



White Lake Proposed Dredging Project

Public Information Meeting
August 22, 2012



Tom De Santis

President

White Lake Citizens League

Agenda

- Introduction
- White Lake Dredging History
- “Dredging 101”
- Proposed White Lake Project
- Project Cost Estimates
- Special Assessment District Funding

Ground Rules

- Please hold your questions until directed by the presenter.
- Please limit your questions to the subject just presented.
- Please hold your comments until the end of the presentation.
- This meeting is specifically to discuss the dredging process and its financing. Other topics may be addressed at the following WLCL meeting.

Dredging Operation Committee

WLCL Board Members

Tom De Santis - Engineer
Jack Butler - Manager
Patte Day - Writer
Walt Koziol - CPA
Bob Parrett - Engineer
Bob Pisoni - Engineer
Mike Wachsberg - Attorney

Dredge Area Residents

Don Day
Bill DeGhetto
John Millington
Bill Scanlon

A History of Improving the Quality of the Lake and Lake Living for 51 Years

- Dawson's Island Development
- Lake Level Augmentation Pump
- Coordinated Weed Harvesting and Chemical Weed Control
- Establishment of the WLIB
 - Weed Control
 - Dredging
 - Sheriff's Patrol

[Slide from 9/16/09 SAD Presentation]

Dredging

- The WLIB and WLCL are committed to a continuing dredging program
- Dredging improves navigation, reduces nutrients, and may preclude eutrophication
- Dredging projects were identified in lake studies, and several have been completed over the years

[Slide from 9/16/09 SAD Presentation]

Dredging

- The proposed plan does not include a dredging project – because it is prudent not to do one in this current economic downturn
- Without other needs for contingency funds, we will have a surplus by 2012 – which may contribute to a dredging project in the next 3-year cycle (2013 - 2015)
- Funding is included for an Engineering Study in 2012, to evaluate needs for dredging in the next cycle



Dredging History

INSTITUTE FOR FISHERIES RESEARCH
 DIVISION OF FISHERIES MICHIGAN CONSERVATION DEPT.
 LAKE INVENTORY MAP
WHITE LAKE
 AREA 840 ACRES
 MARSHAL SURVEY AND SOUNDINGS 8/14,17/83
 INVENTORY 8/23-27/84
 OAKLAND COUNTY T.3 N.R.7-S E. SEC.17, 22, 33

1986 Study: Potential Dredge Areas

LEGEND

BOTTOM

- Sand
- ▨ Pulpy peat
- ▩ Fibrous peat
- ⋯ Gravel

OUTLINE & CONTOURS

- Shoreline
- - - Contours

SHORE FEATURES

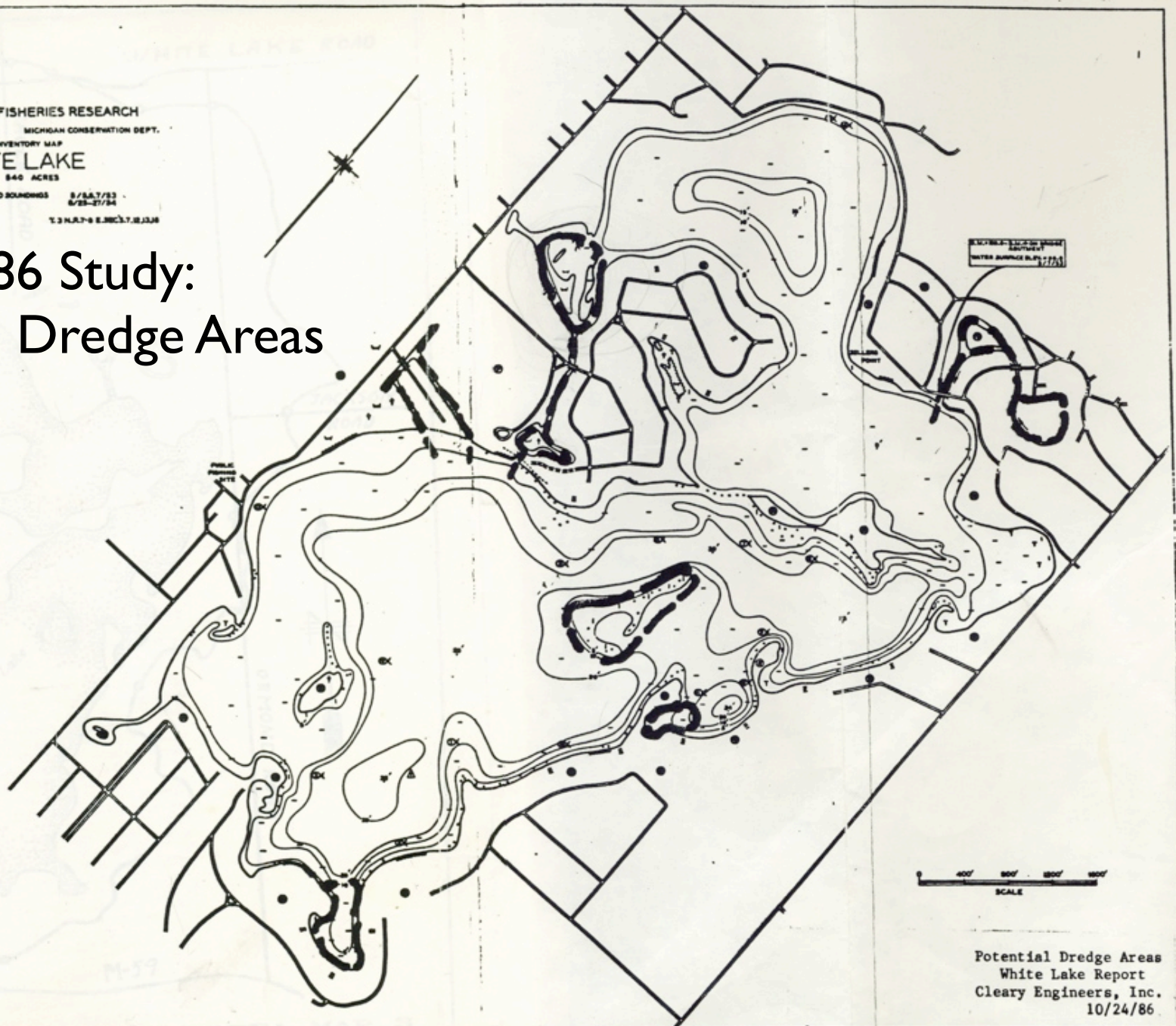
- ▬ Slope
- ▬ Improved road
- - - Unimproved road
- ▬ Breakwater
- - - Encroaching shore
- ⊥ Marsh
- ⊥ Brush
- Wooded
- ⊙ Partly wooded
- ⊙ Pasture
- ▬ Bridge
- ⊥ Inlet

