

Curly-leaf Pondweed Inspection Report

Location: Pelican, Little Pelican, and Bass Lakes

Inspection Date: June 18 and 19, 2025

County: Otter Tail

Surveyor: Hannah Passolt and Nathan Sedlacek

Report Author: Hannah Passolt

Report Date: November 25, 2025

INTRODUCTION

Houston Engineering staff (H. Passolt and N. Sedlacek) completed a survey to determine the presence and/or absence and abundance of *Potamogeton crispus* (curly-leaf pondweed) on Pelican Lake, Little Pelican Lake, and Bass Lake (**Exhibit A: Survey Areas Location Map**). The survey took place on June 18 and 19, 2024. The purpose of this survey was to assess the presence or absence of curly-leaf pondweed (CLP) in previous treatment areas, and to investigate areas of reported observations of curly-leaf pondweed.

METHODS

Survey methods included vegetation collection by thrown rakes at sample points within each survey area (**Figure 1**). The survey areas and sample points are shown on **Exhibit A: Survey Areas Location Map**. Photographs from the survey fieldwork are provided in **Exhibit B: Survey Photographs**.

A professional GPS unit (Trimble TDC 600 with Juniper Systems Geode) was used during the field survey to navigate to the previous treatment areas and to record sample points. Aquatic vegetation samples were collected on a double-headed rake, which was connected to a 35-foot rope. At each sample location, the rake was thrown into the lake, allowed to sink to the lake bottom, and pulled back into the boat. The presence/absence of CLP was determined by examining the plant species on the rake. If CLP was present, the density rating was estimated on a scale of 1 (low density) to 4 (high density). If no CLP was present, the sample point was given a rating of 0 (zero). If no vegetation was returned on the rake sample, the sample point was marked as “empty rake”. Survey Area F had a high density of submergent vegetation and was not accessible by boat. We observed the area from a distance and sampled in accessible areas adjacent to the original survey area.



Figure 1. Thrown rake sample with curly-leaf pondweed.

RESULTS

PELICAN LAKE

Three survey areas were sampled in Pelican Lake. CLP was observed at 72 of 270 sample points and the average density ratings were between 2.6 – 2.8 (Table 1, Exhibit C).

Table 1. Summary of results for Pelican Lake survey areas.

Survey area Map ID	Average density rating	Survey area size (acres)	# sample points	# CLP observations
A	2.8	131.7	206	51
B	2.8	31.0	45	4
C	2.6	5.4	19	17
Totals		168.0	270	72

LITTLE PELICAN LAKE

Three survey areas (total 75.8 acres) were sampled in Little Pelican Lake. CLP was observed at 204 of 298 sample points and the average density ratings were between 2.5 – 3.2 (Table 2, Exhibits C).

Table 2. Summary of results for Little Pelican Lake survey areas.

Survey area Map ID	Average density rating	Survey area size (acres)	# sample points	# CLP observations
D	3.2	22.5	133	100
E	2.6	22.7	128	80
F	2.5	51.8	37	24
Totals		97.0	298	204

BASS LAKE

One survey area (total 54.3 acres) was sampled in Bass Lake. CLP was observed at 81 of 141 sample points and the average density rating was 3.3 (Table 2, Exhibit C).

Table 3. Summary of results for Little Pelican Lake survey areas.

Survey area Map ID	Average density rating	Survey area size (acres)	# sample points	# CLP observations
G	3.3	54.3	141	81
Totals		54.3	141	81



Conclusions and Recommendations

Curly-leaf pondweed was observed in all survey areas. Herbicide treatments are recommended for some areas in spring 2026. The recommended treatment areas are summarized in **Table 3** and are shown in **Exhibit D: Recommended Treatment Area Maps**. No herbicide treatment is recommended for Survey Area B.

Table 3. Recommended 2026 treatment areas.

