



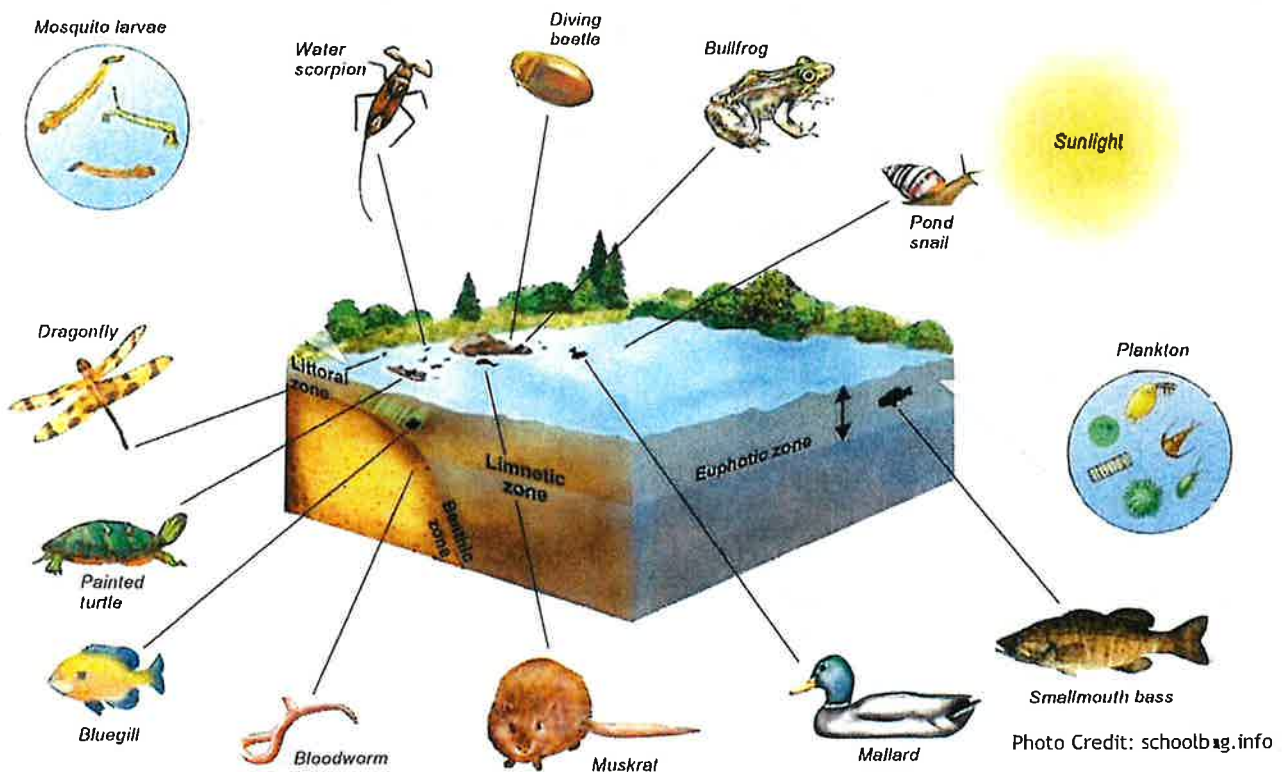
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environment today  
for tomorrow.

## Lake Evaluation Summary

Lake Name: Budd Lake County: Clare

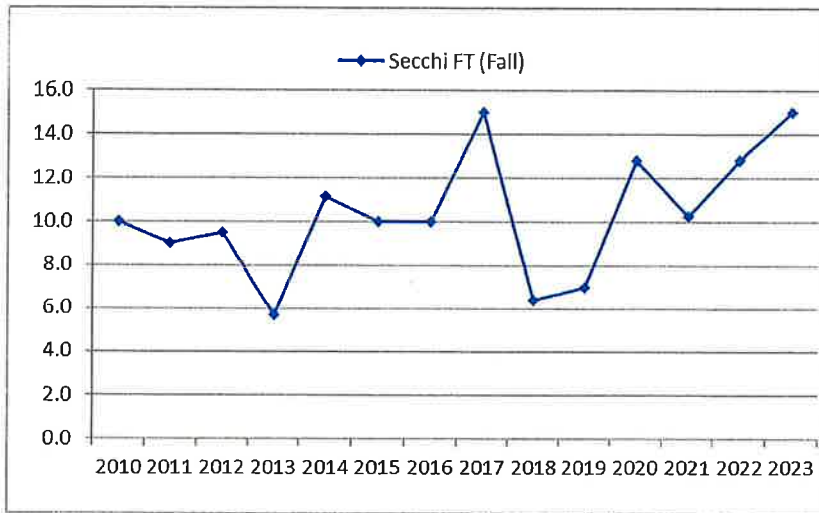
Evaluated by: Raquelle Robbins Date: August 2024

