4.80E-06	4.20E-06	6.00E-06	3.80E-06	5.40E-06
Intermediate	16 to < 21 years	4.00E-06	5.50E-06	5.00E-06	6.90E-06	6.50E-06	8.90E-06	2.40E-06	3.30E-06	5.50E-06	7.50E-06	1.00E-06	1.40E-06	2.90E-06	4.00E-06	3.70E-06	5.10E-06	3.30E-06	4.60E-06
Intermediate	Adult	1.60E-06	3.00E-06	2.00E-06	3.70E-06	2.60E-06	4.80E-06	9.80E-07	1.80E-06	2.20E-06	4.00E-06	4.10E-07	7.40E-07	1.20E-06	2.20E-06	1.50E-06	2.70E-06	1.30E-06	2.40E-06
Chronic	Birth to < 1 year	1.30E-05	2.60E-05	1.70E-05	3.20E-05	2.20E-05	4.20E-05	8.10E-06	1.60E-05	1.80E-05	3.50E-05	3.30E-06	6.50E-06	9.70E-06	1.90E-05	1.20E-05	2.40E-05	1.10E-05	2.10E-05
Chronic	1 to < 2 years	1.30E-05	2.30E-05	1.70E-05	2.90E-05	2.20E-05	3.80E-05	8.20E-06	1.40E-05	1.80E-05	3.20E-05	3.40E-06	5.90E-06	9.90E-06	1.70E-05	1.20E-05	2.10E-05	1.10E-05	1.90E-05
Chronic	2 to < 6 years	7.50E-06	1.60E-05	9.40E-06	2.00E-05	1.20E-05	2.60E-05	4.60E-06	9.60E-06	1.00E-05	2.20E-05	1.90E-06	4.00E-06	5.50E-06	1.20E-05	6.90E-06	1.40E-05	6.20E-06	1.30E-05
Chronic	6 to < 11 years	5.10E-06	9.60E-06	6.40E-06	1.20E-05	8.30E-06	1.60E-05	3.10E-06	5.90E-06	7.00E-06	1.30E-05	1.30E-06	2.40E-06	3.80E-06	7.10E-06	4.70E-06	8.90E-06	4.30E-06	8.00E-06
Chronic	11 to < 16 years	3.10E-06	4.40E-06	3.90E-06	5.50E-06	5.00E-06	7.10E-06	1.90E-06	2.60E-06	4.20E-06	6.00E-06	7.80E-07	1.10E-06	2.30E-06	3.20E-06	2.80E-06	4.00E-06	2.60E-06	3.60E-06
Chronic	16 to < 21 years	2.70E-06	3.70E-06	3.40E-06	4.60E-06	4.40E-06	6.00E-06	1.60E-06	2.20E-06	3.70E-06	5.10E-06	6.80E-07	9.30E-07	2.00E-06	2.70E-06	2.50E-06	3.40E-06	2.20E-06	3.10E-06
Chronic	Adult	1.10E-06	2.00E-06	1.40E-06	2.50E-06	1.80E-06	3.20E-06	6.60E-07	1.20E-06	1.50E-06	2.70E-06	2.70E-07	5.00E-07	8.00E-07	1.50E-06	1.00E-06	1.80E-06	9.00E-07	1.60E-06

Table 7h. PAH Exposure Levels for Floodplain 8/9

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	3.10E-05	5.90E-05	3.20E-05	6.30E-05	5.10E-05	9.90E-05	1.90E-05	3.70E-05	3.90E-05	7.50E-05	6.20E-06	1.20E-05	2.30E-05	4.40E-05	2.60E-05	5.10E-05	4.20E-05	8.10E-05
	1 to < 2 years	3.10E-05	5.40E-05	3.30E-05	5.70E-05	5.20E-05	9.00E-05	2.00E-05	3.40E-05	3.90E-05	6.80E-05	6.30E-06	1.10E-05	2.30E-05	4.00E-05	2.70E-05	4.60E-05	4.20E-05	7.40E-05
	2 to < 6 years	1.70E-05	3.60E-05	1.80E-05	3.80E-05	2.90E-05	6.00E-05	1.10E-05	2.30E-05	2.20E-05	4.60E-05	3.50E-06	7.30E-06	1.30E-05	2.70E-05	1.50E-05	3.10E-05	2.40E-05	5.00E-05
	6 to < 11 years	1.20E-05	2.20E-05	1.20E-05	2.30E-05	2.00E-05	3.70E-05	7.40E-06	1.40E-05	1.50E-05	2.80E-05	2.40E-06	4.50E-06	8.80E-06	1.70E-05	1.00E-05	1.90E-05	1.60E-05	3.00E-05
	11 to < 16 years	7.10E-06	1.00E-05	7.50E-06	1.10E-05	1.20E-05	1.70E-05	4.50E-06	6.30E-06	9.00E-06	1.30E-05	1.40E-06	2.00E-06	5.30E-06	7.50E-06	6.20E-06	8.70E-06	9.80E-06	1.40E-05
	16 to < 21 years	6.20E-06	8.50E-06	6.60E-06	9.00E-06	1.00E-05	1.40E-05	3.90E-06	5.40E-06	7.80E-06	1.10E-05	1.30E-06	1.70E-06	4.60E-06	6.30E-06	5.40E-06	7.30E-06	8.50E-06	1.20E-05
	Adult	2.50E-06	4.60E-06	2.60E-06	4.80E-06	4.20E-06	7.60E-06	1.60E-06	2.90E-06	3.20E-06	5.80E-06	5.10E-07	9.20E-07	1.90E-06	3.40E-06	2.20E-06	3.90E-06	3.40E-06	6.30E-06
Intermediate	Birth to < 1 year	1.30E-05	2.50E-05	1.40E-05	2.70E-05	2.20E-05	4.20E-05	8.30E-06	1.60E-05	1.70E-05	3.20E-05	2.70E-06	5.10E-06	9.80E-06	1.90E-05	1.10E-05	2.20E-05	1.80E-05	3.50E-05
	1 to < 2 years	1.30E-05	2.30E-05	1.40E-05	2.40E-05	2.20E-05	3.80E-05	8.40E-06	1.50E-05	1.70E-05	2.90E-05	2.70E-06	4.70E-06	9.90E-06	1.70E-05	1.10E-05	2.00E-05	1.80E-05	3.20E-05
	2 to < 6 years	7.40E-06	1.60E-05	7.80E-06	1.60E-05	1.20E-05	2.60E-05	4.70E-06	9.80E-06	9.30E-06	2.00E-05	1.50E-06	3.10E-06	5.50E-06	1.20E-05	6.40E-06	1.30E-05	1.00E-05	2.10E-05
	6 to < 11 years	5.10E-06	9.50E-06	5.40E-06	1.00E-05	8.40E-06	1.60E-05	3.20E-06	6.00E-06	6.40E-06	1.20E-05	1.00E-06	1.90E-06	3.80E-06	7.10E-06	4.40E-06	8.20E-06	6.90E-06	1.30E-05
	11 to < 16 years	3.10E-06	4.30E-06	3.20E-06	4.50E-06	5.10E-06	7.20E-06	1.90E-06	2.70E-06	3.90E-06	5.40E-06	6.20E-07	8.70E-07	2.30E-06	3.20E-06	2.60E-06	3.70E-06	4.20E-06	5.90E-06
	16 to < 21 years	2.70E-06	3.60E-06	2.80E-06	3.90E-06	4.40E-06	6.10E-06	1.70E-06	2.30E-06	3.30E-06	4.60E-06	5.40E-07	7.40E-07	2.00E-06	2.70E-06	2.30E-06	3.10E-06	3.60E-06	5.00E-06
	Adult	1.10E-06	2.00E-06	1.10E-06	2.10E-06	1.80E-06	3.30E-06	6.80E-07	1.20E-06	1.40E-06	2.50E-06	2.20E-07	4.00E-07	8.00E-07	1.50E-06	9.30E-07	1.70E-06	1.50E-06	2.70E-06
Chronic	Birth to < 1 year	8.80E-06	1.70E-05	9.30E-06	1.80E-05	1.50E-05	2.80E-05	5.50E-06	1.10E-05	1.10E-05	2.10E-05	1.80E-06	3.50E-06	6.60E-06	1.30E-05	7.60E-06	1.50E-05	1.20E-05	2.30E-05
	1 to < 2 years	8.90E-06	1.50E-05	9.40E-06	1.60E-05	1.50E-05	2.60E-05	5.60E-06	9.70E-06	1.10E-05	1.90E-05	1.80E-06	3.10E-06	6.70E-06	1.20E-05	7.70E-06	1.30E-05	1.20E-05	2.10E-05

