

**Minutes of the Lake Oakland
Lake Improvement Board Meeting
June 30, 2022**

Mr. Sabina called the meeting to order at 3:14 p.m. at the Oakland County Water Resources Commissioner 1st Floor Meeting Room.

PRESENT: Rick Sabina, Citizen Member/Chairperson
George Nichols, Oakland County WRC, Secretary
Karen Joliat, Oakland County Board of Commissioners
Kimberly Markee, Waterford Township Clerk
Paul Hausler, Progressive AE (virtual)

Open Meeting

All participants stated their name and affiliation for the record.

Mr. Sabina reminded everyone to sign the attendance sheet (see Attachment 'A').

Approval of the Meeting Agenda:

Kimberly Markee, supported by George Nichols, moved to accept the meeting agenda as presented with the addition of Item 7c (see Attachment 'B').

Motion Carried Unanimously

Approval of Meeting Minutes:

Kimberly Markee, supported by George Nichols, moved to accept the minutes as submitted for the meeting of May 17, 2022.

Motion Carried Unanimously

Paul Hausler will post the meeting minutes on the Lake Oakland website.

Old Business:

A. Project Work Journal

Paul Hausler provided a handout that outlines the Proposed Annual Budget and Plan Assessments for 2019-2023. (see Attachment 'C')

Paul Hausler provided a Project Work Journal (see Attachment 'D') dated June 20, 2022 that outlines the services regarding plant control and associated costs to date for the 2022 calendar year. Since the last meeting it is noted that a survey was done on June 1, 2022 and the treatment on the lake was on June 8, 2022 and June 16, 2022..

B. Herbicide Treatment Update

Paul Hausler stated that a herbicide treatment occurred on June 8, 2022 (see Attachment 'E' – June 1, 2022 Treatment Map). The targeted species were filamentous and planktonic algae, eurasian milfoil and mixed exotics.

Another herbicide treatment occurred on June 16, 2022 (see Attachment 'F' – June 13, 2022 Treatment Map). The targeted species was filamentous algae

C. Plant Harvesting Update

Paul Hausler stated that the harvesting is scheduled to occur from July 5th thru July 13th on Lake Oakland. A second harvest is tentatively scheduled for August 29 thru September 2.

D. Purple Loosestrife Beetles

Rick Sabina that he was not available to accept the delivery of the plants and therefore no new plantings will occur this year. He will be contacted again next year by Integrated Weed Control in Bozemen, Montana. There was nothing paid as you only pay on the amount that was shipped once they are delivered.

New Business

A. Mobile Aquatic Invasive Species Station

Rick Sabina stated that the unit was onsite for the past two weeks and just got picked up this morning. In order to encourage use, he posted a sign next to the machine stating the unit is free to use. If there is another opening for the machine this year, we will be contacted accordingly.

Rick Sabina stated that he received the results of the station usage from last year (see Attachment 'G'). There were 27 times that the air hoses were used, 17 times the vacuum was used and the tools were used sparingly.

B. Catch Basin Cleaning Update

George Nichols reached back to the Road Commission regarding the status of the catch basin cleaning. They were asking why we are requesting the cleaning. George will follow up with the Road Commission again to see when the catch basins are scheduled to be cleaned.

Public Comments:

No Public Comments

Lake Oakland Invoice Approval:

Rick Sabina outlined invoice #17702 from Aqua-Weed Control (dated May 31, 2022) in the amount of \$10,121.23 for the May 12th treatment of invasive weeds and algae, as noted in Item '7a'.

George Nichols, supported by Karen Joliat, to pay invoice #17702 in the amount of \$10,121.23.

Motion Carried Unanimously

Rick Sabina outlined invoice #17837 from Aqua-Weed Control (dated June 17, 2022) in the amount of \$640.00 for the June 16th treatment of invasive weeds and algae, as noted in Item '7b'.

Kimberly Markee, supported by Karen Joliat, to pay invoice #17837 in the amount of \$640.00.