Lake	Survey area Map ID	Potential 2025 Treatment Acres
Pelican Lake	A	11.4
	B	No treatment
	C	5.1
Little Pelican Lake	D	13.1
	E	11.7
	F	13.2
Bass Lake	G	7.2
Total Treatment Acres		61.7



Exhibit A – Survey Areas Location Map



BECKER COUNTY

OTTER TAIL COUNTY

DUCK

Survey Area A

Survey Area B

Survey Area D

Survey Area F

PELICAN

LITTLE PELICAN

Survey Area E

Survey Area C

59

59

59

BASS

Survey Area G

FISH

59

59

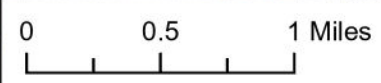
TAMARAC

TRIMMER

LIZZIE

FR

- Lakes
- 2025 Survey Areas



Location Map					
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Exhibit B – Survey Photographs



Rake sample with *P. crispus*



Rake sample with *P. crispus*

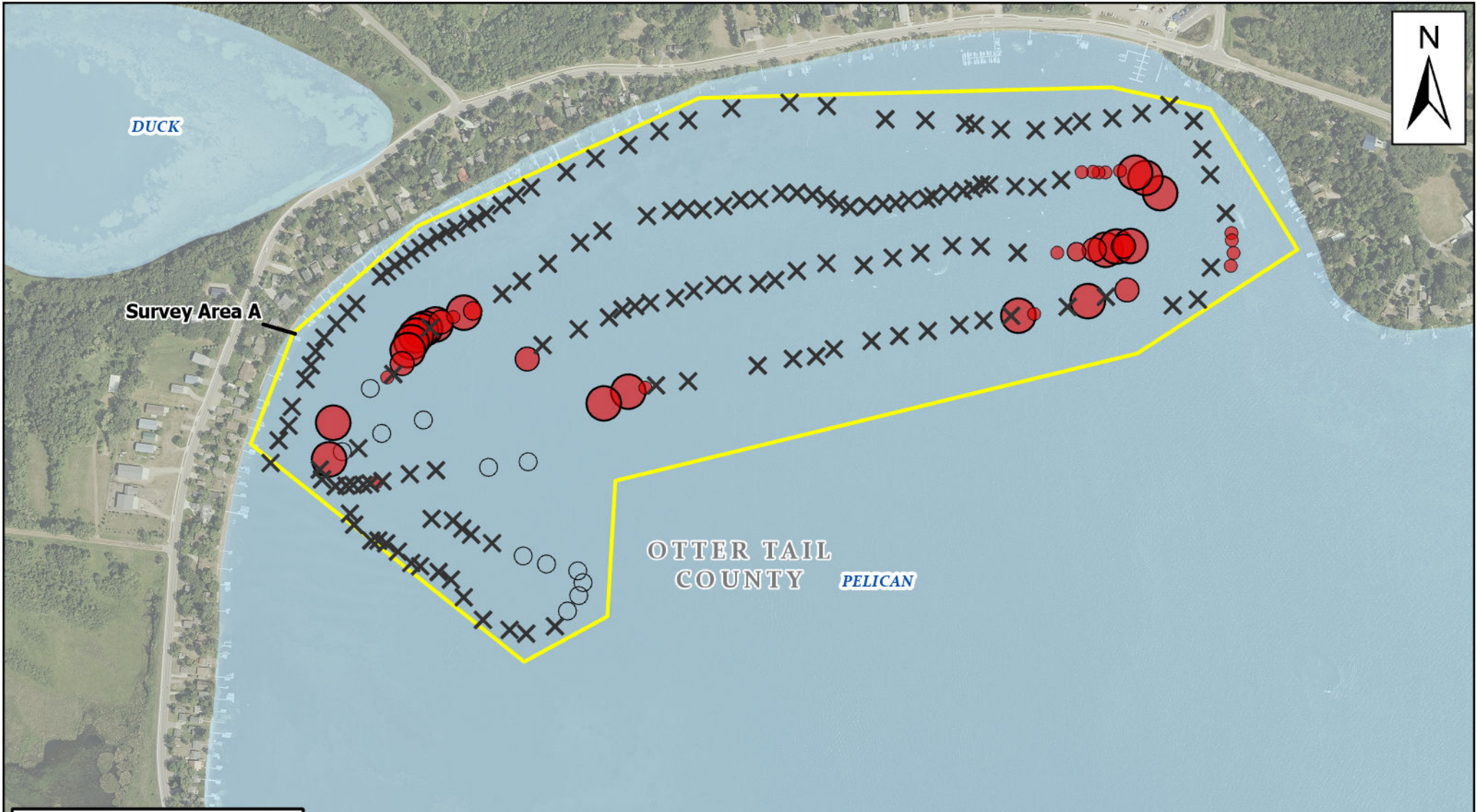


Rake sample with *Ceratophyllum demersum*



Rake sample with *Chara*

Exhibit C – Survey Results Maps



CLP Density Rating

- × 0
- 1
- 2
- 3
- 4

○ Empty rake

▭ 2025 Survey Areas

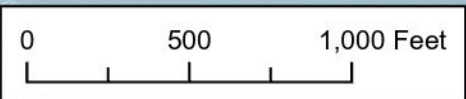


Exhibit C - Survey Area A Results Map

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Survey Area B

OTTER TAIL COUNTY

PELICAN

CLP Density Rating

- × 0
- 1
- 2
- 3
- 4

○ Empty rake

▭ 2025 Survey Areas

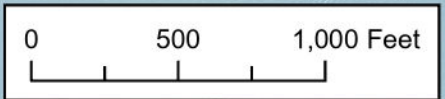
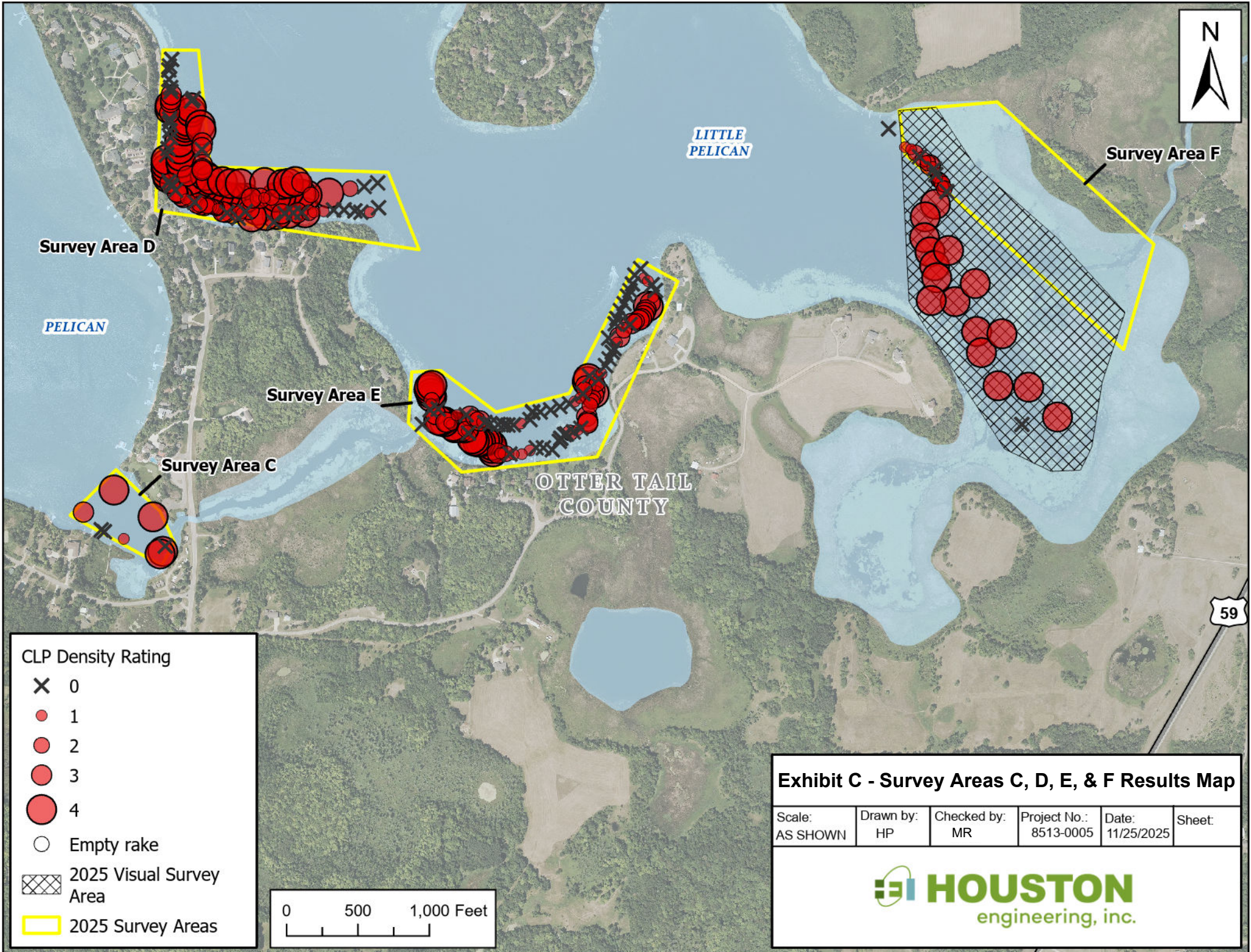