	2 to < 6 years	5.00E-06	1.00E-05	5.30E-06	1.10E-05	8.30E-06	1.70E-05	3.10E-06	6.60E-06	6.30E-06	1.30E-05	1.00E-06	2.10E-06	3.70E-06	7.80E-06	4.30E-06	9.00E-06	6.80E-06	1.40E-05
	6 to < 11 years	3.40E-06	6.40E-06	3.60E-06	6.80E-06	5.70E-06	1.10E-05	2.10E-06	4.00E-06	4.30E-06	8.10E-06	6.90E-07	1.30E-06	2.50E-06	4.80E-06	2.90E-06	5.50E-06	4.70E-06	8.80E-06
	11 to < 16 years	2.00E-06	2.90E-06	2.20E-06	3.10E-06	3.40E-06	4.80E-06	1.30E-06	1.80E-06	2.60E-06	3.60E-06	4.20E-07	5.80E-07	1.50E-06	2.20E-06	1.80E-06	2.50E-06	2.80E-06	4.00E-06
	16 to < 21 years	1.80E-06	2.40E-06	1.90E-06	2.60E-06	3.00E-06	4.10E-06	1.10E-06	1.50E-06	2.20E-06	3.10E-06	3.60E-07	5.00E-07	1.30E-06	1.80E-06	1.50E-06	2.10E-06	2.40E-06	3.40E-06
	Adult	7.20E-07	1.30E-06	7.60E-07	1.40E-06	1.20E-06	2.20E-06	4.50E-07	8.30E-07	9.10E-07	1.70E-06	1.50E-07	2.70E-07	5.40E-07	9.80E-07	6.20E-07	1.10E-06	9.90E-07	1.80E-06

Table 7i. PAH Exposure Levels for Floodplain 10

		Benz(a) anthracene		Benzo(a)pyrene		Benzo(b) fluoranthene		Benzo(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Indeno(1,2,3-cd) pyrene		Benzo(ghi) perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	1.90E-05	3.70E-05	2.20E-05	4.20E-05	3.20E-05	6.30E-05	1.30E-05	2.50E-05	2.30E-05	4.50E-05	4.80E-06	9.20E-06	1.60E-05	3.10E-05	2.10E-05	4.10E-05	1.70E-05	3.40E-05
	1 to < 2 years	1.90E-05	3.30E-05	2.20E-05	3.80E-05	3.30E-05	5.70E-05	1.30E-05	2.30E-05	2.40E-05	4.10E-05	4.80E-06	8.40E-06	1.60E-05	2.80E-05	2.10E-05	3.70E-05	1.80E-05	3.10E-05
	2 to < 6 years	1.10E-05	2.30E-05	1.20E-05	2.60E-05	1.80E-05	3.80E-05	7.20E-06	1.50E-05	1.30E-05	2.80E-05	2.70E-06	5.60E-06	9.00E-06	1.90E-05	1.20E-05	2.50E-05	9.80E-06	2.10E-05
	6 to < 11 years	7.40E-06	1.40E-05	8.50E-06	1.60E-05	1.30E-05	2.40E-05	5.00E-06	9.30E-06	9.10E-06	1.70E-05	1.80E-06	3.50E-06	6.20E-06	1.20E-05	8.20E-06	1.50E-05	6.70E-06	1.30E-05
	11 to < 16 years	4.40E-06	6.30E-06	5.10E-06	7.20E-06	7.60E-06	1.10E-05	3.00E-06	4.20E-06	5.50E-06	7.70E-06	1.10E-06	1.60E-06	3.70E-06	5.20E-06	4.90E-06	6.90E-06	4.10E-06	5.70E-06
	16 to < 21 years	3.90E-06	5.30E-06	4.40E-06	6.10E-06	6.60E-06	9.00E-06	2.60E-06	3.60E-06	4.70E-06	6.50E-06	9.70E-07	1.30E-06	3.20E-06	4.40E-06	4.30E-06	5.90E-06	3.50E-06	4.80E-06
	Adult	1.60E-06	2.80E-06	1.80E-06	3.30E-06	2.70E-06	4.80E-06	1.10E-06	1.90E-06	1.90E-06	3.50E-06	3.90E-07	7.10E-07	1.30E-06	2.40E-06	1.70E-06	3.20E-06	1.40E-06	2.60E-06
Intermediate	Birth to < 1 year	8.20E-06	1.60E-05	9.40E-06	1.80E-05	1.40E-05	2.70E-05	5.50E-06	1.10E-05	1.00E-05	1.90E-05	2.00E-06	4.00E-06	6.80E-06	1.30E-05	9.00E-06	1.80E-05	7.40E-06	1.40E-05
	1 to < 2 years	8.30E-06	1.40E-05	9.50E-06	1.60E-05	1.40E-05	2.40E-05	5.60E-06	9.70E-06	1.00E-05	1.80E-05	2.10E-06	3.60E-06	6.90E-06	1.20E-05	9.20E-06	1.60E-05	7.50E-06	1.30E-05
	2 to < 6 years	4.60E-06	9.70E-06	5.30E-06	1.10E-05	7.80E-06	1.60E-05	3.10E-06	6.50E-06	5.70E-06	1.20E-05	1.20E-06	2.40E-06	3.90E-06	8.10E-06	5.10E-06	1.10E-05	4.20E-06	8.80E-06
	6 to < 11 years	3.20E-06	5.90E-06	3.60E-06	6.80E-06	5.40E-06	1.00E-05	2.10E-06	4.00E-06	3.90E-06	7.30E-06	7.90E-07	1.50E-06	2.60E-06	5.00E-06	3.50E-06	6.60E-06	2.90E-06	5.40E-06

	11 to < 16 years	1.90E-06	2.70E-06	2.20E-06	3.10E-06	3.20E-06	4.60E-06	1.30E-06	1.80E-06	2.30E-06	3.30E-06	4.80E-07	6.70E-07	1.60E-06	2.20E-06	2.10E-06	3.00E-06	1.70E-06	2.40E-06
	16 to < 21 years	1.70E-06	2.30E-06	1.90E-06	2.60E-06	2.80E-06	3.90E-06	1.10E-06	1.50E-06	2.00E-06	2.80E-06	4.10E-07	5.70E-07	1.40E-06	1.90E-06	1.80E-06	2.50E-06	1.50E-06	2.10E-06
	Adult	6.70E-07	1.20E-06	7.70E-07	1.40E-06	1.10E-06	2.10E-06	4.50E-07	8.20E-07	8.20E-07	1.50E-06	1.70E-07	3.00E-07	5.60E-07	1.00E-06	7.40E-07	1.40E-06	6.10E-07	1.10E-06
Chronic	Birth to < 1 year	5.50E-06	1.10E-05	6.30E-06	1.20E-05	9.30E-06	1.80E-05	3.70E-06	7.20E-06	6.70E-06	1.30E-05	1.40E-06	2.70E-06	4.60E-06	8.90E-06	6.10E-06	1.20E-05	5.00E-06	9.70E-06
	1 to < 2 years	5.50E-06	9.60E-06	6.40E-06	1.10E-05	9.40E-06	1.60E-05	3.70E-06	6.50E-06	6.80E-06	1.20E-05	1.40E-06	2.40E-06	4.70E-06	8.10E-06	6.20E-06	1.10E-05	5.10E-06	8.80E-06
	2 to < 6 years	3.10E-06	6.50E-06	3.60E-06	7.50E-06	5.30E-06	1.10E-05	2.10E-06	4.40E-06	3.80E-06	8.00E-06	7.70E-07	1.60E-06	2.60E-06	5.40E-06	3.40E-06	7.20E-06	2.80E-06	5.90E-06
	6 to < 11 years	2.10E-06	4.00E-06	2.40E-06	4.60E-06	3.60E-06	6.80E-06	1.40E-06	2.70E-06	2.60E-06	4.90E-06	5.30E-07	1.00E-06	1.80E-06	3.30E-06	2.30E-06	4.40E-06	1.90E-06	3.60E-06
	11 to < 16 years	1.30E-06	1.80E-06	1.50E-06	2.10E-06	2.20E-06	3.10E-06	8.60E-07	1.20E-06	1.60E-06	2.20E-06	3.20E-07	4.50E-07	1.10E-06	1.50E-06	1.40E-06	2.00E-06	1.20E-06	1.60E-06
	16 to < 21 years	1.10E-06	1.50E-06	1.30E-06	1.80E-06	1.90E-06	2.60E-06	7.50E-07	1.00E-06	1.40E-06	1.90E-06	2.80E-07	3.80E-07	9.30E-07	1.30E-06	1.20E-06	1.70E-06	1.00E-06	1.40E-06
	Adult	4.50E-07	8.20E-07	5.20E-07	9.40E-07	7.60E-07	1.40E-06	3.00E-07	5.50E-07	5.50E-07	1.00E-06	1.10E-07	2.00E-07	3.80E-07	6.90E-07	5.00E-07	9.10E-07	4.10E-07	7.50E-07