Motion Carried Unanimously

Rick Sabina outlined invoice #17836 from Aqua-Weed Control (dated June 17, 2022) in the amount of \$11,352.50 for the June 8th treatment of invasive weeds and algae, as noted in Item '7c'.

Kimberly Markee, supported by Karen Joliat, to pay invoice #17836 in the amount of \$11,352.50.

Motion Carried Unanimously

Board Member Comments

Karen Joliat mentioned that she believes that Lake Oakland was selected by the County Commissioners to receive police patrol on the lake through the Marine Division for the 4th of July. Only the top busiest lakes were selected to receive this extra patrol services.

Kimberly Markee and Rick Sabina discussed how to confirm what parcels are should be included in the assessment role. It has been noticed that there are some boats that are docked that might relate to properties that are being assessed. Will need to pull the tax role to determine which homes should and shouldn't be included.

Meeting Schedule:

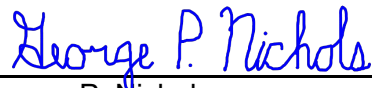
The next Lake Board meeting will be held on Monday August , 2022, at 3:00 p.m. The meeting will take place at Oakland County Water Resources Commissioner office 1st Floor Lunchroom. The address is One Public Works Drive, Building 95W, Waterford, Michigan. This will be posted on the website.

Upon conclusion of the meeting, the next meeting date was rescheduled for Monday, August 29, 2022 at 3:00 pm.

Adjournment:

Kimberly Markee, supported by George Nichols, moved to adjourn the meeting at 3:57 p.m.

Motion Carried Unanimously




George P. Nichols
Lake Improvement Board Secretary
For Lake Oakland

STATE OF MICHIGAN)
) ss:
COUNTY OF OAKLAND)

I hereby certify that the foregoing is a true and complete copy of the minutes of the Lake Improvement Board for Lake Oakland, Oakland County, Michigan held on the 30th day of June 2022 and that the said minutes are on file in the Office of the Oakland County Water Resources Commissioner and are available to the public.

I further certify that notice of the meeting was posted at least 18 hours before the meeting at the Office of the Oakland County Water Resources Commissioner, which is the principal office of the Lake Improvement Board for Lake Oakland.



George P. Nichols
Lake Improvement Board Secretary
For Lake Oakland

Dated: July 5, 2022

Attachment 'A'

**OAKLAND COUNTY WATER RESOURCES COMMISSIONER
ATTENDANCE SHEET**

DATE: June 30, 2022 @ 3:30 p.m. **FACILITATOR:** _____

TYPE Lake Improvement Board Meeting (WRC 2nd Floor Main Conference Room)

TOPIC: Lake Oakland Lake Improvement Board Meeting

PRINTED NAME	E-MAIL	ADDRESS	CONTACT NUMBER
Kim Markee	Kmarkee@waterfordmi.gov		248-674-6211
Rick Sabina	Richard sabina@oakland.edu		248-877-8150
Karen J. Platt	jol Platt@yahoo.com		248 935 6133
George Nichols	nicholsge@oakgov.com		248.941.3006
Paul Hausher (via virtual Teams Mtg)			

Attachment 'B'

AGENDA

LAKE OAKLAND LAKE IMPROVEMENT BOARD

Thursday, June 30, 2022 – 3:00 p.m.

Oakland County Water Resources Commissioner 2nd Floor Conference Room

1. Open Meeting
 - a. Introductions and Attendance

2. Approval of the Meeting Agenda for June 30, 2022

3. Approval of Meeting Minutes from May 17, 2022

4. Old Business
 - a. Project Work Journal
 - b. Herbicide Treatment Update
 - c. Plant Harvesting Update
 - d. Loosestrife beetle plantings

5. New Business
 - a. Mobile Aquatic Invasive Species (AIS) Station
 - b. Catch Basin Cleaning Update

6. Public Comments

7. Lake Oakland Invoice Approval
 - a. Approve payment of invoice #17702 (dated May 31, 2022) from Aqua Weed Control Inc. in the amount of \$10,121.23 for the May 12th treatment of invasive weeds and algae.