Purpose of evaluation: AVAS Survey Evaluation, Water Quality



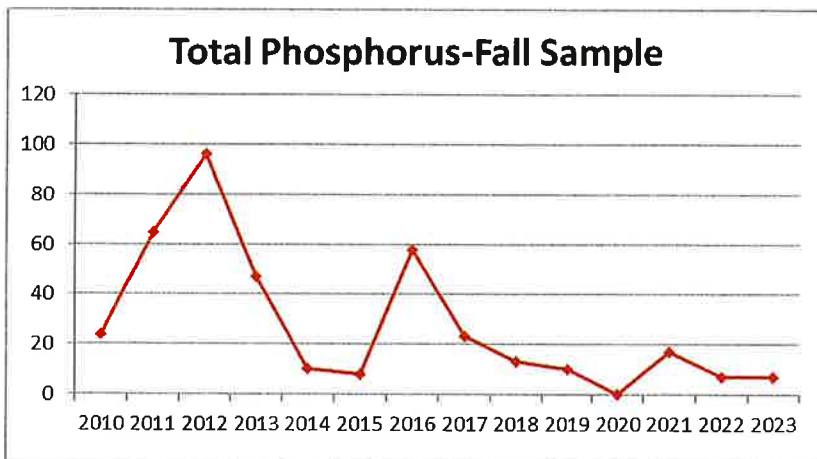
Budd Lake was surveyed on 15 August 2024, by experienced PLM scientists. The goal of this survey was to identify any exotic species and document native plant diversity. An AVAS Survey was performed, using EGLE approved survey techniques which broke the lake down into segments to document all vegetation present by species and density. July through September are ideal months for finding peak biomass in this geographical area. Out of the sites surveyed, 17 native species were found and Budd Lake had some EWM and no CLP. Overall, the growth in Budd Lake was good and chara, wild celery and various pondweeds were the most prevalent species found. Chara is a vital part of the lake ecosystem, providing sediment control and water clarity while providing habitat for fish. Over the past few years, Budd Lake is showing strong native trend lines with a healthy native plant community. Following the use of Sonar in 2023, we found some EWM growing back throughout the season. This is to be expected but will be aggressive with management in 2025.

# Water Quality Assessment



This graph represents water clarity of Budd Lake. Clarity of a lake can vary yearly and monthly. Lake clarity can help determine productivity of a lake. Lake clarity can be impacted by rain/runoff, zebra mussels and erosion to name a few.

Budd Lake has good water clarity, based on both spring and fall measurements.



This graph represents total phosphorus in Budd Lake. Besides a few spikes in the TP on Budd Lake, the nutrient levels have been stable dating back to 2003. Seasonal and even weekly fluctuations can impact nutrient levels based on factors such as rain events, septic issues, lawn fertilizers, organic breakdown (tree leaves) to name a few. This is why looking at long term data is important. We want to be able to see trends, not just single events. For 2023, the nutrient levels do come out as normal! (7ug/L).

## Budd Lake's Recommended Management Program:

- Survey Program including:
  - Annual AVAS Survey
- Water quality evaluation (optional)
- Exotic plant control where found (EWM & CLP)
- Algae and wild celery treatments around shoreline
- Aeration System Installation and
- Muck Pellet Treatments in Southern Basins