Table 7j. PAH Exposure Levels for Floodplain 11

		Benz(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenz(a,h)anthracene		Indeno(1,2,3-cd)pyrene		Benzo(ghi)perylene		Phenanthrene	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	3.40E-05	6.60E-05	3.60E-05	7.00E-05	5.00E-05	9.70E-05	2.00E-05	3.90E-05	4.00E-05	7.70E-05	6.90E-06	1.30E-05	2.30E-05	4.50E-05	2.90E-05	5.60E-05	3.70E-05	7.20E-05
	1 to < 2 years	3.40E-05	6.00E-05	3.70E-05	6.40E-05	5.10E-05	8.80E-05	2.00E-05	3.50E-05	4.00E-05	7.00E-05	7.00E-06	1.20E-05	2.40E-05	4.10E-05	2.90E-05	5.00E-05	3.80E-05	6.50E-05
	2 to < 6 years	1.90E-05	4.00E-05	2.10E-05	4.30E-05	2.80E-05	6.00E-05	1.10E-05	2.40E-05	2.30E-05	4.70E-05	3.90E-06	8.20E-06	1.30E-05	2.80E-05	1.60E-05	3.40E-05	2.10E-05	4.40E-05
	6 to < 11 years	1.30E-05	2.50E-05	1.40E-05	2.60E-05	1.90E-05	3.60E-05	7.80E-06	1.50E-05	1.50E-05	2.90E-05	2.70E-06	5.00E-06	9.00E-06	1.70E-05	1.10E-05	2.10E-05	1.40E-05	2.70E-05
	11 to < 16 years	7.90E-06	1.10E-05	8.50E-06	1.20E-05	1.20E-05	1.60E-05	4.70E-06	6.60E-06	9.30E-06	1.30E-05	1.60E-06	2.30E-06	5.50E-06	7.70E-06	6.70E-06	9.40E-06	8.70E-06	1.20E-05
	16 to < 21 years	6.90E-06	9.40E-06	7.40E-06	1.00E-05	1.00E-05	1.40E-05	4.10E-06	5.60E-06	8.10E-06	1.10E-05	1.40E-06	1.90E-06	4.70E-06	6.50E-06	5.80E-06	8.00E-06	7.50E-06	1.00E-05
	Adult	2.80E-06	5.10E-06	3.00E-06	5.40E-06	4.10E-06	7.50E-06	1.70E-06	3.00E-06	3.30E-06	6.00E-06	5.70E-07	1.00E-06	1.90E-06	3.50E-06	2.30E-06	4.30E-06	3.00E-06	5.50E-06

Intermediate	Birth to < 1 year	1.50E-05	2.80E-05	1.60E-05	3.00E-05	2.20E-05	4.20E-05	8.60E-06	1.70E-05	1.70E-05	3.30E-05	3.00E-06	5.80E-06	1.00E-05	1.90E-05	1.20E-05	2.40E-05	1.60E-05	3.10E-05
	1 to < 2 years	1.50E-05	2.60E-05	1.60E-05	2.70E-05	2.20E-05	3.80E-05	8.80E-06	1.50E-05	1.70E-05	3.00E-05	3.00E-06	5.20E-06	1.00E-05	1.80E-05	1.20E-05	2.20E-05	1.60E-05	2.80E-05
	2 to < 6 years	8.20E-06	1.70E-05	8.80E-06	1.80E-05	1.20E-05	2.60E-05	4.90E-06	1.00E-05	9.60E-06	2.00E-05	1.70E-06	3.50E-06	5.70E-06	1.20E-05	6.90E-06	1.50E-05	9.00E-06	1.90E-05
	6 to < 11 years	5.60E-06	1.10E-05	6.00E-06	1.10E-05	8.30E-06	1.60E-05	3.30E-06	6.30E-06	6.60E-06	1.20E-05	1.20E-06	2.20E-06	3.90E-06	7.30E-06	4.70E-06	8.90E-06	6.20E-06	1.20E-05
	11 to < 16 years	3.40E-06	4.80E-06	3.60E-06	5.10E-06	5.00E-06	7.10E-06	2.00E-06	2.80E-06	4.00E-06	5.60E-06	6.90E-07	9.80E-07	2.30E-06	3.30E-06	2.90E-06	4.00E-06	3.70E-06	5.20E-06
	16 to < 21 years	2.90E-06	4.00E-06	3.20E-06	4.30E-06	4.40E-06	6.00E-06	1.80E-06	2.40E-06	3.50E-06	4.70E-06	6.00E-07	8.30E-07	2.00E-06	2.80E-06	2.50E-06	3.40E-06	3.20E-06	4.40E-06
	Adult	1.20E-06	2.20E-06	1.30E-06	2.30E-06	1.80E-06	3.20E-06	7.10E-07	1.30E-06	1.40E-06	2.60E-06	2.40E-07	4.40E-07	8.20E-07	1.50E-06	1.00E-06	1.80E-06	1.30E-06	2.40E-06
Chronic	Birth to < 1 year	9.70E-06	1.90E-05	1.00E-05	2.00E-05	1.40E-05	2.80E-05	5.80E-06	1.10E-05	1.10E-05	2.20E-05	2.00E-06	3.90E-06	6.70E-06	1.30E-05	8.20E-06	1.60E-05	1.10E-05	2.10E-05
	1 to < 2 years	9.90E-06	1.70E-05	1.10E-05	1.80E-05	1.50E-05	2.50E-05	5.90E-06	1.00E-05	1.20E-05	2.00E-05	2.00E-06	3.50E-06	6.80E-06	1.20E-05	8.40E-06	1.40E-05	1.10E-05	1.90E-05
	2 to < 6 years	5.50E-06	1.20E-05	5.90E-06	1.20E-05	8.20E-06	1.70E-05	3.30E-06	6.90E-06	6.50E-06	1.40E-05	1.10E-06	2.40E-06	3.80E-06	8.00E-06	4.70E-06	9.80E-06	6.00E-06	1.30E-05
	6 to < 11 years	3.80E-06	7.10E-06	4.00E-06	7.60E-06	5.60E-06	1.00E-05	2.20E-06	4.20E-06	4.40E-06	8.30E-06	7.70E-07	1.50E-06	2.60E-06	4.90E-06	3.20E-06	6.00E-06	4.10E-06	7.80E-06
	11 to < 16 years	2.30E-06	3.20E-06	2.40E-06	3.40E-06	3.40E-06	4.70E-06	1.40E-06	1.90E-06	2.70E-06	3.80E-06	4.70E-07	6.60E-07	1.60E-06	2.20E-06	1.90E-06	2.70E-06	2.50E-06	3.50E-06
	16 to < 21 years	2.00E-06	2.70E-06	2.10E-06	2.90E-06	2.90E-06	4.00E-06	1.20E-06	1.60E-06	2.30E-06	3.20E-06	4.00E-07	5.60E-07	1.40E-06	1.90E-06	1.70E-06	2.30E-06	2.20E-06	3.00E-06
	Adult	8.00E-07	1.50E-06	8.60E-07	1.60E-06	1.20E-06	2.20E-06	4.80E-07	8.70E-07	9.40E-07	1.70E-06	1.60E-07	3.00E-07	5.50E-07	1.00E-06	6.70E-07	1.20E-06	8.70E-07	1.60E-06