VEGETATION

- ⊥ Emergent
- ⊥ Submergent
- ⊥ Floating

STATIONS

- △ Temp. chem analysis
- ⊗ Fish sample



Potential Dredge Areas
 White Lake Report
 Cleary Engineers, Inc.
 10/24/86

INSTITUTE FOR FISHERIES RESEARCH
 DIVISION OF FISHERIES MICHIGAN CONSERVATION DEPT.
 LAKE INVENTORY MAP
WHITE LAKE
 AREA 840 ACRES
 MARSHAL SURVEY AND SOUNDINGS INVENTORY 8/14,17/53 8/23-27/54
 OAKLAND COUNTY T.3 N.R.7-S E.36,37,38,39

1st Dredging Program

LEGEND

BOTTOM

- Sand
- ▨ Pulpy peat
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- Shoreline
- - - Contours

SHORE FEATURES

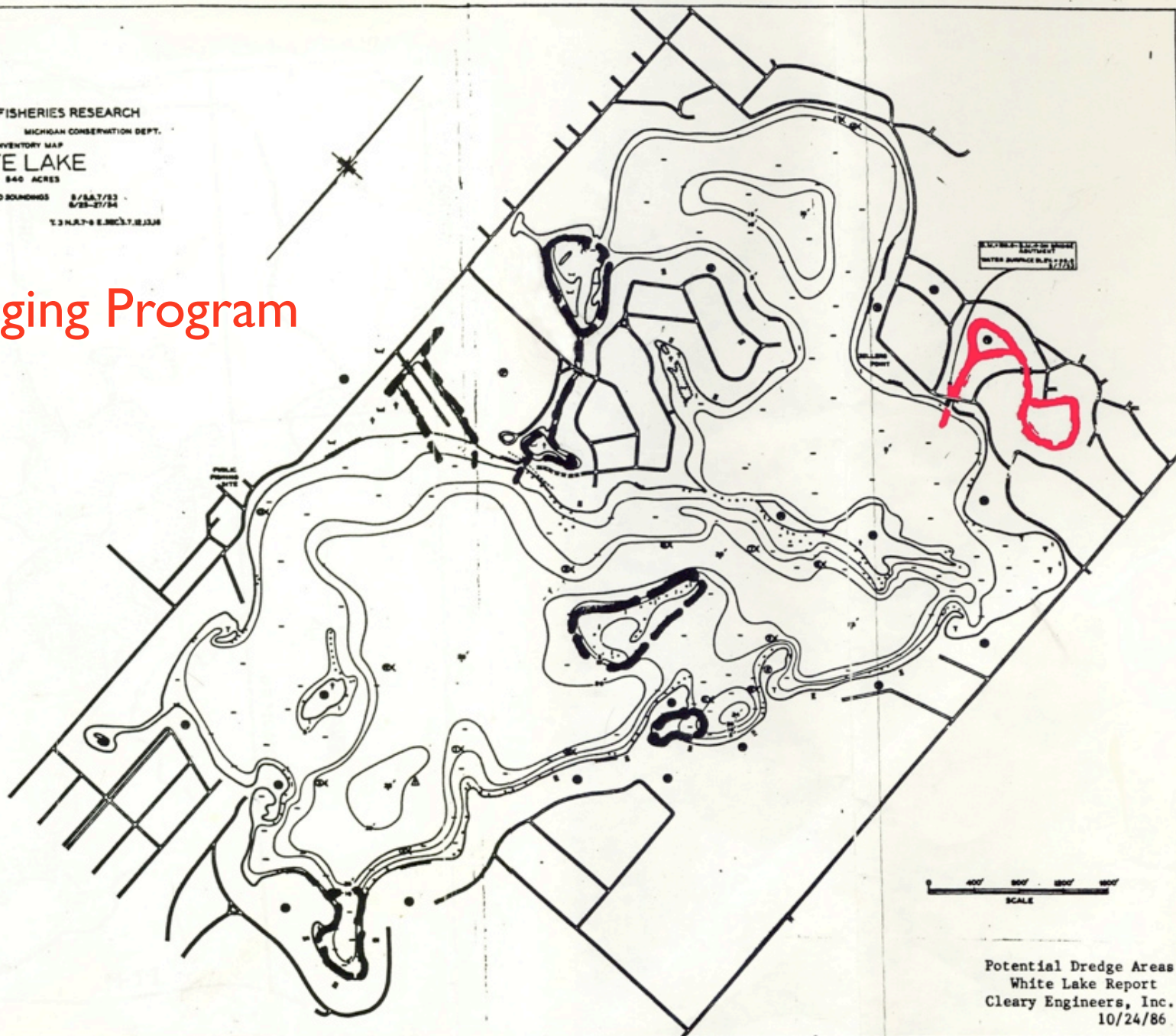
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 LAKE INVENTORY MAP
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 MARSHAL SURVEY AND SOUNDINGS 8/14,17/33
 INVENTORY 8/23-27/34
 OAKLAND COUNTY T.3 N.R.7-S E.SEC.17,22,33