- b. Approve payment of invoice # 17837 (dated June 17, 2022) from Aqua-Weed Control, Inc. in the amount of \$640.00 for the June 16th nuisance aquatic plant control work.
- c. Approve payment of invoice # 17836 (dated June 17, 2022) from Aqua-Weed Control, Inc. in the amount of \$11,352.50 for the June 8th nuisance aquatic plant control work.

8. Board Member Comments

9. All Else

- a. Schedule next meeting date

10. Adjournment

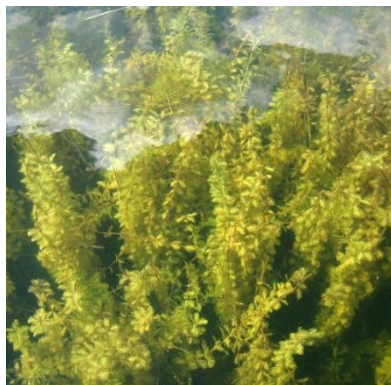
Attachment 'C'

LAKE OAKLAND

LAKE IMPROVEMENT PROJECT PROPOSED ANNUAL BUDGET AND PLAN 2019 – 2023

IMPROVEMENT	ANNUAL COST
Nuisance Aquatic Plant Control	\$70,000
Aquatic Plant Control Coordination/Field Evaluations	\$9,000
Hydro-Acoustic Mapping	\$1,500
Water Quality Monitoring	\$3,500
Information and Education	\$3,000
Fish Stocking and Goose Round-Up	\$2,500
Administration and Contingency	\$8,000
TOTAL	\$97,500

The Lake Oakland plant control program would include a combination of herbicide treatments and mechanical harvesting. The program would focus primarily on invasive species such as Eurasian milfoil, curly-leaf pondweed and starry stonewort.



Eurasian milfoil



Curly-leaf pondweed



Starry stonewort

Plant control activities are proposed to be coordinated under the direction of the Lake Oakland Improvement Board's consultant, Progressive AE. The consultant would be responsible for preparing contract documents for the plant control program, conducting GPS-guided surveys of the lake to determine the scope of work to be performed by the plant control contractors, and conducting follow-up surveys to ensure work is performed in a satisfactory manner. The consultant would report to the lake board regarding plant control effectiveness, and maintain a written record of the timing, scope and cost of plant control activities.

Lake Oakland was mapped in 1944 by the Michigan Department of Conservation. Since that time, significant alterations to the shoreline have occurred. To provide an updated map of the lake, recent orthodigital photography would be used to delineate the lake shoreline and a hydro-acoustic survey of the lake bottom would be conducted to measure current water depths, plant bio-volume (i.e., the height of plants in the water column) and sediment hardness. A series of maps of Lake Oakland would then be created that show depth contours, the height and location of plants in the lake, and sediment hardness. In addition, an updated aquatic vegetation survey map with GPS reference points would be created to facilitate future aquatic plant surveys. Digital copies of all maps would be posted on the lake board's website.

Annual water quality sampling would be conducted in the spring and late summer to evaluate baseline water quality conditions in Lake Oakland. Samples would be collected at 10-foot intervals from the surface to the bottom over the deepest basin to measure temperature, dissolved oxygen, and total phosphorus. In addition, measurements of Secchi transparency and chlorophyll-a levels would be taken during each sampling period. In the first year of the monitoring program, the following additional parameters would be analyzed surface to bottom: total suspended solids, chloride, pH and alkalinity. Sampling conducted during the project would provide a benchmark from which to gauge future changes in water quality. Monitoring results would be posted annually on the lake board's website.

Information regarding the Lake Oakland Improvement Project would continue to be posted on the Lake Oakland Improvement Board's website (www.lakeoaklandboard.org). The website would be updated annually and include information regarding lake board activities, the nuisance plant control program, water quality monitoring results, updated lake maps, lake and watershed facts, and would include links to other information sources.

Fish stocking and goose round-ups are proposed to be conducted on an as-needed basis throughout the duration of the project.