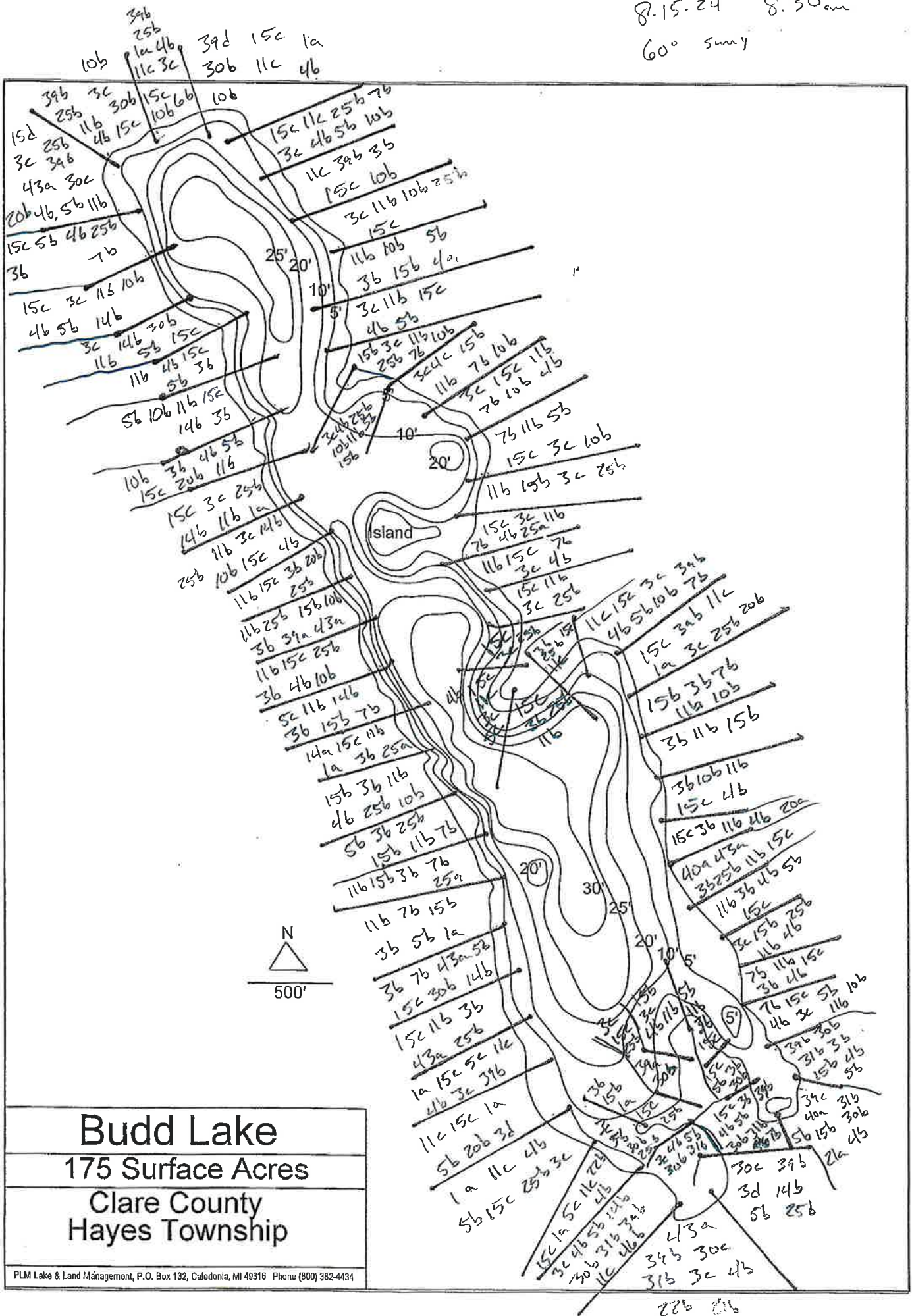
**PLM**  
LAKE & LAND  
MANAGEMENT CORP

## Standard Aquatic Vegetation Summary Sheet

|                        |                            | Total number of<br>AVAS's for each<br>Density Category |        |        |        | Calculations |             |             |             | Sum of<br>Columns<br>5-8 | Total<br>No. of<br>AVAS | Col 9<br>divided<br>by<br>Col 10 |
|------------------------|----------------------------|--------------------------------------------------------|--------|--------|--------|--------------|-------------|-------------|-------------|--------------------------|-------------------------|----------------------------------|
| Code<br>No             | Plant Name                 | A<br>1                                                 | B<br>2 | C<br>3 | D<br>4 | A x 1<br>5   | B x 10<br>6 | C x 40<br>7 | D x 80<br>8 | 9                        | 10                      | 11                               |
| 1                      | Eurasian watermilfoil      | 11                                                     | 0      | 0      | 0      | 11           | 0           | 0           | 0           | 11                       | 69                      | 0.16                             |
| 2                      | Curly leaf pondweed        | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 3                      | Chara                      | 0                                                      | 31     | 33     | 2      | 0            | 310         | 1320        | 160         | 1790                     | 69                      | 25.94                            |
| 4                      | Thinleaf pondweed          | 1                                                      | 35     | 1      | 0      | 1            | 350         | 40          | 0           | 391                      | 69                      | 5.67                             |
| 5                      | Flatstem pondweed          | 0                                                      | 29     | 4      | 0      | 0            | 290         | 160         | 0           | 450                      | 69                      | 6.52                             |
| 6                      | Robbins pondweed           | 0                                                      | 1      | 0      | 0      | 0            | 10          | 0           | 0           | 10                       | 69                      | 0.14                             |
| 7                      | Variable pondweed          | 0                                                      | 18     | 0      | 0      | 0            | 180         | 0           | 0           | 180                      | 69                      | 2.61                             |
| 8                      | White stem pondweed        | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 9                      | Richardsons pondweed       | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 10                     | Illinois pondweed          | 0                                                      | 23     | 0      | 0      | 0            | 230         | 0           | 0           | 230                      | 69                      | 3.33                             |
| 11                     | Large leaf pondweed        | 0                                                      | 43     | 13     | 0      | 0            | 430         | 520         | 0           | 950                      | 69                      | 13.77                            |
| 12                     | American pondweed          | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 13                     | Floating leaf pondweed     | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 14                     | Water stargrass            | 1                                                      | 9      | 0      | 0      | 1            | 90          | 0           | 0           | 91                       | 69                      | 1.32                             |
| 15                     | Wild celery                | 0                                                      | 18     | 46     | 1      | 0            | 180         | 1840        | 80          | 2100                     | 69                      | 30.43                            |
| 16                     | Sagittaria (submersed)     | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 17                     | Northern watermilfoil      | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 18                     | Rush                       | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 19                     | Variable leaf watermilfoil | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 20                     | Coontail                   | 1                                                      | 5      | 0      | 0      | 1            | 50          | 0           | 0           | 51                       | 69                      | 0.74                             |
| 21                     | Elodea                     | 1                                                      | 1      | 0      | 0      | 1            | 10          | 0           | 0           | 11                       | 69                      | 0.16                             |
