RESTORING WHITE LAKE





Citizens and businesses

environmental stewards

strive to be good

EXPLORING WHITE LAKE'S ENVIRONMENTAL HISTORY

he goal of the White Lake Environmental History Project is for residents and visitors of the area to learn about and understand the impact of White Lake's environmental history, including pollution issues and restoration efforts.

The Early Days

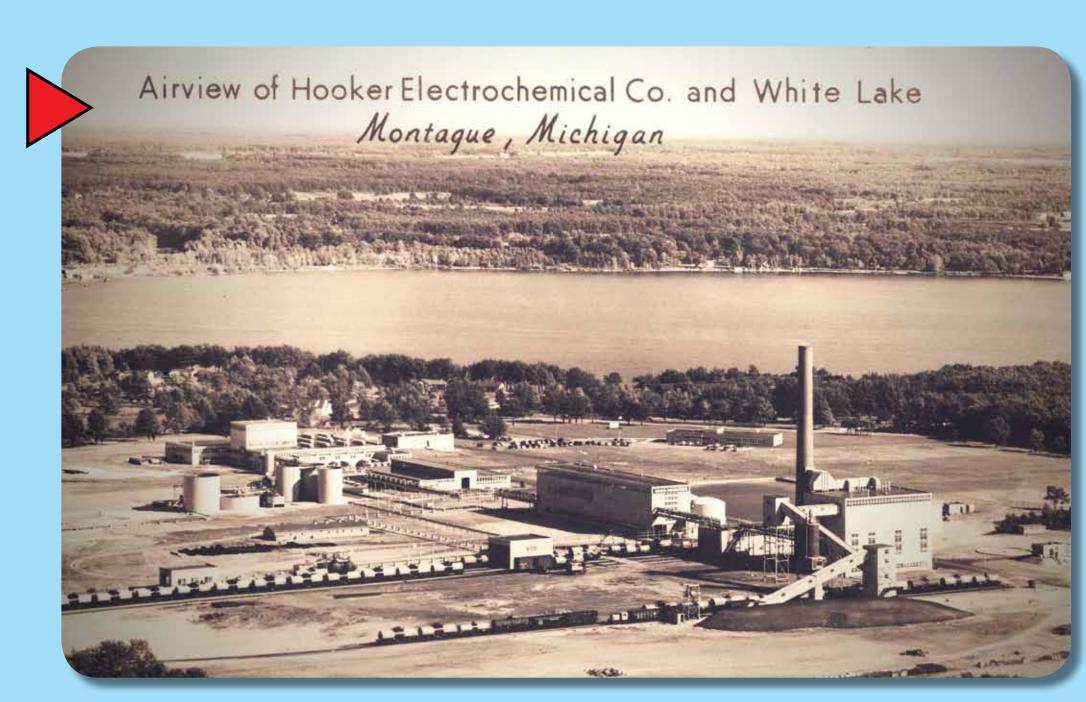
- Native Americans inhabited the White Lake area
- 1700s 1830s ... Fur trading
- 1837 ... First sawmill on White Lake established by Charles Mears
- 1837 1900 ... Logging practices, including the channelizing of the White River marsh, drastically changed the White River and White Lake by causing sedimentation and decreasing the capacity of the wetlands
- to reduce nutrient loads, absorb floods, and filter water 1860 ... Mears/Whitehall platted

