Estabrook Dam Operation

Why is the dam opened or closed?

The water level in the impoundment is generally lowered from mid-October to mid-May to to avoid potential ice damage.

What is the condition of the dam?

A recent inspection identified:

- Problems with gate operation
- Some concrete that needs repair

An operational order needs to be developed regulating the operation of the dam. This will determine if the dam is kept open or closed.

What is Milwaukee County doing regarding problems found in the DNR inspection?

Milwaukee County has contracted with a consultant to compare the costs of repairing the dam to removal of the dam, including managing the sediments immediately upstream. This study should be completed by January.

What would be the impact of the dam being opened, or of contaminated sediment removal on flooding in Lincoln Creek area?

A hydraulic evaluation of the Lincoln Creek – Milwaukee River Confluence Area identified the most effective strategy for reducing peak flood stages as a channel modification between Green Bay Avenue and the Milwaukee River. It is estimated that removing 2 feet of sediment 100 feet across would lower the 100 year level in this area by 1.0 to 1.2 feet. In contrast to the channel modification option, this study reported that keeping the dam gates open would lower the 100 year flood level in this area by no more than 0.14 feet.

Sources for further information:

General Information
Alderman Hamilton 414-286-3779

Health Effects
City of Milwaukee Health Department (414) 286-3606
North Shore Health Department (414) 371-2980
Wisconsin Department of Health and Family Services (608) 266-1120

Sediment Contamination Theodore Bosch, Dept of Natural Resources (414) 263-8623

Dam Issues Milwaukee County
Greg High, (414) 278-4943

Flood Issues Milwaukee Metropolitan Sewerage District, Tom Chapman (414) 225-2154

Web sites for additional information:

More information about PCBs can be found at http://dhfs.wi.gov/eh/HlthHaz/fs/PCBlink.HTM.

Milwaukee River PCB mass balance report http://wi.water.usgs.gov/pubs/WRIR-99-4100/

Fish consumption advisory www.dnr.state.wi.us/org/water/fhp/fish/pages/consumption/index.shtml

EPA PCB home page www.epa.gov/opptintr/pcb

City of Milwaukee Health Department Environmental page: www.milwaukee.gov/lincolncreek

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Lincoln Creek and Estabrook Impoundment Facts

September 2005

The Lincoln Creek area and the Estabrook impoundment includes water stored behind the Estabrook Dam, and the Milwaukee River, and Lincoln Creek between the Dam and Green Bay Avenue and Bender Road.

There are several issues of public concern in the Estabrook Impoundment and Lincoln Creek area. These issues include contamination of sediment in the impoundment, operation of the dam, and flood control.

This pamphlet provides current information on these subjects and identifies sources for more information.

Contaminated Sediment

What are PCBs?

PCBs are polychlorinated biphenyls. This is a group of toxic compounds manufactured in the United States until 1977.

How contaminated is the area?

28% of the study area has a layer of PCB contamination greater than 50 milligrams per kilogram (mg/kg), the highest sample was 870mg/kg. The 50 mg/kg level is significant because this is the concentration of PCBs where the material becomes regulated as a toxic waste and additional regulations address handling of the sediment.

How does this compare to other areas?

The PCB sediment in the Milwaukee River in Lincoln Park areas Northwest of Hampton Avenue and by the Blatz Pavilion contain the most contaminated sediments identified in the Milwaukee River basin.

What is the source of contamination?

PCBs were used in the manufacturing of various products from 1930 to 1977. There is no identified source which caused the contamination for this sediment. The type of PCBs found in this area is different from those found in other areas of the Milwaukee River. There is no identified ongoing source. The PCB contamination is believed to have come from Lincoln Creek.

Is it dangerous to have physical contact with the sediment in the river?

People can also be exposed to PCBs by swimming, wading or playing in the river or river bed. When water levels are low, it is easier to walk and play on the river bed.

Parents are asked to keep children from playing near the river edge and to keep out of the river bed when the water is low. If river soils are touched, wash with soap and water.

What can be done to solve the problem?

The PCBs need to be kept from entering the water column. This can be done by removing the PCBs or creating a barrier.

The objective of the recently completed report was to define the problem area. An effort now must be made by parties involved to restrict access to contaminated areas and to seek funding for the design and remediation of the contaminated areas.

Can I eat fish caught in the area?

Eating fish contaminated with PCBs should be avoided. PCBs are a group of chemicals known to cause health problems in children and pregnant women, and possibly to cause cancer. Contact with soils in the river is not a high risk, but is still worth avoiding.

Carp in Lincoln Creek contain high levels of PCBs and should not be eaten, at any size. Other fish can be eaten in limited amounts. See the Wisconsin fish advisory booklet for safe fish to eat. They are listed in the section for the Milwaukee River from the City of Grafton downstream to Estabrook Falls.

The Department of Natural Resources fish advisory is current. Fish in this area are able to move from the harbor area to the Thiensville Dam. Specific advisory information for this area is listed below.

Is it better to have the contaminated sediment submerged under water or above water?

There is less exposure to the sediment when the dam is closed and water covers the sediment. When the sediment is under water contaminants are flushed from the impoundment area to downstream locations. The impoundment is a significant ongoing source of PCBs in the Milwaukee River system.

If the sediment is exposed, erosion control measures should be in place to keep the sediment in place.

Waterbody/Species	Unlimited	Eat no more than 1 meal a week or 52 meals/year	Eat no more than 1 meal a month, or 12 meals/year	Eat no more than 1 meal every 2 months or 6 meals/year	DO NOT EAT
Milwaukee River from the city of Grafton downstream to Estabrook Falls					
Black Crappie			All sizes		
Carp					All sizes
Largemouth Bass			All sizes		
Northern Pike				All sizes	
Redhorse			All sizes		
Rock Bass			All sizes		
Smallmouth Bass			All sizes		
Milwaukee River from Estabrook Falls downstream to the estuary including Menomonee River, Kinnickinnic River and Lincoln Creek					
Black Crappie				All sizes	
Carp					All sizes
Northern Pike				All sizes	
Redhorse				All sizes	
Rock Bass			All sizes		
Smallmouth Bass			All sizes		
Trout and Salmon	Follow the Lake Michigan PCB advisory				
Walleye			Less than 18 inches	Larger than 18 inches	
White Sucker				All sizes	
Yellow Perch		All sizes			