Table 8: PAH Exposure Levels as a Percentage of Benzo(a)pyrene

	Benz(a)anthracene		Benzo(a)pyrene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Chrysene		Dibenz(a,h)anthracene		Indeno(1,2,3-cd)pyrene		Benzo(ghi)perylene		Phenanthrene	
	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME	CTE	RME
FP1	94.44%	93.88%	100.00%	100.00%	144.94%	142.63%	53.03%	52.76%	111.15%	110.65%	20.64%	20.44%	67.11%	66.29%	83.22%	82.90%	139.06%	138.32%
FP2	80.19%	80.28%	100.00%	100.00%	134.71%	134.73%	48.62%	48.40%	110.04%	109.63%	16.01%	16.02%	60.38%	59.93%	69.97%	70.30%	80.19%	80.28%
FP3	86.77%	86.08%	100.00%	100.00%	166.86%	167.13%	49.88%	49.98%	100.00%	100.00%	20.86%	20.76%	58.34%	58.27%	60.12%	59.93%	78.98%	78.24%
FP4	94.30%	93.21%	100.00%	100.00%	134.34%	133.86%	62.42%	62.22%	102.93%	101.92%	19.90%	19.85%	55.58%	54.86%	58.27%	58.31%	84.42%	83.45%
FP5	94.83%	93.78%	100.00%	100.00%	134.30%	134.37%	62.36%	62.43%	103.18%	102.08%	19.93%	19.78%	55.74%	54.81%	58.23%	58.62%	84.40%	83.33%
FP6	92.66%	92.79%	100.00%	100.00%	175.95%	176.12%	56.97%	56.72%	109.46%	109.92%	23.28%	23.17%	73.03%	72.88%	84.72%	84.53%	81.35%	81.51%

FP7	79.50%	80.07%	100.00%	100.00%	129.32%	130.82%	48.31%	48.42%	108.42%	109.88%	20.13%	20.15%	58.50%	59.06%	72.74%	73.59%	65.86%	66.41%
FP8/9	95.09%	94.21%	100.00%	100.00%	158.46%	157.92%	59.80%	59.63%	120.17%	119.68%	19.29%	19.13%	70.83%	71.04%	81.67%	81.20%	129.72%	129.93%
FP10	87.29%	87.22%	100.00%	100.00%	147.96%	148.27%	58.65%	58.69%	106.65%	107.22%	21.79%	21.77%	72.97%	72.91%	95.89%	97.26%	79.14%	79.42%
FP11	93.33%	94.67%	100.00%	100.00%	138.00%	139.08%	55.47%	55.79%	109.29%	110.40%	19.01%	19.25%	64.11%	65.07%	78.38%	79.50%	101.99%	103.37%

Table 9a. Heavy Metal Exposure Levels in Floodplain 1

		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	0.0003	0.00079	1.60E-05	3.10E-05
	1 to < 2 years	0.00033	0.00072	1.60E-05	2.80E-05
	2 to < 6 years	0.00015	0.00047	9.20E-06	1.90E-05
	6 to < 11 years	8.50E-05	0.00026	6.40E-06	1.20E-05
	11 to < 16 years	2.90E-05	7.80E-05	3.90E-06	5.40E-06
	16 to < 21 years	2.30E-05	6.30E-05	3.40E-06	4.60E-06
	Adult	1.70E-05	5.20E-05	1.40E-06	2.40E-06
Intermediate	Birth to < 1 year	0.00013	0.00034	7.00E-06	1.30E-05
	1 to < 2 years	0.00014	0.00031	7.00E-06	1.20E-05
	2 to < 6 years	6.40E-05	0.0002	4.00E-06	8.10E-06
	6 to < 11 years	3.60E-05	0.00011	2.70E-06	5.00E-06
	11 to < 16 years	1.20E-05	3.30E-05	1.70E-06	2.30E-06
	16 to < 21 years	1.00E-05	2.70E-05	1.50E-06	2.00E-06
	Adult	7.30E-06	2.20E-05	5.80E-07	1.00E-06
Chronic	Birth to < 1 year	8.60E-05	0.00023	4.70E-06	8.90E-06
	1 to < 2 years	9.50E-05	0.00021	4.70E-06	8.00E-06
	2 to < 6 years	4.30E-05	0.00014	2.70E-06	5.40E-06
	6 to < 11 years	2.40E-05	7.50E-05	1.80E-06	3.40E-06
	11 to < 16 years	8.30E-06	2.20E-05	1.10E-06	1.60E-06
	16 to < 21 years	6.80E-06	1.80E-05	9.80E-07	1.30E-06
	Adult	4.90E-06	1.50E-05	3.90E-07	6.90E-07

Table 9b. Heavy Metal Exposure Levels in Floodplain 2

		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	0.00056	0.0015	2.80E-06	5.40E-06
	1 to < 2 years	0.00062	0.0013	2.90E-06	4.90E-06
	2 to < 6 years	0.00028	0.00088	1.60E-06	3.30E-06
	6 to < 11 years	0.00016	0.00049	1.10E-06	2.00E-06
	11 to < 16 years	5.40E-05	0.00015	6.90E-07	9.50E-07
	16 to < 21 years	4.40E-05	0.00012	6.00E-07	8.00E-07
	Adult	3.20E-05	9.70E-05	2.40E-07	4.20E-07
Intermediate	Birth to < 1 year	0.00024	0.00063	1.20E-06	2.30E-06
	1 to < 2 years	0.00026	0.00057	1.20E-06	2.10E-06
	2 to < 6 years	0.00012	0.00038	6.90E-07	1.40E-06
	6 to < 11 years	6.80E-05	0.00021	4.80E-07	8.80E-07
	11 to < 16 years	2.30E-05	6.20E-05	2.90E-07	4.10E-07
	16 to < 21 years	1.90E-05	5.00E-05	2.60E-07	3.40E-07
	Adult	1.40E-05	4.10E-05	1.00E-07	1.80E-07
Chronic	Birth to < 1 year	0.00016	0.00042	8.20E-07	1.60E-06

	1 to < 2 years	0.00018	0.00038	8.30E-07	1.40E-06
	2 to < 6 years	8.00E-05	0.00025	4.70E-07	9.50E-07
	6 to < 11 years	4.50E-05	0.00014	3.20E-07	5.90E-07
	11 to < 16 years	1.50E-05	4.20E-05	2.00E-07	2.70E-07
	16 to < 21 years	1.30E-05	3.30E-05	1.70E-07	2.30E-07
	Adult	9.10E-06	2.80E-05	6.80E-08	1.20E-07

Table 9c. Heavy Metal Exposure Levels in Floodplain 3

		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	0.0005	0.0013	1.90E-06	3.60E-06
	1 to < 2 years	0.00055	0.0012	1.90E-06	3.30E-06
	2 to < 6 years	0.00025	0.00079	1.10E-06	2.20E-06
	6 to < 11 years	0.00014	0.00043	7.50E-07	1.40E-06
	11 to < 16 years	4.80E-05	0.00013	4.60E-07	6.30E-07
	16 to < 21 years	3.90E-05	0.0001	4.00E-07	5.40E-07
	Adult	2.80E-05	8.70E-05	1.60E-07	2.80E-07
Intermediate	Birth to < 1 year	0.00021	0.00056	8.10E-07	1.50E-06
	1 to < 2 years	0.00024	0.00051	8.20E-07	1.40E-06
	2 to < 6 years	0.00011	0.00034	4.60E-07	9.50E-07
	6 to < 11 years	6.10E-05	0.00019	3.20E-07	5.80E-07
	11 to < 16 years	2.10E-05	5.60E-05	2.00E-07	2.70E-07
	16 to < 21 years	1.70E-05	4.50E-05	1.70E-07	2.30E-07
	Adult	1.20E-05	3.70E-05	6.80E-08	1.20E-07
Chronic	Birth to < 1 year	0.00014	0.00038	5.50E-07	1.00E-06
	1 to < 2 years	0.00016	0.00034	5.50E-07	9.40E-07
	2 to < 6 years	7.20E-05	0.00023	3.10E-07	6.30E-07
	6 to < 11 years	4.10E-05	0.00013	2.10E-07	3.90E-07
	11 to < 16 years	1.40E-05	3.70E-05	1.30E-07	1.80E-07
	16 to < 21 years	1.10E-05	3.00E-05	1.10E-07	1.50E-07
	Adult	8.20E-06	2.50E-05	4.50E-08	8.10E-08