Project administration and contingency would include costs related to public hearing proceedings, mailings, meetings, and contingent expenses.

R:\01200000\01100100\Water Resources\Budgets\Lake Oakland Proposed Budget 2019 - 2022.docx

Attachment 'D'

2022

Beginning Balance: \$70,000.00

Date	Type	Results
1/3/2022	Permit	Reimbursement for 2022 EGLE permit fee

Application Date	Type	Target Species	Qty	Dose Rate	Cost	Remaining Balance
1/10/2022	Permit Fee		1.00 each		\$1,500.00	\$68,500.00
Invoice 17078 Total					\$1,500.00	\$68,500.00

5/4/2022	Survey	Found some milfoil. Very little curly-leaf pondweed. Water temp. = 55F.
----------	--------	---

Treatment Date	Type	Target Species	Qty	Dose Rate	Cost	Remaining Balance
5/12/2022	Algae control (filamentous and planktonic)	Filamentous or Planktonic Algae	4.00 acre(s)		\$160.00	\$68,340.00
5/12/2022	Triclopyr liquid	Eurasian Milfoil	7.50 acre(s)	4.00 gallons/acre	\$2,499.98	\$65,840.02
5/12/2022	ProcellaCOR	Eurasian Milfoil	11.75 PDU		\$1,351.25	\$64,488.77
5/12/2022	Diquat dibromide @ 1 gal/acre + 4 PDU ProcellaCOR	Eurasian Milfoil	11.75 acre(s)		\$6,110.00	\$58,378.77
Invoice 17702 Total					\$10,121.23	\$58,378.77

6/1/2022	Survey	JML, CMD - Some milfoil found along shore, water clarity was good. Pondweeds starting to come in.
----------	--------	---






Attachment 'E'

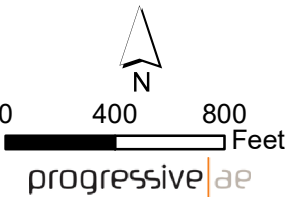
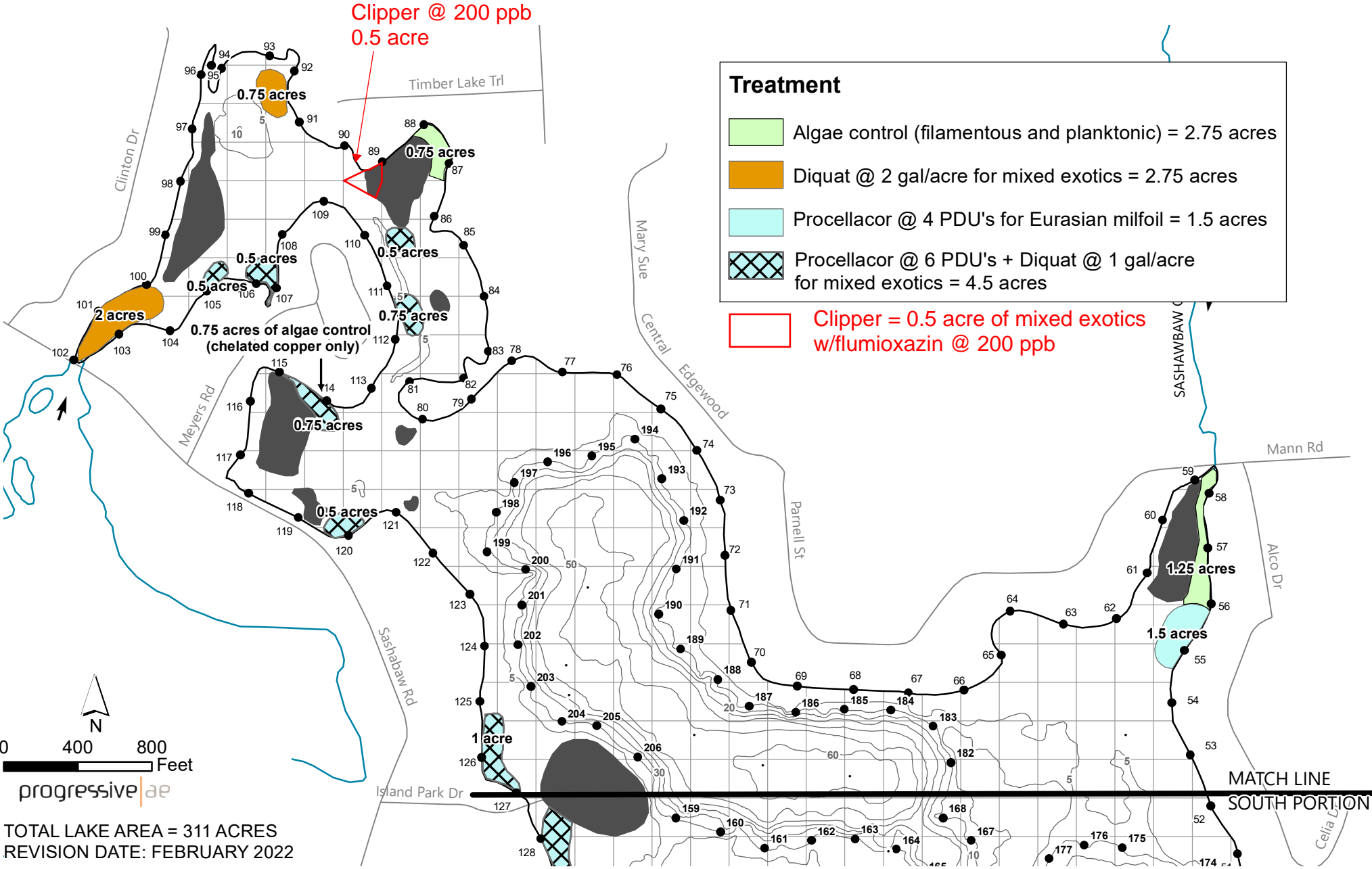
☐ = 1 ACRE