2nd Dredging Program

LEGEND

BOTTOM

- Sand
- ▨ Pulpy peat
- ▩ Friable peat
- ▧ Gravel

OUTLINE & CONTOURS

- Shoreline
- - - Contours

SHORE FEATURES

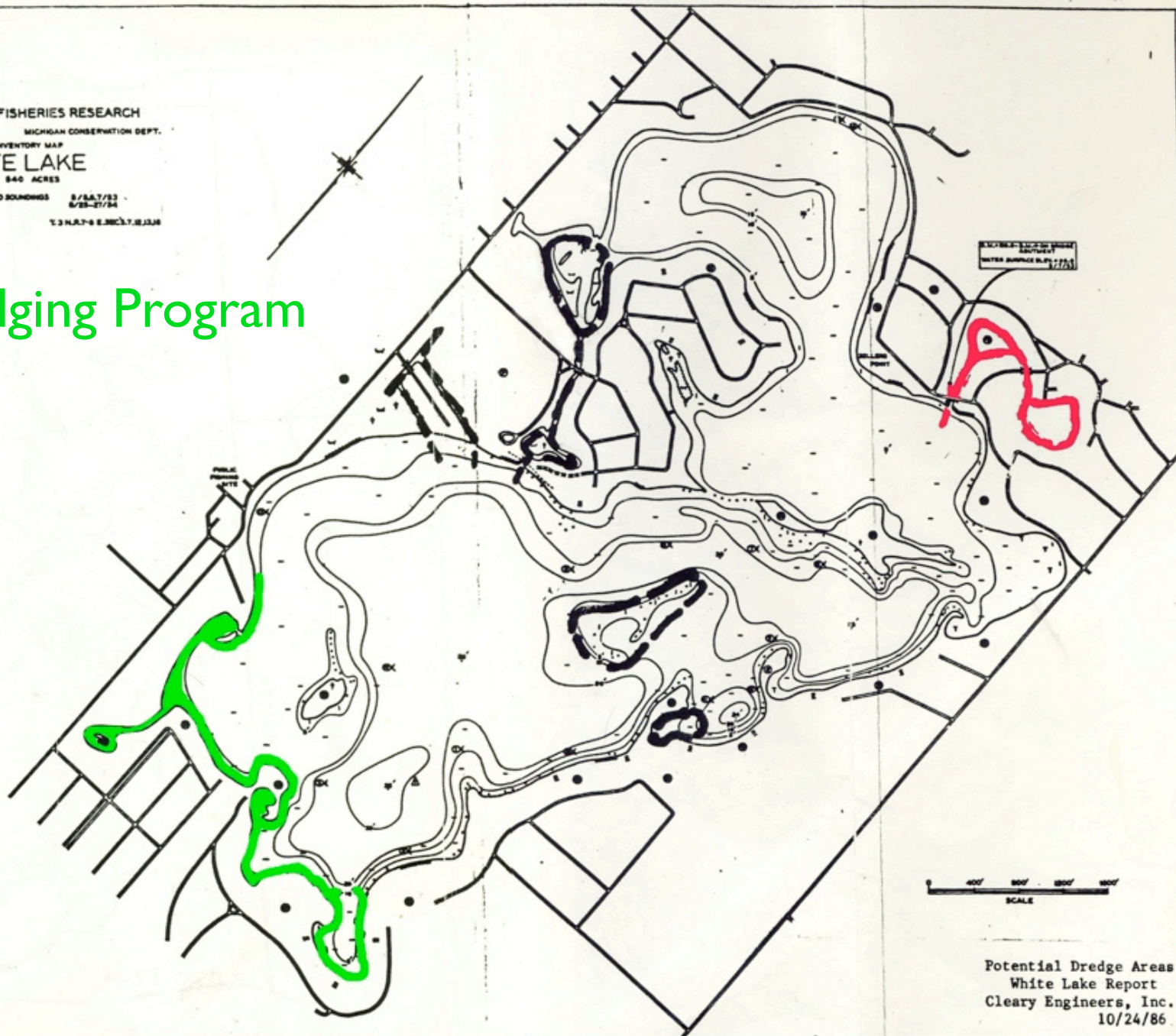
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 MARSHAL SURVEY AND BOUNDINGS 8/14,17/33
 INVENTORY 8/23-27/34
 OAKLAND COUNTY T.3 N.R.7-S E.SEC.17,2,23,24