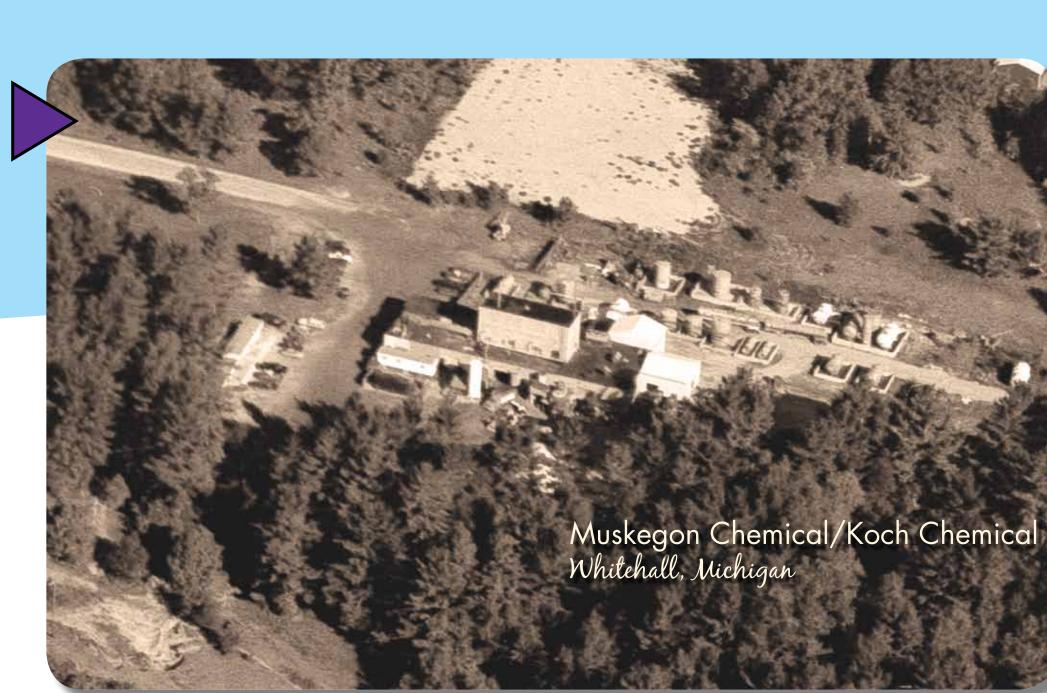
1865 ... Eagle Tanning Works

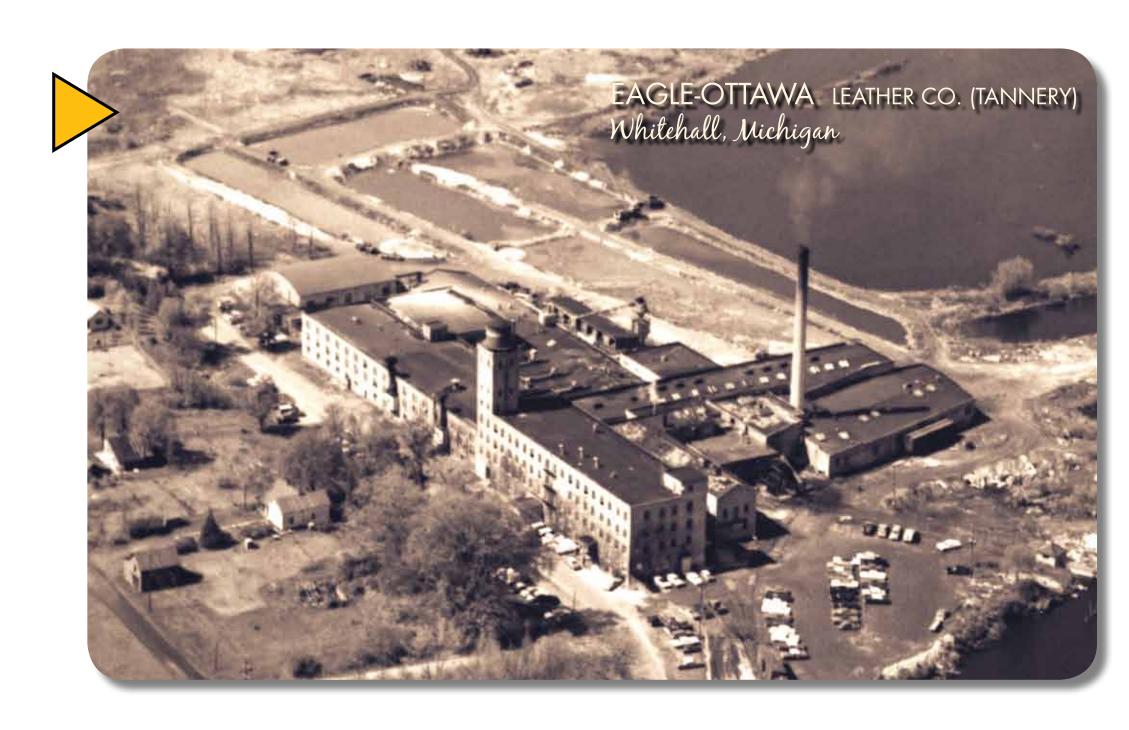
- 1867 ... Montague platted
- Late 1800s/early 1900s ... End of logging era

(Whitehall Leather Company) opens









1940s - 1950s 1960s

1940 ... Whitehall ➤ 1967 ... State of Leather Company Michigan documents stopped using bark for steep decline in tanning and began benthos and high using chromium levels of sodium chlorides at Hooker