LAKE OAKLAND (NORTH PORTION) OAKLAND COUNTY, MICHIGAN JUNE 1, 2022 TREATMENT MAP

Clipper @ 200 ppb
0.5 acre

Treatment

-  Algae control (filamentous and planktonic) = 2.75 acres
-  Diquat @ 2 gal/acre for mixed exotics = 2.75 acres
-  Procellacor @ 4 PDU's for Eurasian milfoil = 1.5 acres
-  Procellacor @ 6 PDU's + Diquat @ 1 gal/acre for mixed exotics = 4.5 acres
-  Clipper = 0.5 acre of mixed exotics w/flumioxazin @ 200 ppb

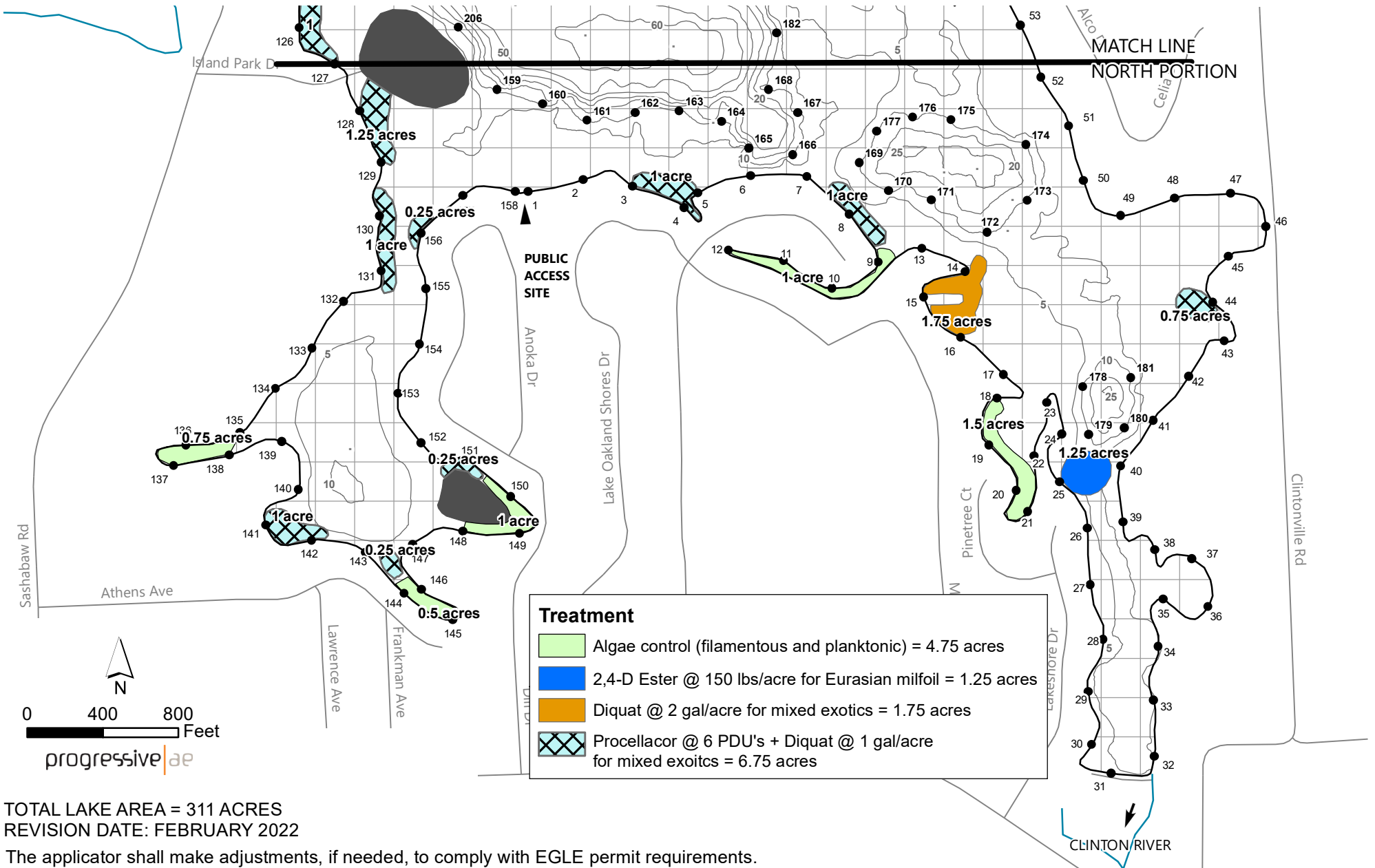


TOTAL LAKE AREA = 311 ACRES
REVISION DATE: FEBRUARY 2022

The applicator shall make adjustments, if needed, to comply with EGLE permit requirements.

LAKE OAKLAND (SOUTH PORTION) OAKLAND COUNTY, MICHIGAN JUNE 1, 2022 TREATMENT MAP

□ = 1 ACRE



TOTAL LAKE AREA = 311 ACRES
REVISION DATE: FEBRUARY 2022

The applicator shall make adjustments, if needed, to comply with EGLE permit requirements.