3rd Dredging Program

LEGEND

BOTTOM

- Sand
- Pulpy peat
- Fibrous peat
- Gravel

OUTLINE & CONTOURS

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SHORE FEATURES

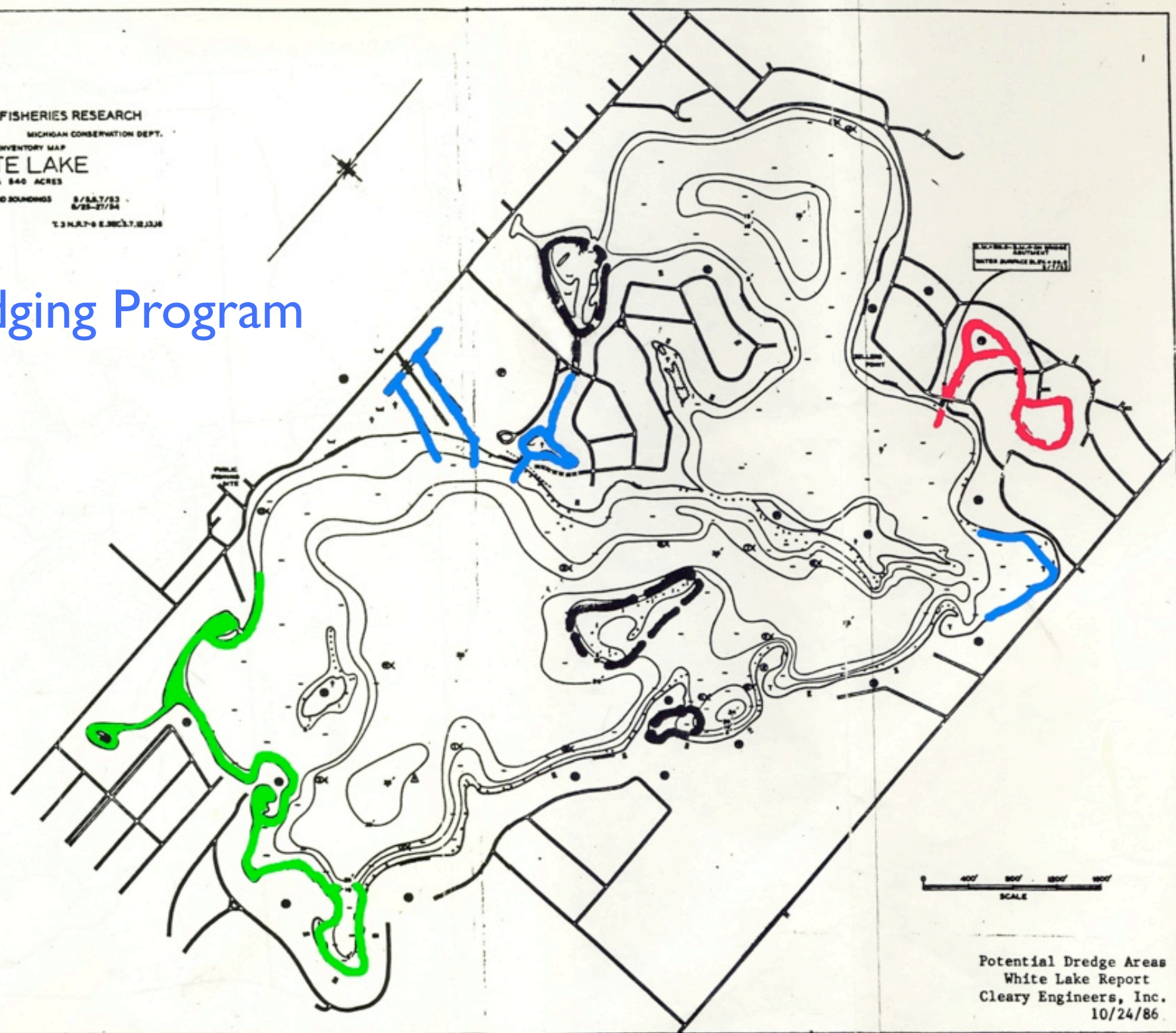
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 OAKLAND COUNTY T.3 N.R.7-S E.SEC.17,22,33