| 22                     | Bladderwort                | 0                                                      | 2      | 0      | 0      | 0            | 20          | 0           | 0           | 20                       | 69                      | 0.29                             |
| 23                     | Mini Bladderwort           | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 24                     | Buttercup                  | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 25                     | Naiad                      | 3                                                      | 29     | 0      | 0      | 3            | 290         | 0           | 0           | 293                      | 69                      | 4.25                             |
| 26                     | Brittle naiad              | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 27                     | Sago Pondweed              | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 28                     | Starry Stonewort           | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 29                     | Cabomba                    | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 30                     | Water Lily                 | 0                                                      | 12     | 3      | 0      | 0            | 120         | 120         | 0           | 240                      | 69                      | 3.48                             |
| 31                     | Spatardock                 | 0                                                      | 6      | 0      | 0      | 0            | 60          | 0           | 0           | 60                       | 69                      | 0.87                             |
| 32                     | Water shield               | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 33                     | Common Duckweed            | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 34                     | Greater duckweed           | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 35                     | Watermeal                  | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 36                     | Arrowhead                  | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 37                     | Pickrelweed                | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 38                     | Arrow arum                 | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 39                     | Cattail                    | 2                                                      | 12     | 1      | 1      | 2            | 120         | 40          | 80          | 242                      | 69                      | 3.51                             |
| 40                     | Bulrush                    | 2                                                      | 0      | 0      | 0      | 2            | 0           | 0           | 0           | 2                        | 69                      | 0.03                             |
| 41                     | Iris                       | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 42                     | Swamp loosestrife          | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 43                     | Purple loosestrife         | 6                                                      | 0      | 0      | 0      | 6            | 0           | 0           | 0           | 6                        | 69                      | 0.09                             |
| 44                     | Phragmites                 | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 45                     | Frogbit                    | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 46                     | Slender spikerush          | 0                                                      | 1      | 0      | 0      | 0            | 10          | 0           | 0           | 10                       | 69                      | 0.14                             |
| 47                     | Smartweed                  | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 48                     | Water marigold             | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 49                     | American lotus             | 0                                                      | 0      | 0      | 0      | 0            | 0           | 0           | 0           |                          |                         |                                  |
| 50                     |                            | 0                                                      | 0      | 0      | 0      |              | 0           | 0           | 0           |                          |                         |                                  |
| Total cumulative cover |                            |                                                        |        |        |        |              |             |             |             |                          | 103.45                  |                                  |