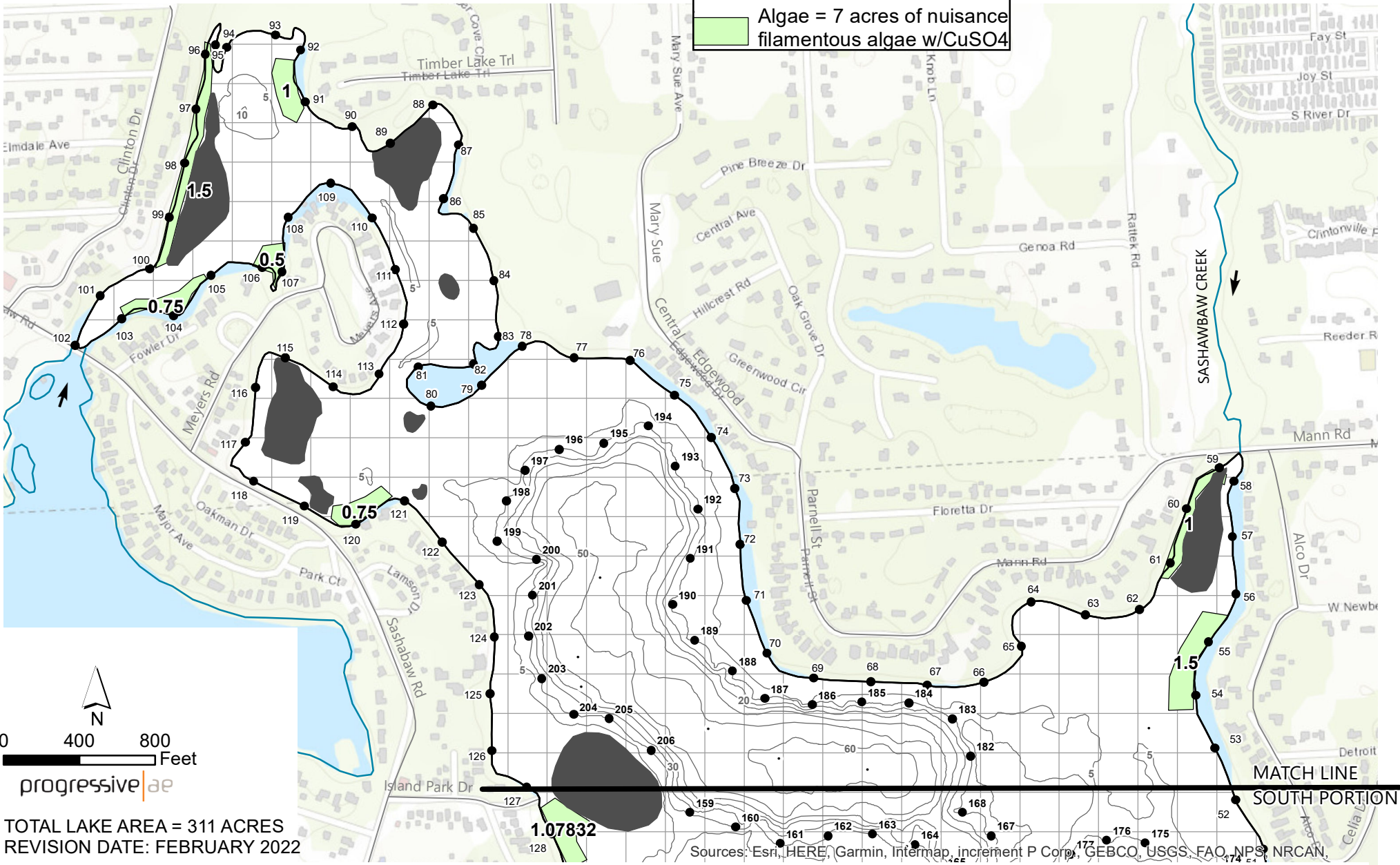
Attachment 'F'