Table 9d. Heavy Metal Exposure Levels in Floodplain 4

	Chromium		Mercury		
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	0.00031	0.00081	2.10E-06	4.00E-06
	1 to < 2 years	0.00034	0.00074	2.10E-06	3.60E-06
	2 to < 6 years	0.00015	0.00048	1.20E-06	2.40E-06
	6 to < 11 years	8.70E-05	0.00027	8.20E-07	1.50E-06
	11 to < 16 years	3.00E-05	8.00E-05	5.00E-07	6.90E-07
	16 to < 21 years	2.40E-05	6.40E-05	4.40E-07	5.90E-07
	Adult	1.80E-05	5.30E-05	1.70E-07	3.10E-07

Intermediate	Birth to < 1 year	0.00013	0.00035	8.90E-07	1.70E-06
	1 to < 2 years	0.00015	0.00032	9.00E-07	1.50E-06
	2 to < 6 years	6.60E-05	0.00021	5.10E-07	1.00E-06
	6 to < 11 years	3.70E-05	0.00011	3.50E-07	6.40E-07
	11 to < 16 years	1.30E-05	3.40E-05	2.20E-07	3.00E-07
	16 to < 21 years	1.00E-05	2.80E-05	1.90E-07	2.50E-07
	Adult	7.50E-06	2.30E-05	7.40E-08	1.30E-07
Chronic	Birth to < 1 year	8.90E-05	0.00023	6.00E-07	1.10E-06
	1 to < 2 years	9.80E-05	0.00021	6.00E-07	1.00E-06
	2 to < 6 years	4.40E-05	0.00014	3.40E-07	7.00E-07
	6 to < 11 years	2.50E-05	7.70E-05	2.40E-07	4.30E-07
	11 to < 16 years	8.50E-06	2.30E-05	1.40E-07	2.00E-07
	16 to < 21 years	6.90E-06	1.80E-05	1.30E-07	1.70E-07
	Adult	5.00E-06	1.50E-05	5.00E-08	8.90E-08

Table 9e. Heavy Metal Exposure Levels in Floodplain 5

		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	0.00031	0.00081	2.10E-06	4.00E-06
	1 to < 2 years	0.00034	0.00074	2.10E-06	3.60E-06
	2 to < 6 years	0.00015	0.00048	1.20E-06	2.40E-06
	6 to < 11 years	8.70E-05	0.00027	8.20E-07	1.50E-06
	11 to < 16 years	3.00E-05	8.00E-05	5.00E-07	6.90E-07
	16 to < 21 years	2.40E-05	6.40E-05	4.40E-07	5.90E-07
	Adult	1.80E-05	5.30E-05	1.70E-07	3.10E-07
Intermediate	Birth to < 1 year	0.00013	0.00035	8.90E-07	1.70E-06
	1 to < 2 years	0.00015	0.00032	9.00E-07	1.50E-06
	2 to < 6 years	6.60E-05	0.00021	5.10E-07	1.00E-06
	6 to < 11 years	3.70E-05	0.00011	3.50E-07	6.40E-07
	11 to < 16 years	1.30E-05	3.40E-05	2.20E-07	3.00E-07
	16 to < 21 years	1.00E-05	2.80E-05	1.90E-07	2.50E-07
	Adult	7.50E-06	2.30E-05	7.40E-08	1.30E-07
Chronic	Birth to < 1 year	8.90E-05	0.00023	6.00E-07	1.10E-06
	1 to < 2 years	9.80E-05	0.00021	6.00E-07	1.00E-06
	2 to < 6 years	4.40E-05	0.00014	3.40E-07	7.00E-07
	6 to < 11 years	2.50E-05	7.70E-05	2.40E-07	4.30E-07
	11 to < 16 years	8.50E-06	2.30E-05	1.40E-07	2.00E-07
	16 to < 21 years	6.90E-06	1.80E-05	1.30E-07	1.70E-07
	Adult	5.00E-06	1.50E-05	5.00E-08	8.90E-08

Table 9f. Heavy Metal Exposure Levels in Floodplain 6

		Cadmium		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	4.20E-05	9.90E-05	0.00081	0.0021	5.00E-06	9.50E-06
	1 to < 2 years	4.50E-05	9.00E-05	0.0009	0.0019	5.00E-06	8.60E-06
	2 to < 6 years	2.20E-05	6.00E-05	0.00041	0.0013	2.80E-06	5.80E-06
	6 to < 11 years	1.30E-05	3.40E-05	0.00023	0.00071	2.00E-06	3.60E-06
	11 to < 16 years	6.10E-06	1.20E-05	7.80E-05	0.00021	1.20E-06	1.70E-06
	16 to < 21 years	5.20E-06	9.80E-06	6.40E-05	0.00017	1.00E-06	1.40E-06
	Adult	2.80E-06	6.90E-06	4.60E-05	0.00014	4.20E-07	7.40E-07
Intermediate	Birth to < 1 year	1.80E-05	4.20E-05	0.00035	0.00092	2.10E-06	4.10E-06
	1 to < 2 years	1.90E-05	3.90E-05	0.00039	0.00083	2.20E-06	3.70E-06
	2 to < 6 years	9.40E-06	2.60E-05	0.00017	0.00055	1.20E-06	2.50E-06
	6 to < 11 years	5.70E-06	1.50E-05	9.90E-05	0.0003	8.40E-07	1.50E-06
	11 to < 16 years	2.60E-06	5.10E-06	3.30E-05	9.10E-05	5.20E-07	7.10E-07
	16 to < 21 years	2.20E-06	4.20E-06	2.70E-05	7.30E-05	4.50E-07	6.00E-07
	Adult	1.20E-06	2.90E-06	2.00E-05	6.10E-05	1.80E-07	3.20E-07
Chronic	Birth to < 1 year	1.20E-05	2.90E-05	0.00023	0.00061	1.40E-06	2.70E-06
	1 to < 2 years	1.30E-05	2.60E-05	0.00026	0.00056	1.40E-06	2.50E-06
	2 to < 6 years	6.30E-06	1.70E-05	0.00012	0.00037	8.20E-07	1.70E-06
	6 to < 11 years	3.90E-06	9.80E-06	6.60E-05	0.0002	5.60E-07	1.00E-06
	11 to < 16 years	1.80E-06	3.40E-06	2.20E-05	6.10E-05	3.50E-07	4.80E-07
	16 to < 21 years	1.50E-06	2.80E-06	1.80E-05	4.90E-05	3.00E-07	4.10E-07
	Adult	7.90E-07	2.00E-06	1.30E-05	4.10E-05	1.20E-07	2.10E-07

Table 9g. Heavy Metal Exposure Levels in Floodplain 7

		Cadmium		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	4.50E-05	0.00011	0.00084	0.0022	7.60E-06	1.40E-05
	1 to < 2 years	4.80E-05	9.70E-05	0.00093	0.002	7.70E-06	1.30E-05
	2 to < 6 years	2.30E-05	6.40E-05	0.00042	0.0013	4.30E-06	8.90E-06
	6 to < 11 years	1.40E-05	3.70E-05	0.00024	0.00073	3.00E-06	5.50E-06
	11 to < 16 years	6.50E-06	1.30E-05	8.10E-05	0.00022	1.80E-06	2.50E-06
	16 to < 21 years	5.60E-06	1.00E-05	6.60E-05	0.00018	1.60E-06	2.20E-06