8.15.24 8:30 am  
60° sunny



10:14 AM

10/08/24

Accrual Basis

PLM MI North  
Sales by Customer Detail  
January through December 2024

| Date             | Memo                                                              | Qty    | Sales Price | Amount    | Balance   |
|------------------|-------------------------------------------------------------------|--------|-------------|-----------|-----------|
| <b>Budd Lake</b> |                                                                   |        |             |           |           |
| 02/22/2024       | Permit Fee for 2024 Season                                        | 1      | 0.00        | 0.00      | 0.00      |
| 05/07/2024       | Spring Newsletter Notice                                          | 1      | 150.00      | 150.00    | 150.00    |
| 05/07/2024       | Algae Treatment of Lake                                           | 20     | 125.00      | 2,500.00  | 2,650.00  |
| 05/07/2024       | MD Pellet Treatment                                               | 1      | 2,137.50    | 2,137.50  | 4,787.50  |
| 05/07/2024       | Fuel Surcharge                                                    | 0.01   | 4,637.50    | 46.38     | 4,833.88  |
| 05/20/2024       | CLP Treatment of Lake Using Aquathol K                            | 10     | 175.00      | 1,750.00  | 6,583.88  |
| 05/20/2024       | EWM/CLP Treatment of Lake Using Diquat                            | 1.7    | 182.50      | 310.25    | 6,894.13  |
| 05/20/2024       | EWM Treatment of Lake using ProcellaCOR (1 acre at 16pdu/acre)    | 16     | 100.00      | 1,600.00  | 8,494.13  |
| 05/20/2024       | Algae Treatment of Lake using ProcellaCOR                         | 1.4    | 125.00      | 175.00    | 8,669.13  |
| 05/20/2024       | Flumioxazin Treatment of Lake 200ppb                              | 5      | 450.00      | 2,250.00  | 10,919.13 |
| 05/20/2024       | Fuel Surcharge                                                    | 0.005  | 6,085.25    | 30.43     | 10,949.56 |
| 05/24/2024       | Algae Treatment of Lake using Chelated Copper                     | 13.25  | 125.00      | 1,656.25  | 12,605.81 |
| 05/24/2024       | Fuel Surcharge                                                    | 0.01   | 1,656.25    | 16.56     | 12,622.37 |
| 06/17/2024       | Weed Treatment of Lake Using Diquat                               | 2.5    | 175.00      | 437.50    | 13,059.87 |
| 06/17/2024       | Weed Treatment of Lake using Komeen Decend                        | 15     | 700.00      | 10,500.00 | 23,559.87 |
| 06/17/2024       | Algae Treatment of Lake                                           | 5.5    | 125.00      | 687.50    | 24,247.37 |
| 06/17/2024       | Flumioxazin Treatment of Lake 200ppb                              | 2.5    | 450.00      | 1,125.00  | 25,372.37 |
| 06/17/2024       | MD Pellet Treatment                                               | 1      | 2,137.50    | 2,137.50  | 27,509.87 |
| 06/17/2024       | Fuel Surcharge                                                    | 0.005  | 14,887.50   | 74.44     | 27,584.31 |
| 07/16/2024       | Weed Treatment of Lake Using Hydro                                | 2.5    | 175.00      | 437.50    | 28,021.81 |
| 07/16/2024       | Weed Treatment of Lake Using Aquastrike                           | 6      | 350.00      | 2,100.00  | 30,121.81 |
| 07/16/2024       | WCTreatment of Lake Using Nautique                                | 4      | 412.00      | 1,648.00  | 31,769.81 |
| 07/16/2024       | Algae Treatment of Lake                                           | 17.25  | 45.00       | 776.25    | 32,546.06 |
| 07/16/2024       | Flumioxazin Treatment of Lake 200ppb                              | 7.5    | 450.00      | 3,375.00  | 35,921.06 |
| 07/16/2024       | MD Pellet Treatment                                               | 1      | 2,137.50    | 2,137.50  | 38,058.56 |
| 07/16/2024       | Fuel Surcharge                                                    | 0.0025 | 10,474.25   | 26.19     | 38,084.75 |
| 08/15/2024       | MD Pellet Treatment                                               | 1      | 2,137.50    | 2,137.50  | 40,222.25 |
| 08/15/2024       | Sediment Sample - Aeration Program                                | 1      | 300.00      | 300.00    | 40,522.25 |
| 08/15/2024       | AVAS Survey of Lake                                               | 1      | 555.00      | 555.00    | 41,077.25 |
| 08/15/2024       | Weed Treatment of Lake Using Aquastrike                           | 6      | 350.00      | 2,100.00  | 43,177.25 |
| 08/15/2024       | WQ Sampling Aeration Program (Nutrient Sampling, Chl a, algal ... | 1      | 4,200.00    | 4,200.00  | 47,377.25 |
| 08/15/2024       | Water Quality Program                                             | 1      | 630.00      | 630.00    | 48,007.25 |
| 08/15/2024       | Algae Treatment of Lake                                           | 4.5    | 48.00       | 216.00    | 48,223.25 |