Chemical

- 1951 ... Misco opens
- ▶ 1952/54 ... Hooker Chemical opens
- ▶ 1956 ... E.I. duPont de Nemours opens
- 1974 ... Industrial and municipal discharges diverted from White Lake to county wastewater site
- ▶ 1975 .. Muskegon Chemical opens Chemical discharge
- ► 1977 ... Groundwater contamination found > 1968 ... Occidental at Muskegon Chemical Chemical (OxyChem) purchases Hooker
 - ▶ 1977 ... OxyChem closes the Hooker Chemical/OxyChem fine chemicals plant

n industrial era, beginning

1970s

1980s

discovered to be

contaminated

- ▶ 1980 ... Whitehall municipal well #3
- ▶ 1981/82 ... Hooker Chemical/OxyChem investigation and cleanup of soils
- 1982 ... Groundwater cleanup begun at Hooker Chemical/OxyChem
- 1982 ... Hooker Chemical/ OxyChem closes
- 1985 ... White Lake named an Area of Concern
- ► 1986 ... Koch Chemical purchases Muskegon Chemical

1990s

- ➤ 1991 ... Muskegon Chemical/ **Koch Chemical closes**
- 1992 ... White Lake Public Advisory Council (PAC) established
- 1992 ... E.I. duPont de Nemours conducts investigation of landfills on its site
- ► 1993 ... EPA orders Hooker Chemical/OxyChem to conduct second site investigation
- 1995 ... Whitehall Leather Company land site and Tannery Bay investigation begins
- 1995 ... 8 problems were officially determined for the White Lake Area of Concern
- ► 1996 ... Hooker Chemical/OxyChem production facilities demolished
- ➤ 1996 ... E.I. duPont de Nemours closes
- 1998 ... E.I. duPont de Nemours facility demolished
- 1999 ... White Lake Landfill closes

2010s

2000s

> 2000 ... Whitehall Leather

2002 ... Whitehall Leather

contaminated sediments

Company closes

Company removes

from Tannery Bay in

2003 ... Hooker Chemical/

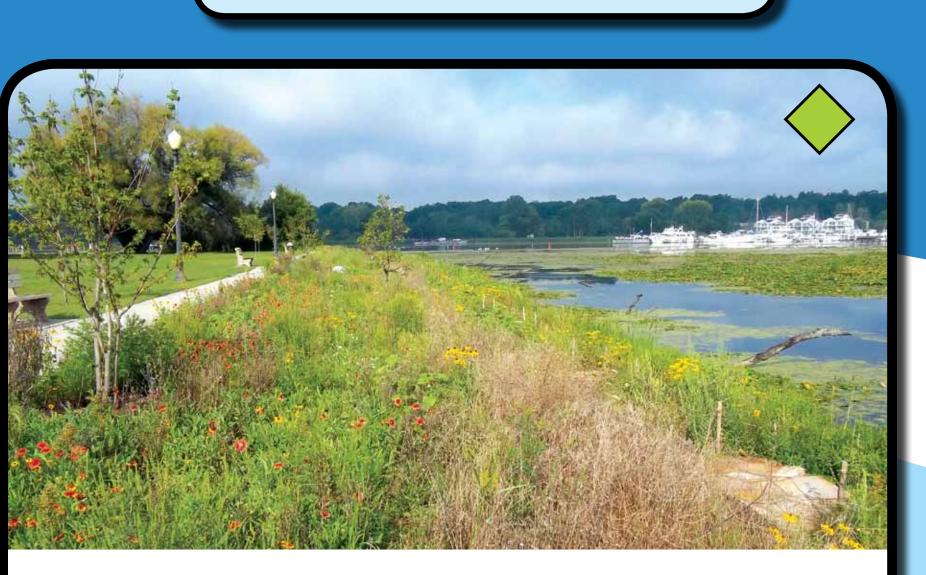
contaminated sediments

OxyChem removes

from White Lake

White Lake

- The Future 2010 ... E.I. duPont de Nemours site Area of Concern investigation begins delisting
- > 2010 ... Whitehall Leather Company land site cleanup begins
- > 2011 ... Whitehall Leather Company land site cleanup completed
- 2011/2012 ... Habitat restoration project
- 2011/2012 ... 3 of 8 problems officially removed for the White Lake Area of Concern



wo of the problems identified for the White Lake ▲ Area of Concern were loss of fish and wildlife habitat and degraded fish and wildlife populations. A \$2.1 million project, funded by the federal Great Lakes Restoration Initiative, was led by the Muskegon Conservation District, in partnership with the White Lake Public Advisory Council in 2011/2012 to restore fish and wildlife habitat along White Lake's shoreline, address the two problems, and help to remove White Lake from the Great Lakes Area of Concern list.