Exhibit C - Survey Areas B Results Map

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PELICAN

LITTLE PELICAN

OTTER TAIL COUNTY

59

CLP Density Rating

- ✕ 0
- 1
- 2
- 3
- 4
- Empty rake
- ▨ 2025 Visual Survey Area
- ▭ 2025 Survey Areas

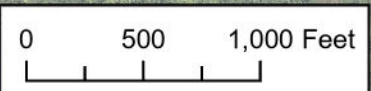
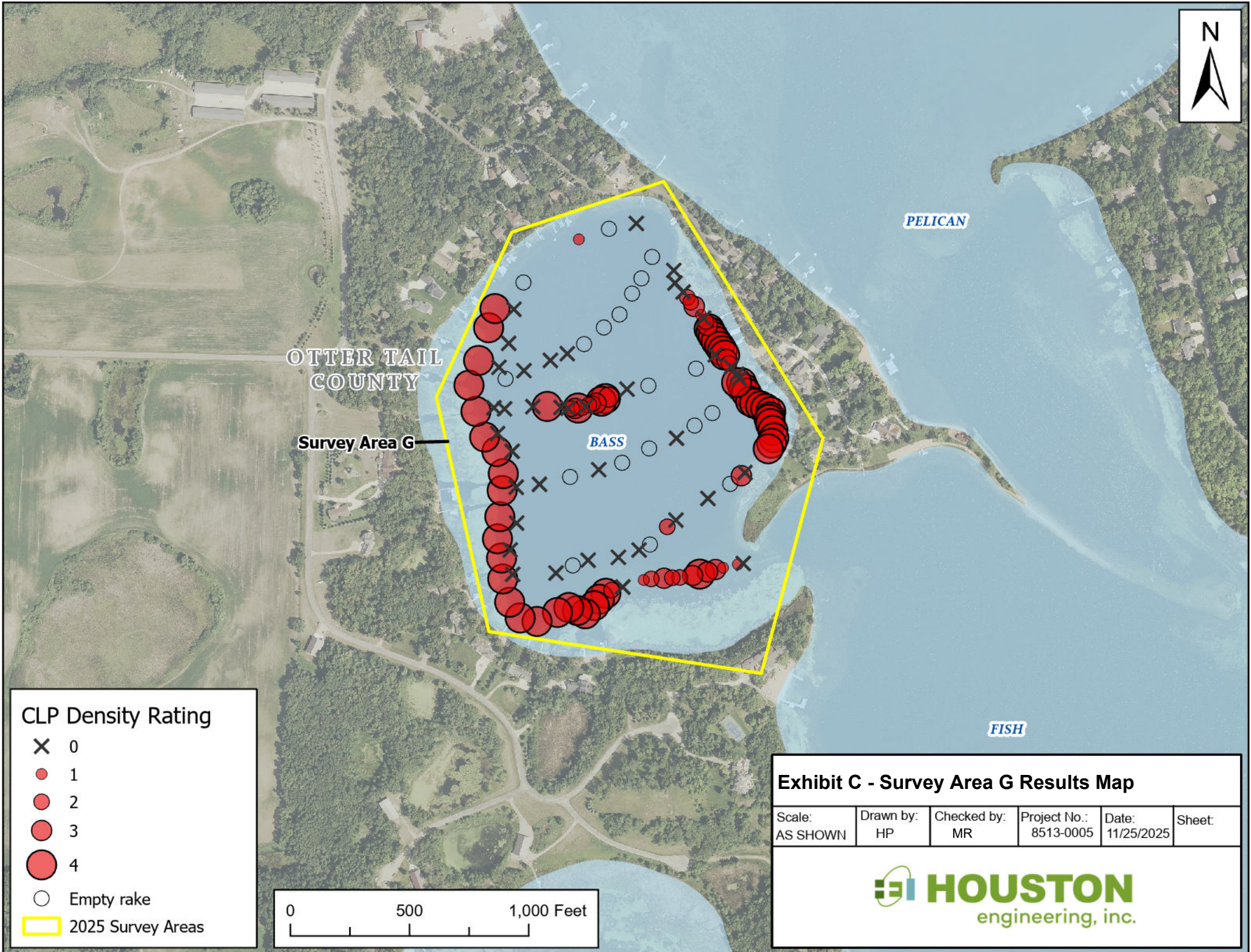