	Adult	3.00E-06	7.40E-06	4.80E-05	0.00015	6.30E-07	1.10E-06
Intermediate	Birth to < 1 year	1.90E-05	4.60E-05	0.00036	0.00095	3.30E-06	6.20E-06
	1 to < 2 years	2.10E-05	4.10E-05	0.0004	0.00086	3.30E-06	5.60E-06
	2 to < 6 years	1.00E-05	2.70E-05	0.00018	0.00057	1.90E-06	3.80E-06
	6 to < 11 years	6.20E-06	1.60E-05	0.0001	0.00031	1.30E-06	2.30E-06
	11 to < 16 years	2.80E-06	5.50E-06	3.50E-05	9.40E-05	7.90E-07	1.10E-06
	16 to < 21 years	2.40E-06	4.50E-06	2.80E-05	7.50E-05	6.90E-07	9.20E-07
	Adult	1.30E-06	3.20E-06	2.10E-05	6.30E-05	2.70E-07	4.80E-07
Chronic	Birth to < 1 year	1.30E-05	3.10E-05	0.00024	0.00064	2.20E-06	4.20E-06
	1 to < 2 years	1.40E-05	2.80E-05	0.00027	0.00058	2.20E-06	3.80E-06
	2 to < 6 years	6.70E-06	1.80E-05	0.00012	0.00038	1.20E-06	2.50E-06
	6 to < 11 years	4.10E-06	1.10E-05	6.90E-05	0.00021	8.60E-07	1.60E-06
	11 to < 16 years	1.90E-06	3.70E-06	2.30E-05	6.30E-05	5.30E-07	7.30E-07
	16 to < 21 years	1.60E-06	3.00E-06	1.90E-05	5.10E-05	4.60E-07	6.20E-07
	Adult	8.50E-07	2.10E-06	1.40E-05	4.20E-05	1.80E-07	3.20E-07

Table 9h. Heavy Metal Exposure Levels in Floodplain 8/9

		Cadmium		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	3.10E-05	7.30E-05	0.00063	0.0016	4.40E-06	8.40E-06
	1 to < 2 years	3.30E-05	6.70E-05	0.00069	0.0015	4.50E-06	7.60E-06
	2 to < 6 years	1.60E-05	4.40E-05	0.00031	0.00099	2.50E-06	5.10E-06
	6 to < 11 years	9.90E-06	2.50E-05	0.00018	0.00055	1.70E-06	3.20E-06
	11 to < 16 years	4.50E-06	8.80E-06	6.00E-05	0.00016	1.10E-06	1.50E-06
	16 to < 21 years	3.80E-06	7.20E-06	4.90E-05	0.00013	9.30E-07	1.20E-06
	Adult	2.00E-06	5.10E-06	3.60E-05	0.00011	3.70E-07	6.50E-07
Intermediate	Birth to < 1 year	1.30E-05	3.10E-05	0.00027	0.00071	1.90E-06	3.60E-06
	1 to < 2 years	1.40E-05	2.90E-05	0.0003	0.00064	1.90E-06	3.30E-06
	2 to < 6 years	6.90E-06	1.90E-05	0.00013	0.00042	1.10E-06	2.20E-06
	6 to < 11 years	4.30E-06	1.10E-05	7.60E-05	0.00023	7.40E-07	1.40E-06
	11 to < 16 years	1.90E-06	3.80E-06	2.60E-05	7.00E-05	4.60E-07	6.30E-07
	16 to < 21 years	1.60E-06	3.10E-06	2.10E-05	5.60E-05	4.00E-07	5.30E-07
	Adult	8.80E-07	2.20E-06	1.50E-05	4.70E-05	1.60E-07	2.80E-07
C hr o	Birth to < 1 year	8.90E-06	2.10E-05	0.00018	0.00047	1.30E-06	2.40E-06

	1 to < 2 years	9.50E-06	1.90E-05	0.0002	0.00043	1.30E-06	2.20E-06
	2 to < 6 years	4.70E-06	1.30E-05	9.00E-05	0.00028	7.20E-07	1.50E-06
	6 to < 11 years	2.90E-06	7.30E-06	5.10E-05	0.00016	5.00E-07	9.10E-07
	11 to < 16 years	1.30E-06	2.50E-06	1.70E-05	4.70E-05	3.10E-07	4.20E-07
	16 to < 21 years	1.10E-06	2.10E-06	1.40E-05	3.80E-05	2.70E-07	3.60E-07
	Adult	5.90E-07	1.50E-06	1.00E-05	3.10E-05	1.10E-07	1.90E-07

Table 9i. Heavy Metal Exposure Levels in Floodplain 10

		Cadmium		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	3.40E-05	8.00E-05	0.00065	0.0017	4.80E-06	9.10E-06
	1 to < 2 years	3.60E-05	7.30E-05	0.00071	0.0015	4.80E-06	8.20E-06
	2 to < 6 years	1.80E-05	4.80E-05	0.00032	0.001	2.70E-06	5.60E-06
	6 to < 11 years	1.10E-05	2.80E-05	0.00018	0.00056	1.90E-06	3.40E-06
	11 to < 16 years	4.90E-06	9.60E-06	6.20E-05	0.00017	1.20E-06	1.60E-06
	16 to < 21 years	4.20E-06	7.90E-06	5.10E-05	0.00013	1.00E-06	1.40E-06
	Adult	2.20E-06	5.60E-06	3.70E-05	0.00011	4.00E-07	7.10E-07
Interme diate	Birth to < 1 year	1.40E-05	3.40E-05	0.00028	0.00073	2.00E-06	3.90E-06
	1 to < 2 years	1.60E-05	3.10E-05	0.00031	0.00066	2.10E-06	3.50E-06
	2 to < 6 years	7.60E-06	2.10E-05	0.00014	0.00044	1.20E-06	2.40E-06
	6 to < 11 years	4.70E-06	1.20E-05	7.90E-05	0.00024	8.10E-07	1.50E-06
	11 to < 16 years	2.10E-06	4.10E-06	2.70E-05	7.20E-05	5.00E-07	6.80E-07
	16 to < 21 years	1.80E-06	3.40E-06	2.20E-05	5.80E-05	4.30E-07	5.80E-07
	Adult	9.60E-07	2.40E-06	1.60E-05	4.80E-05	1.70E-07	3.00E-07
Chronic	Birth to < 1 year	9.70E-06	2.30E-05	0.00019	0.00049	1.40E-06	2.60E-06
	1 to < 2 years	1.00E-05	2.10E-05	0.00021	0.00044	1.40E-06	2.40E-06
	2 to < 6 years	5.10E-06	1.40E-05	9.30E-05	0.00029	7.80E-07	1.60E-06
	6 to < 11 years	3.10E-06	8.00E-06	5.30E-05	0.00016	5.40E-07	9.90E-07
	11 to < 16 years	1.40E-06	2.80E-06	1.80E-05	4.80E-05	3.30E-07	4.60E-07
	16 to < 21 years	1.20E-06	2.30E-06	1.50E-05	3.90E-05	2.90E-07	3.90E-07
	Adult	6.40E-07	1.60E-06	1.10E-05	3.20E-05	1.10E-07	2.00E-07