Proposed Dredging Area

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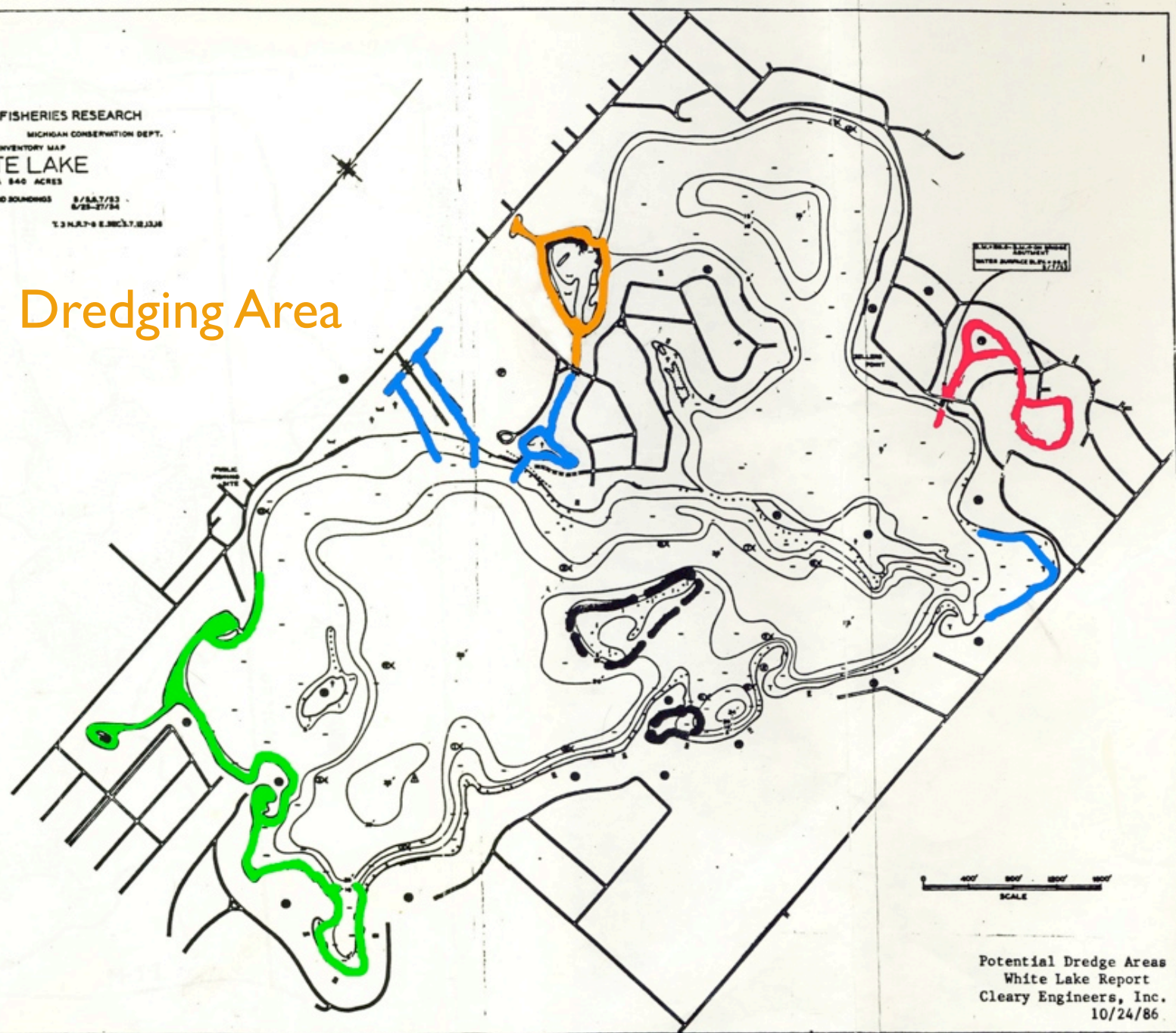
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Potential Dredge Areas
 White Lake Report
 Cleary Engineers, Inc.
 10/24/86

“Dredging 101”

Dredging Process Phases

1. Engineering Management
2. Dredging & Dewatering
3. Final Spoils Disposal

1. Engineering Management

- Survey
- Soil Samples & Analysis
- Planning for Project
- Permits & Easements
- Administration

2. Dredging & Dewatering

- Mobilization
- Hydraulic Dredging







2. Dredging & Dewatering

- Mobilization
- Dredging
- Spoils Storage & Dewatering
 - Open Pit
 - Geotextile Bags

Open Pit Dewatering

- Advantage - less expensive
- Disadvantage - more space



(Allow 1-2 years to dry)

Geotextile Bags

- Advantage - less space
- Disadvantage - more expensive

(Allow 6-8 months to dry - over winter is preferred)



3. Final Spoils Disposal

- On Site
- Truck to Private Property
- Truck to Landfill

- Final Site Restoration



Proposed White Lake Project

Based on the
Engineering Study
prepared by:



INSTITUTE FOR FISHERIES RESEARCH
 DIVISION OF FISHERIES MICHIGAN CONSERVATION DEPT.
 LAKE INVENTORY MAP
WHITE LAKE
 AREA 840 ACRES
 MARSHAL SURVEY AND BOUNDINGS 8/25-27/33
 INVENTORY 8/25-27/34
 OAKLAND COUNTY T.3 N.R.7-8 E. SEC. 17, 18, 19

Proposed Dredging Area

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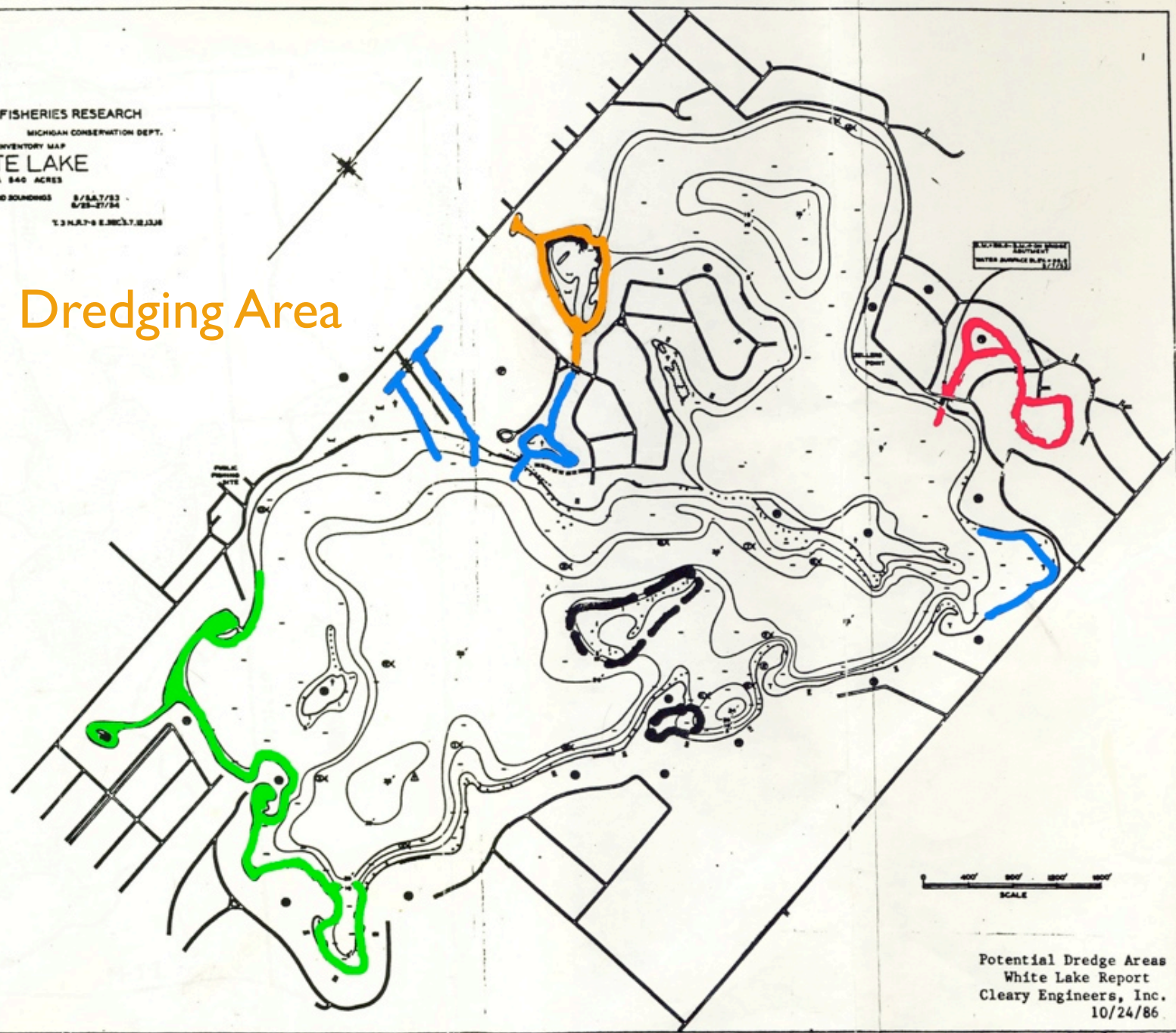
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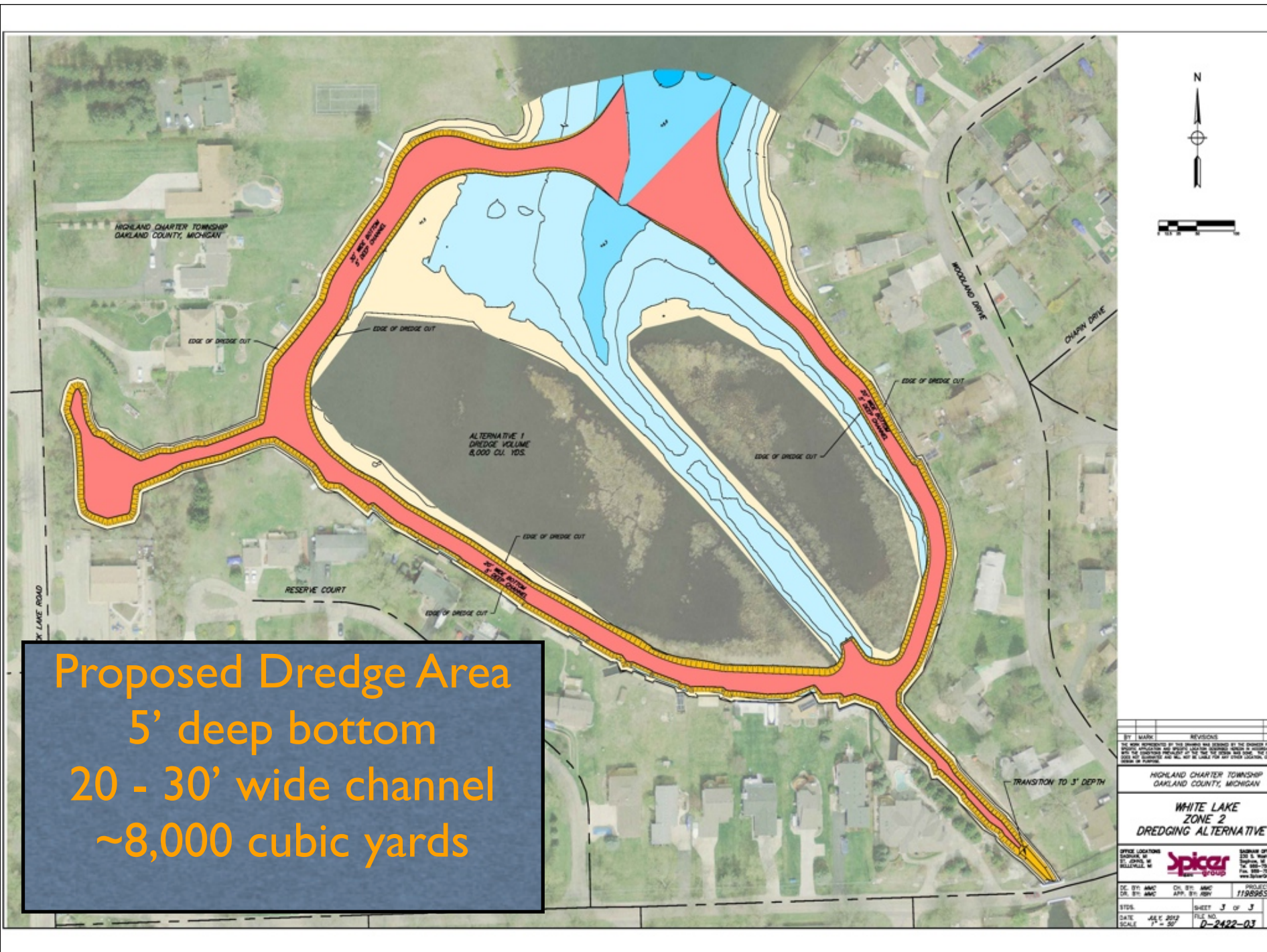
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Potential Dredge Areas
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Proposed Dredge Area
 5' deep bottom
 20 - 30' wide channel
 ~8,000 cubic yards