7:47 AM

09/20/23

Accrual Basis

**PLM MI North**  
**Sales by Customer Detail**  
January through December 2023

| Date             | Memo                                          | Qty      | Sales Price | Amount    | Balance   |
|------------------|-----------------------------------------------|----------|-------------|-----------|-----------|
| <b>Budd Lake</b> |                                               |          |             |           |           |
| 02/27/2023       | Reimbursement for 2023 Permit Application Fee | 1        | 1,600.00    | 1,600.00  | 1,600.00  |
| 04/20/2023       | Spring Aeration Installation                  | 1        | 250.00      | 250.00    | 1,850.00  |
| 04/20/2023       | Fuel Surcharge                                | 0.025    | 250.00      | 6.25      | 1,856.25  |
| 05/15/2023       | Spring Newsletter Notice                      | 1        | 225.00      | 225.00    | 2,081.25  |
| 05/15/2023       | Fastest                                       | 16       | 175.00      | 2,800.00  | 4,881.25  |
| 05/15/2023       | Lake Management Plan                          | 1        | 750.00      | 750.00    | 5,631.25  |
| 05/15/2023       | Sonar Treatment of Lake                       | 7.27     | 2,842.00    | 20,661.34 | 26,292.59 |
| 05/15/2023       | MD Pellet Treatment                           | 1        | 2,137.50    | 2,137.50  | 28,430.09 |
| 05/15/2023       | Algae Treatment of Lake using Chelated Copper | 15       | 125.00      | 1,875.00  | 30,305.09 |
| 05/15/2023       | Fuel Surcharge                                | 0.0075   | 22,012.00   | 165.09    | 30,470.18 |
| 06/05/2023       | Sonar Treatment of Lake Using Sonar AS        | 2.21     | 2,842.00    | 6,280.82  | 36,751.00 |
| 06/05/2023       | MD Pellet Treatment                           | 1        | 2,137.50    | 2,137.50  | 38,888.50 |
| 06/05/2023       | Algae Treatment of Lake                       | 16.5     | 125.00      | 2,062.50  | 40,951.00 |
| 06/05/2023       | Fuel Surcharge                                | 0.005    | 10,480.82   | 52.40     | 41,003.40 |
| 07/14/2023       | MD Pellet Treatment                           | 1        | 2,137.50    | 2,137.50  | 43,140.90 |
| 07/14/2023       | Algae Treatment of Lake                       | 19       | 43.00       | 817.00    | 43,957.90 |
| 07/14/2023       | Fuel Surcharge                                | 0.015    | 2,954.50    | 44.32     | 44,002.22 |
| 08/09/2023       | MD Pellet Treatment                           | 1        | 2,137.50    | 2,137.50  | 46,139.72 |
| 08/09/2023       | Algae Treatment of Lake                       | 13       | 43.00       | 559.00    | 46,698.72 |
| 08/09/2023       | Fuel Surcharge                                | 0.015    | 2,696.50    | 40.45     | 46,739.17 |
| 09/14/2023       | Fall Aeration Removal and Storage             | 1        | 250.00      | 250.00    | 46,989.17 |
| 09/14/2023       | AVAS Survey of Lake                           | 1        | 555.00      | 555.00    | 47,544.17 |
| 09/14/2023       | Aeration WQ Program                           | 1        | 4,000.00    | 4,000.00  | 51,544.17 |
| 09/14/2023       | Water Quality Program                         | 1        | 630.00      | 630.00    | 52,174.17 |
| 09/14/2023       | MD Pellet Treatment                           | 1        | 2,137.50    | 2,137.50  | 54,311.67 |
| Total Budd Lake  |                                               | 102.0475 |             | 54,311.67 | 54,311.67 |
| <b>TOTAL</b>     |                                               | 102.0475 |             | 54,311.67 | 54,311.67 |