☐ = 1 ACRE

LAKE OAKLAND (NORTH PORTION) OAKLAND COUNTY, MICHIGAN JUNE 13, 2022 TREATMENT MAP

Treatment

- Algae = 7 acres of nuisance filamentous algae w/CuSO₄



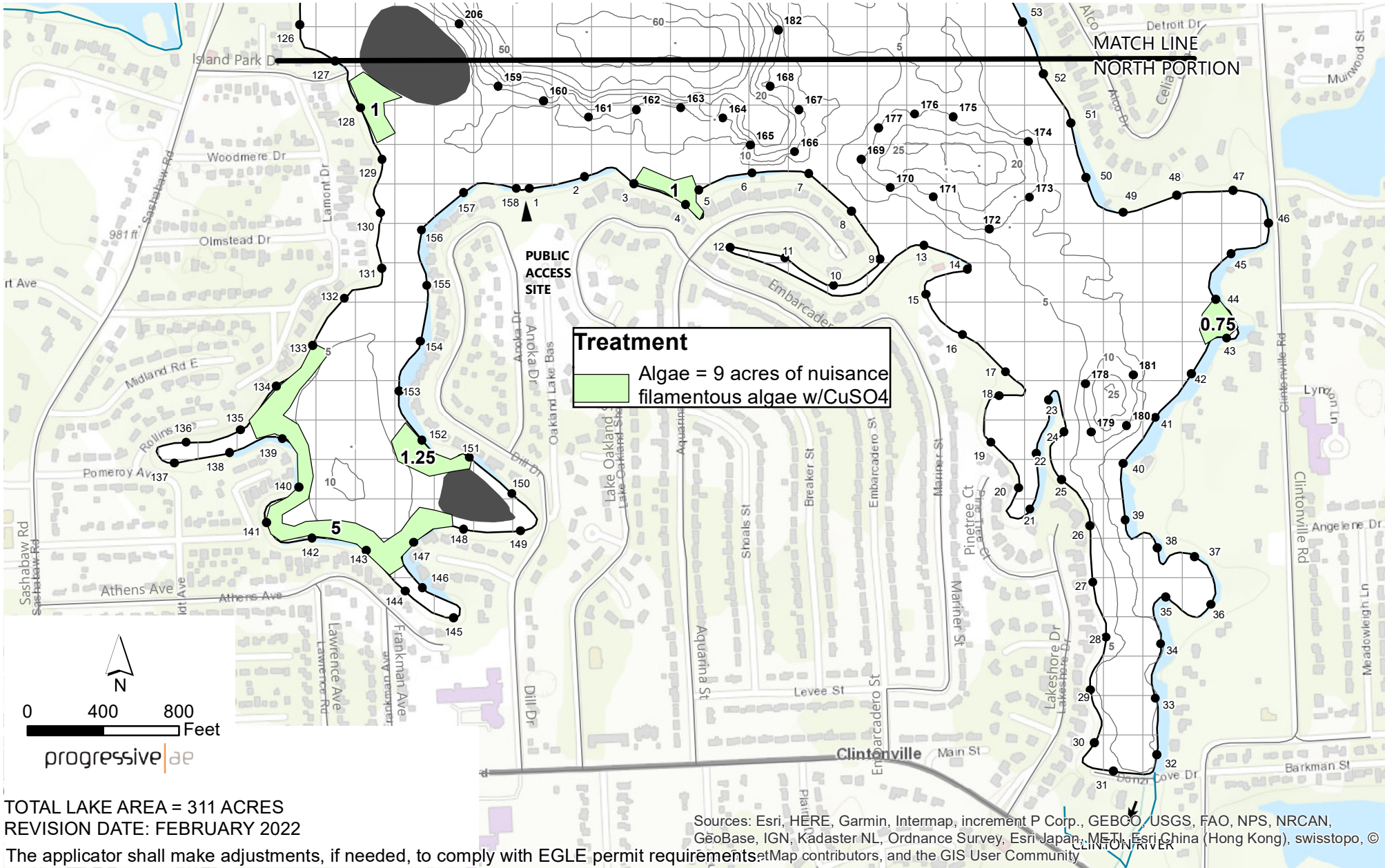
TOTAL LAKE AREA = 311 ACRES
REVISION DATE: FEBRUARY 2022

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN.

The applicator shall make adjustments, if needed, to comply with EGLE permit requirements.

LAKE OAKLAND (SOUTH PORTION) OAKLAND COUNTY, MICHIGAN JUNE 13, 2022 TREATMENT MAP

☐ = 1 ACRE



TOTAL LAKE AREA = 311 ACRES
REVISION DATE: FEBRUARY 2022

The applicator shall make adjustments, if needed, to comply with EGLE permit requirements at Map contributors, and the GIS User Community

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, ©

Attachment 'G'



CD3 System Software Analytics

Use Data and Graphs

Location	Month Name	Air Uses	Light Uses	Tool 1 Use Count	Tool 2 Use Count	Tool 3 Use Count	Vacuum Uses
Oakland County Trailer 2	Jun	27	6	0	8	2	17