BY	DATE	REVISIONS

THE WORK REPRESENTED BY THIS DRAWING WAS PERFORMED BY THE ENGINEER OR SURVEYOR LICENSED IN THE STATE OF MICHIGAN. THE ENGINEER OR SURVEYOR HAS CONDUCTED A VISUAL CHECK OF THE DRAWING TO VERIFY THAT THE INFORMATION SHOWN IS ACCURATE AND COMPLETE. THE ENGINEER OR SURVEYOR DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN ON THIS DRAWING.

HIGHLAND CHARTER TOWNSHIP
 OAKLAND COUNTY, MICHIGAN

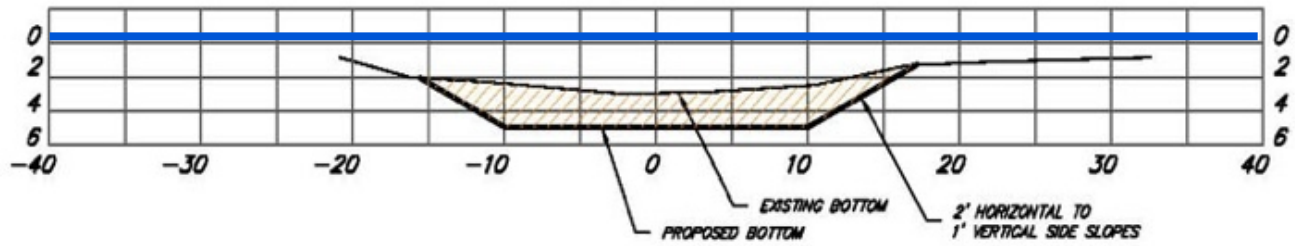
**WHITE LAKE
 ZONE 2
 DREDGING ALTERNATIVE**