Muskegon Chemical

BENSTON

MUSKEGON

COUNTY

WHITE LAKE

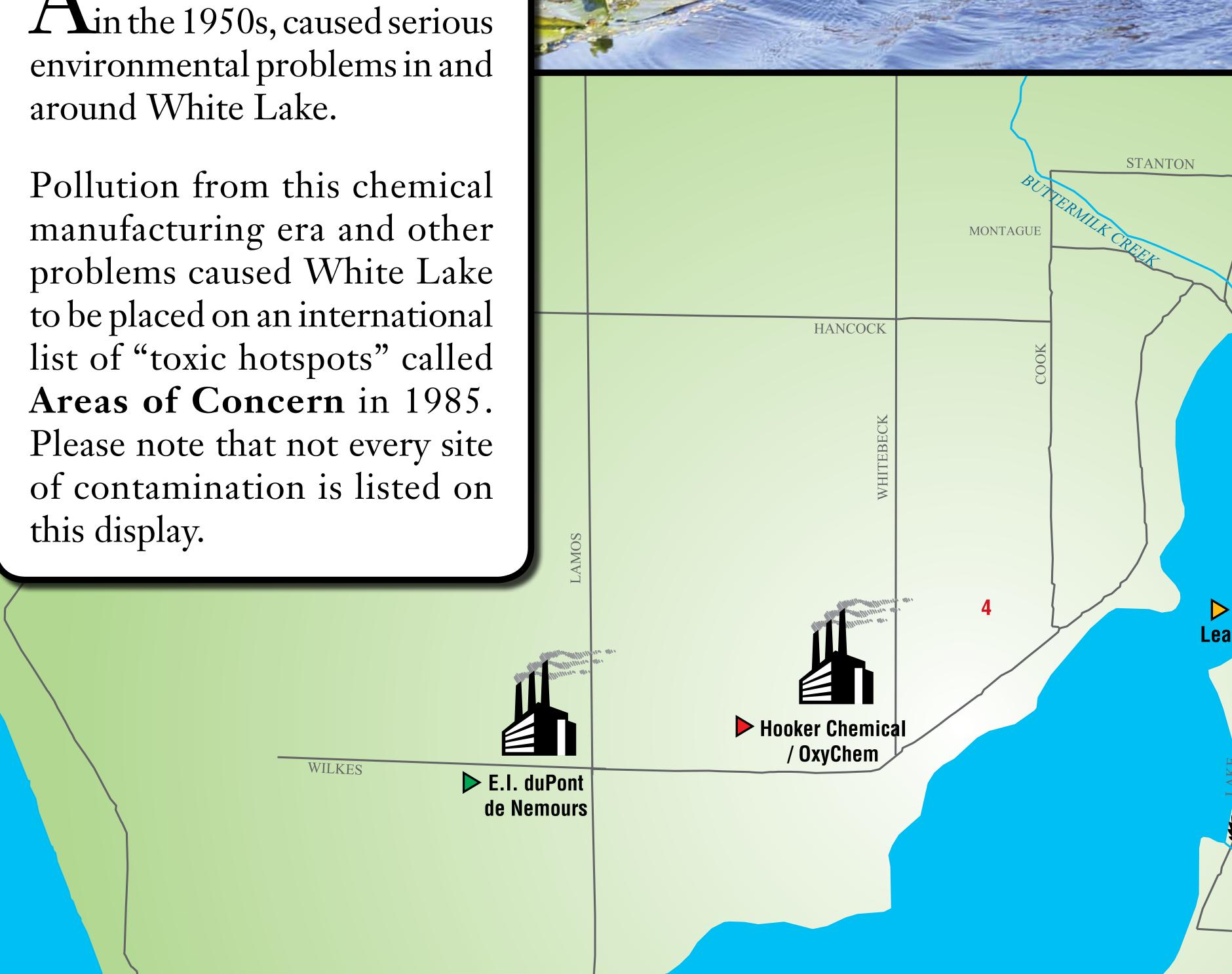
/ Koch Chemical

Whitehall Municipal

SLOCUM

WHITEHALL

Well #3



WHITE LAKE

LAKE **MICHIGAN**

Fortunately, a variety of public and private cleanup efforts have led to dramatic improvements in water quality of White Lake over the past three decades; efforts which now allow for all recreational uses to be safely enjoyed - boating, swimming, fishing.

CONTAMINATED SITES

- Muskegon Chemical/Koch Chemical
- ► E.I. duPont de Nemours

First Sawmill on White Lake

- Hooker Chemical/OxyChem
- Whitehall Leather Company
- White Lake Landfill
- Shellcast
- 3 Muskegon County Wastewater
- Management Site Whitehall
- Tech Cast/Anderson Road 5 Alcoa Howmet (formerly Misco)
- 6 5-A Oil
- Whitehall Municipal Well #3

The White Lake Environmental History Project was made possible by:





ALCOA















Photos courtesy of Gradyimage.com, Photography-Plus.com & Bervin Johnson