Exhibit C - Survey Areas C, D, E, & F Results Map

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OTTER TAIL COUNTY

Survey Area G

BASS

PELICAN

FISH

CLP Density Rating

- × 0
- 1
- 2
- 3
- 4

○ Empty rake

▭ 2025 Survey Areas

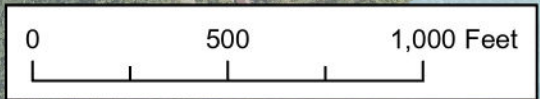


Exhibit C - Survey Area G Results Map

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Exhibit D – Recommended Treatment Area Maps



Survey Area A

2025 Survey Areas

2026 Recommended Treatment Areas

CLP Density Rating

×

0

●

1

●

2

●

3

●

4

○

Empty rake

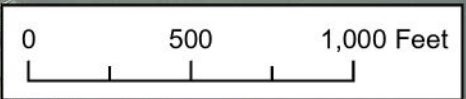
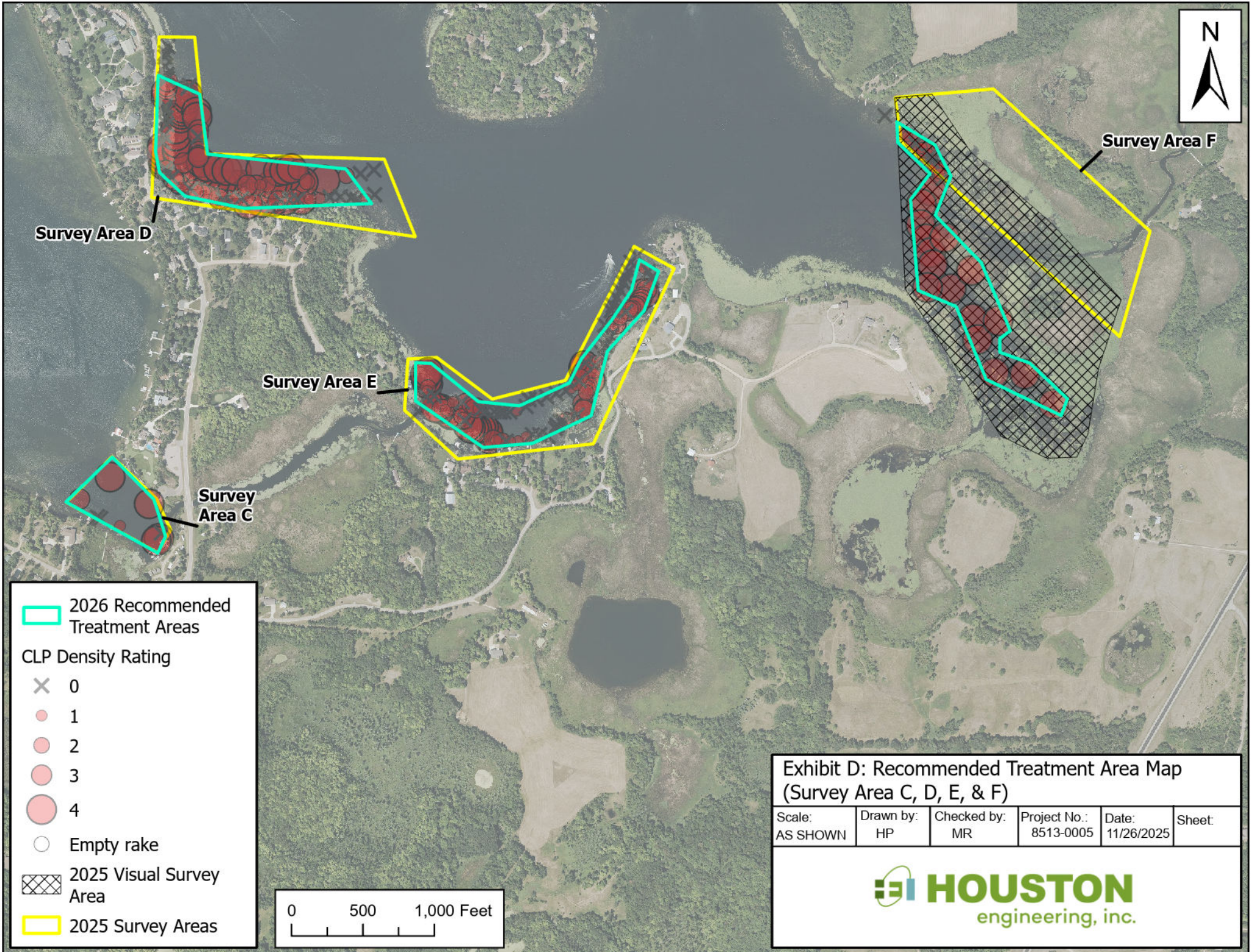


Exhibit D: Recommended Treatment Area Map (Survey Area A)

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Survey Area D






Survey Area E

Survey Area C

Survey Area F

 2026 Recommended Treatment Areas

CLP Density Rating

-  0
-  1
-  2
-  3
-  4

 Empty rake

 2025 Visual Survey Area

 2025 Survey Areas

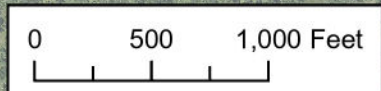




Exhibit D: Recommended Treatment Area Map
(Survey Area C, D, E, & F)

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Survey Area G

-  2026 Recommended Treatment Areas
-  2025 Survey Areas

CLP Density Rating

-  0
-  1
-  2
-  3
-  4
-  Empty rake

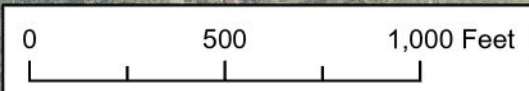


Exhibit D: Recommended Treatment Area Map
(Survey Area G)

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