OFFICE LOCATION:
 2150 W. WOODLAND DRIVE
 ST. JOHNS, MI 48886


 Spicer Group
 225 E. WOODLAND DRIVE
 ST. JOHNS, MI 48886-1000
 TEL: 517-353-2000
 WWW.SPICERGROUP.COM

DE. BY: AMC DR. BY: AMC	DI. BY: AMC APP. BY: JBY	PROJECT: 119896S
STD.	SHEET: 3 OF 3	DATE: JULY 2012
SCALE: 1" = 50'	FILE NO.: D-2422-03	PROJECT:

EXAMPLE CROSS SECTION
1" = 10'



RESERVE COURT

EDGE OF DREDGE CUT

20' WIDE BOTTOM
5' DEEP CHANNEL

EDGE OF DREDGE CUT

Dredging Spoils

- ~ 8,000 cubic yards
- ~ 5 acre-feet
 - 5 acres @ 1 foot deep
 - 1 acre @ 5 feet deep
- ~ 1,600 linear feet of Geo Bags
 - (19' diameter = 60' circumference)

Soil Testing

- 7 Soil Samples Taken on 6/22/12
- Analyzed by:
 - Environmental Consulting & Technology, Inc.
 - Ann Arbor, MI
- “All work was performed in accordance with applicable Michigan Department of Environmental Quality (MDEQ) protocols and operational memoranda.”

7 Soil Samples Taken

- Tested for 11 different metals + Mercury
- Arsenic Levels
 - (MDEQ Background: 5800 ug/kg)
 - Sample 1: 570 ug/kg
 - Sample 2: 5,100 ug/kg
 - Sample 3: 8,900 ug/kg
 - Sample 4: 3,400 ug/kg
 - Sample 5: 6,500 ug/kg
 - Sample 6: 11,000 ug/kg
 - Sample 7: 2,200 ug/kg

7 Soil Samples Taken

- Tested for 17 different Polynuclear Aromatic Hydrocarbons
 - Benzo(a)pyrene found in 1 sample
 - (MDEQ Background: 180 ug/kg)
 - Sample 3: **580 ug/kg**

Final Spoils Disposal

- On Site
 - Requires Restrictive Covenant on Deed
- Truck to Private Property
 - Requires Restrictive Covenant on Deed
- Truck to Landfill
 - Hazardous Material Landfill

The background of the slide is a photograph of a sunset over a vast body of water. The sun is low on the horizon, creating a bright, colorful glow that transitions from yellow and orange near the horizon to a deep blue in the sky. The water's surface is textured with small ripples, reflecting the light from the sky. The overall mood is serene and expansive.

Project Cost Estimates

Project Cost Estimates

- Engineering Management: \$30,000
- Dredging & Dewatering
 - Open Pit: \$140,000
 - Geotextile Bags: \$200,000
- Final Spoils Disposal
 - On site: \$50,000
 - Truck to Private Property: \$90,000
 - Truck to Landfill: \$165,000

Lowest Cost Option


- Engineering Management: \$30,000
- Dredging & Dewatering: \$140,000
 - Open Pit
- Final Spoils Disposal: \$50,000
 - On site
- 10% Contingency: \$22,000

- TOTAL: \$242,000

Highest Cost Option

- Engineering Management: \$30,000
- Dredging & Dewatering: \$200,000
 - Geotextile Bags
- Final Spoils Disposal: \$165,000
 - Truck to Landfill
- 10% Contingency: \$39,500

- TOTAL: \$438,000



Special Assessment District Funding

Current SAD Budget

Year	Starting Balance	Tax Revenue	Weed Control	Legal	Water Testing	Sheriff Patrols	Dredging Study	Ending Balance
2010	138,400	107,000	135,200	3,800	6,000	6,000	0	94,400
	157,345	108,000	84,512	3,185	0	5,027	0	172,621
2011	100,400	107,000	133,200	3,800	6,000	7,000	0	64,400
	172,621	108,000	82,110	3,932	0	6,610	0	187,969
2012	64,400	107,000	112,200	3,800	6,000	7,000	35,000	7,400
	187,969	108,000	83,000	4,000	0	7,000	21,000	180,969

Budget
Actual

Proposed SAD Assessments 2013-2017

	2010-2012	2013-2017
Lakefront	150	210
Lake Access	18	25
Commercial	368	515

Proposed SAD Budget

Year	Starting Balance	Tax Revenue	Weed Control	Legal	Water Testing	Sheriff Patrols	Dredging	Ending Balance
2013	180,969	151,200	85,000	4,000	100	7,000	0	236,069
2014	236,069	151,200	87,000	4,000	100	7,000	0	289,169
2015	289,169	151,200	89,000	4,000	100	7,000	272,000	68,269
2016	68,269	151,200	91,000	4,000	100	7,000	0	117,369
2017	117,369	151,200	93,000	4,000	100	7,000	166,000	-1,531

SAD Public Hearing

Monday, September 24, 2012
7:00 PM

Highland Township Auditorium
205 N. John Street
Highland, MI 48357

The SAD Process

- The WLIB levies taxes and allocates funds
- The WLCL manages SAD spending
- The WLCL proposes a 3-5 year program
- The WLIB schedules a Public Hearing
- After listening to public comments, the WLIB votes on the SAD assessments



Thank
You