Table 9j. Heavy Metal Exposure Levels in Floodplain 11

		Chromium		Mercury	
Duration	Exposure Group	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)	Dose CTE (mg/kg/day)	Dose RME (mg/kg/day)
Acute	Birth to < 1 year	0.00041	0.0011	4.00E-06	7.60E-06
	1 to < 2 years	0.00045	0.00098	4.00E-06	6.90E-06
	2 to < 6 years	0.0002	0.00064	2.30E-06	4.70E-06
	6 to < 11 years	0.00012	0.00036	1.60E-06	2.90E-06
	11 to < 16 years	3.90E-05	0.00011	9.70E-07	1.30E-06
	16 to < 21 years	3.20E-05	8.50E-05	8.40E-07	1.10E-06
	Adult	2.30E-05	7.10E-05	3.30E-07	5.90E-07
Intermediate	Birth to < 1 year	0.00018	0.00046	1.70E-06	3.30E-06
	1 to < 2 years	0.00019	0.00042	1.70E-06	3.00E-06
	2 to < 6 years	8.80E-05	0.00028	9.80E-07	2.00E-06
	6 to < 11 years	5.00E-05	0.00015	6.80E-07	1.20E-06
	11 to < 16 years	1.70E-05	4.60E-05	4.20E-07	5.70E-07
	16 to < 21 years	1.40E-05	3.70E-05	3.60E-07	4.90E-07
	Adult	1.00E-05	3.00E-05	1.40E-07	2.50E-07
Chronic	Birth to < 1 year	0.00012	0.00031	1.20E-06	2.20E-06
	1 to < 2 years	0.00013	0.00028	1.20E-06	2.00E-06
	2 to < 6 years	5.90E-05	0.00018	6.60E-07	1.30E-06
	6 to < 11 years	3.30E-05	0.0001	4.50E-07	8.30E-07
	11 to < 16 years	1.10E-05	3.10E-05	2.80E-07	3.80E-07
	16 to < 21 years	9.20E-06	2.50E-05	2.40E-07	3.30E-07
	Adult	6.70E-06	2.00E-05	9.60E-08	1.70E-07

Table 10. Blood Lead Level Estimates from Soil Lead Exposures (µg/dL)

Age	FP1	FP2	FP3	FP4	FP5	FP6	FP7	FP8/9	FP10	FP11
0.5-1	1.4	1.8	1.7	1.8	2.8	3.5	2.9	2.6	2.4	2.6
1-2	1.6	2.0	1.8	2.0	2.8	3.4	2.9	2.6	2.5	2.7
2-3	1.4	1.7	1.6	1.7	2.3	2.7	2.3	2.1	2.0	2.2
3-4	1.3	1.5	1.4	1.5	2.0	2.4	2.1	1.9	1.8	1.9
4-5	1.3	1.5	1.4	1.5	2.0	2.3	2.0	1.9	1.8	1.9
5-6	1.3	1.4	1.3	1.4	1.8	2.1	1.9	1.7	1.6	1.7
6-7	1.2	1.3	1.3	1.3	1.7	1.9	1.7	1.6	1.5	1.6
7+	0.6	0.7	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.7
Fetal	1.5	1.6	1.5	1.5	1.7	1.8	1.7	1.7	1.6	1.7
$P(PbB_{fetal} > PbB_t)$	0.10%	0.10%	0.10%	0.10%	0.20%	0.30%	0.20%	0.20%	0.20%	0.20%

$P(PbB_{fetal} > PbB_t)$ refers to the probability that that fetal PbB exceeds target PbB, assuming a lognormal distribution.

Table 11. Cadmium Risk Levels for Intermediate and Chronic Exposures

		FP6		FP7		FP8/9		FP10	
Duration	Exposure Group	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME	HQ CTE	HQ RME
Intermediate	Birth to < 1 year	0.036	0.085	0.038	0.091	0.027	0.063	0.029	0.069
	1 to < 2 years	0.038	0.077	0.041	0.083	0.028	0.057	0.031	0.063
	2 to < 6 years	0.019	0.051	0.02	0.055	0.014	0.038	0.015	0.041
	6 to < 11 years	0.011	0.029	0.012	0.031	0.0085	0.022	0.0093	0.024
	11 to < 16 years	0.0052	0.01	0.0056	0.011	0.0039	0.0076	0.0042	0.0083
	16 to < 21 years	0.0044	0.0084	0.0048	0.009	0.0033	0.0062	0.0036	0.0068
	Adult	0.0024	0.0059	0.0025	0.0063	0.0018	0.0044	0.0019	0.0048
Chronic	Birth to < 1 year	0.12	0.29	0.13	0.31	0.089	0.21	0.097	0.23
	1 to < 2 years	0.13	0.26	0.14	0.28	0.095	0.19	0.1	0.21
	2 to < 6 years	0.063	0.17	0.067	0.18	0.047	0.13	0.051	0.14
	6 to < 11 years	0.039	0.098	0.041	0.11	0.029	0.073	0.031	0.08
	11 to < 16 years	0.018	0.034	0.019	0.037	0.013	0.025	0.014	0.028
	16 to < 21 years	0.015	0.028	0.016	0.03	0.011	0.021	0.012	0.023
	Adult	0.0079	0.02	0.0085	0.021	0.0059	0.015	0.0064	0.016

Table 12. Cancer Risk Assessment

		Combined Child		Adult	
Floodplain	Contaminant	CR CTE	CR RME	CR CTE	CR RME
FP1	BaP Equivalent	1.00E-05	1.90E-05	1.60E-06	2.80E-06
	Polychlorinated biphenyls	7.50E-07	1.30E-06	5.10E-07	9.10E-07
	Total	1.08E-05	2.03E-05	2.11E-06	3.71E-06
FP2	BaP Equivalent	1.00E-04	1.90E-04	1.60E-05	2.90E-05
	Polychlorinated biphenyls	1.00E-06	1.80E-06	6.90E-07	1.20E-06
	Total	1.01E-04	1.92E-04	1.67E-05	3.02E-05
FP3	BaP Equivalent	2.00E-05	3.80E-05	3.10E-06	5.70E-06
	Polychlorinated biphenyls	9.30E-07	1.60E-06	6.40E-07	1.10E-06
	Total	2.09E-05	3.96E-05	3.74E-06	6.80E-06
FP4	BaP Equivalent	1.70E-05	3.10E-05	2.60E-06	4.70E-06
	Polychlorinated biphenyls	6.20E-07	1.10E-06	4.30E-07	7.60E-07
	Total	1.76E-05	3.21E-05	3.03E-06	5.46E-06
FP5	BaP Equivalent	1.70E-05	3.10E-05	2.60E-06	4.70E-06
	Polychlorinated biphenyls	6.20E-07	1.10E-06	4.30E-07	7.60E-07
	Total	1.76E-05	3.21E-05	3.03E-06	5.46E-06
FP6	BaP Equivalent	2.20E-05	4.00E-05	1.40E-06	2.60E-06
	Polychlorinated biphenyls	5.70E-06	1.00E-05	1.70E-06	3.00E-06
	Total	2.77E-05	5.00E-05	3.10E-06	5.60E-06
FP7	BaP Equivalent	2.40E-05	4.50E-05	3.80E-06	6.90E-06
	Polychlorinated biphenyls	7.90E-06	1.40E-05	5.40E-06	9.70E-06
	Total	3.19E-05	5.90E-05	9.20E-06	1.66E-05
FP8/9	BaP Equivalent	1.40E-05	2.60E-05	2.20E-06	3.90E-06
	Polychlorinated biphenyls	4.60E-06	8.20E-06	3.20E-06	5.70E-06
	Total	1.86E-05	3.42E-05	5.40E-06	9.60E-06
FP10	BaP Equivalent	1.10E-05	2.10E-05	1.80E-06	3.20E-06
	Polychlorinated biphenyls	3.90E-06	6.90E-06	2.70E-06	4.80E-06
	Total	1.49E-05	2.79E-05	4.50E-06	8.00E-06
FP11	BaP Equivalent	3.30E-05	6.00E-05	5.00E-06	9.20E-06
	Polychlorinated biphenyls	1.20E-06	2.20E-06	8.40E-07	1.50E-06
	Total	3.42E-05	6.22E-05	5.84E-06	1.07E-05

CR = Cancer Risk
RME = Reasonable Maximum Exposure
CTE = Central Tendency Exposure

Appendix A: Site Visit Report from May 2021

Milwaukee Estuary Area of Concern Site Visit Summary | 5/5/2021

Background

On 5/5/2021, three DHS staffers (Curtis Hedman, PhD; Brita Kilburg-Basnyat, PhD; and Amanda Koch, MPH) conducted a site visit at various designated floodplains (FPs) within the Milwaukee Estuary Area of Concern (AOC). The purpose of this visit was to review locations where recent sampling had indicated high levels of contamination and note where interventions were either sufficient or lacking to protect the public from potentially harmful exposures, and relay this information to DNR and its stakeholders to inform the site's risk management proposal.

Findings

Floodplain 1

- Two signs were posted at Entrance No. 5 (Image 1):
  Sign #1 (top) is a fish advisory from 2005 produced by DHFS in collaboration with North Shore Health Dept. and Milwaukee Health Dept.; this sign is outdated and contains incorrect information.
  Sign #2 (bottom) is a hazardous chemicals alert from 2005; produced by DHFS in collaboration with North Shore Health Dept. and Milwaukee Health Dept. While advice is accurate, the sign is heavily graffitied and the listed agency information for DHS is outdated.
- *Entrance No. 4 did not contain advisory signage.*
- *Overall, access to the riverbed and nearby soil in this location via the designated hiking trail is possible, particularly when the water level is low.*

Image 1. Current signage at Entrance No. 5 along the Milwaukee River Greenway at FP1.

Floodplain 2

- Signage is not present in this area, including at Entrance No. 8.
- The children's playground on Estabrook Parkway is adjacent to FP2. An easily identifiable footpath (unofficial access) connects the playground area to the floodplain (Image 2).
- A bench donated by Friends of Estabrook Park (Image 3) is situated within the floodplain near sampling location FP-38 (elevated PCBs, PAHs and lead).
- DHS staff noticed two individuals (young adults) exploring off-path and very near the water.

Image 2 (above). A footpath connects a children's playground with hiking trails along Floodplain 2.

Image 3 (right). A Friends of Estabrook Park bench located along the hiking trail in Floodplain 2.

Floodplain 3

- Signage is not present in this area. There are no official trailheads.
- Riverbed has lower accessibility in this area.

Floodplain 5

- Riverbed accessibility varies, but overall accessibility is lower than in other floodplain areas.
- Signage for the trail and arboretum is present.

Floodplain 6

- From the vantage point of FP7, DHS staffers observed hikers on a path near the riverbed in FP6.

Floodplain 7

- Riverbed accessibility varies, but is high near sampling locations FP-62 and FP-67 (elevated PCBs) (Image 4).
- A staircase near sampling location FP-63 lacks signage.
- A canoe launch near sampling location FP-15 lacks signage.
- Newly planted trees were present along the river (Image 5).
- Straw toward the southern end of FP7 (Image 6).
- There is a sewer overflow discharge point near the southern end of FP7 with related signage.
- A large information board near the Urban Ecology Center features a map and information regarding a children's summer camp offering.

Image 4. High accessibility to the riverbed in FP7 near sampling location FP-62 (elevated PCBs).

Image 5. Newly planted trees along the river in FP7.

Image 6. Straw provides a barrier to soil in FP7.

Image 7. An information board near the Urban Ecology Center.

Floodplain 8

- From the vantage point of FP7, DHS staffers noted an open meadow that allows for high accessibility to the riverbed.

Floodplain 11

- From the vantage point of FP5, DHS staffers observed fishermen along the riverbed in FP11.

Summarized Recommendations

- Current signage posted at Entrance No. 5 should be updated. DHS can provide assistance with developing new signage.
- The footpath connecting the children's playground on Estabrook Parkway with trails along FP2 presents easy access for children to contaminated areas. Access to and signage in this area should be addressed.
- Consider working with Friends of Estabrook Park to relocate the donated bench to a safer area away from contaminated soils.
- Additional new signage should be posted where appropriate at official trail entrances/trail markers and other places that invite visitors to trails along the riverbank (e.g., staircase in FP7).
- Provide education to the Urban Ecology and affiliated stakeholders regarding tips for safely contacting soil for planting.
- Provide education to the Urban Ecology Center and affiliated stakeholders regarding tips for hosting children's summer camps safely, with a focus on soil safety and handwashing. DHS can assist with developing fact sheets, etc.
- Consider adding signage to the main Urban Ecology Center information boards about the cleanup efforts with tips for safe recreating along the river.
- Continued use of straw where appropriate helps provide a barrier to soil.

Appendix B

1. Exposure Calculations:

Average Daily Intake of chemicals for Milwaukee Estuary AOC users and Hazard Index Exposures were calculated by the following equations:

Oral:

$D = (EPC \times IR \times EF \times CF) / BW$

D = Age-Specific Dose (mg/kg/day), **EPC** = Exposure Point Concentration (mg/kg), **IR** = Intake Rate (mg/day), **EF** = Exposure Factor (unitless), **CF** = Conversion Factor (10^{-6} kg/mg), **BW** = Body Weight (kg)

Dermal:

$ADD = (EPC \times EF \times CF \times AF \times ABS_d \times SA) / (BW \times ABS_{GI})$

ADD = Administered Dermal Dose (mg/kg/day), **EPC** = Exposure Point Concentration (mg/kg), **EF** = Exposure Factor (unitless), **CF** = Conversion Factor (10^{-6} kg/mg), **AF** = Adherence Factor to Skin (mg/cm^2-event), **ABS_d** = Dermal Absorption Fraction to Skin (unitless), **SA** = Skin Surface Area

2. Risk was calculated by the following equation for both the RME and CTE.

$HQ = (D / MRL \text{ or } D / RfD)$

HQ = Hazard Quotient, **D** = Age-Specific Dose (mg/kg/day), **MRL** = Minimal Risk Level (mg/kg/day), **RfD** = Reference Dose (mg/kg/day)

3. Cancer Risk

$CR = (D \times CSF) \times (ED / LY)$

CR = Cancer Risk, **D** = Age-Specific Dose (mg/kg/day), **CSF** = Cancer Slope Factor ($(mg/kg/day)^{-1}$), **ED** = Age-Specific Exposure Duration (years), **LY** = Lifetime in Years

Appendix C

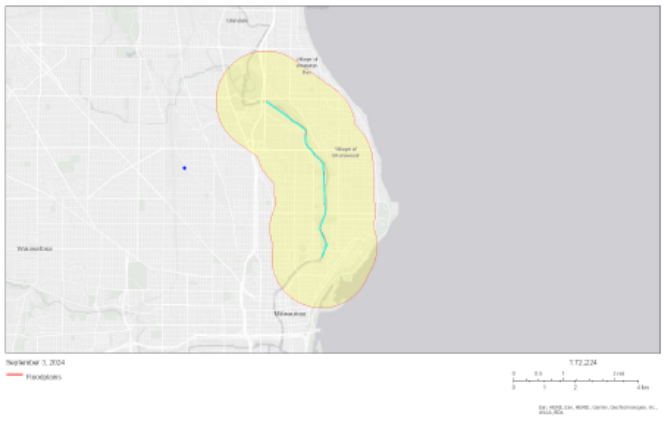
EPA

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Floodplains

1 mile Ring around the Corridor
Population: 87,128
Area in square miles: 10.52



COMMUNITY INFORMATION

Low income: 34 percent	People of color: 35 percent	Less than high school education: 5 percent	Limited English households: 2 percent
Unemployment: 5 percent	Persons with disabilities: 11 percent	Male: 50 percent	Female: 50 percent
79 years Average life expectancy	N/A Per capita income	Number of households: 42,951	Owner occupied: 34 percent

BREAKDOWN BY RACE

White: 65%	Black: 19%	American Indian: 0%	Asian: 4%
Hawaiian/Pacific Islander: 0%	Other race: 1%	Two or more races: 4%	Hispanic: 7%

BREAKDOWN BY AGE

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	89%
Spanish	4%
German or other West Germanic	1%
Russian, Polish, or Other Slavic	1%
Other Indo-European	2%
Chinese (including Mandarin, Cantonese)	1%
Other Asian and Pacific Island	1%
Total Non-English	11%

From Ages 1 to 4	4%
From Ages 1 to 18	15%
From Ages 18 and up	85%
From Ages 65 and up	14%

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish	30%
Speak Other Indo-European Languages	41%
Speak Asian-Pacific Island Languages	20%
Speak Other Languages	9%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, American Community Survey (ACS) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

Report for 1 mile Ring around the Corridor
Report produced September 3, 2024 using EJScreen Version 2.3