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## **RECORD OF MANAGEMENT SERVICE AT LAKE LENAPE - 2021**

### **April 13**

Lake survey. Secchi depth: 9.0 feet. Temperature: 49.1 (F).

North lake: Curlyleaf pondweed plant growth was scattered to patchy and low in the water.

West shore: Curlyleaf pondweed plant growth was scattered to patchy and low in the water (some plants were emerging from the hydrosol).

South lake: Curlyleaf pondweed plant growth was scattered and low in the water (some plants were emerging from the hydrosol).

East shore: Curlyleaf pondweed plant growth was scattered and low in the water (some plants were emerging from the hydrosol).

Island: Curlyleaf pondweed plant growth was scattered and low in the water (some plants were emerging from the hydrosol).

Channel: Scattered curlyleaf pondweed plants and water lilies were emerging from the hydrosol.

East Cove: Curlyleaf pondweed plant growth was scattered to patchy and low in the water.

Center: Curlyleaf pondweed plant growth was scattered to patchy and low in the water (3' tall in 8'-12' of water).

Water clarity was very good.

### **April 26**

Lake survey. Secchi depth: 8.5 feet. Temperature: 53.6 (F). Dissolved oxygen (mg/L): 9.1. pH: 7.0. Hardness (ppm): 185.

North lake: Curlyleaf pondweed plant growth was scattered to patchy and low in the water. Spirogyra, sp. was on the bottom.

West shore: Curlyleaf pondweed plant growth was scattered to patchy and low in the water.

South lake: Curlyleaf pondweed plant growth was scattered and low in the water.

East shore: Curlyleaf pondweed plant growth was scattered and low in the water.

Island: Curlyleaf pondweed plant growth was scattered and low in the water.

Channel: Curlyleaf pondweed plant growth was scattered (some plants emerging from the hydrosol). Water lily plant growth was scattered. Spirogyra, sp. was on the bottom.

East Cove: Curlyleaf pondweed plant growth was scattered to patchy and low in the water (some plants emerging from the hydrosol). Spirogyra, sp. was on the bottom.

Center: Curlyleaf pondweed plant growth was scattered to patchy and low in the water.

Water clarity was very good.

Treated the lake with Fluridone (1<sup>st</sup> half of split application) to control the growth of curlyleaf pondweed.

### **May 11**

Lake survey. Secchi depth: 6.5 feet. Temperature: 58.1 (F). Dissolved oxygen (mg/L): 7.9. pH: 7.0.

North lake: Some curlyleaf pondweed plants dropped (chlorosis on plants). Spirogyra, sp. was on the bottom. Some pollen was on the surface.

West shore: Some curlyleaf pondweed plants dropped (chlorosis on plants). A few naiad plants were emerging from the hydrosol.

South lake: Some curlyleaf pondweed plants dropped (chlorosis on plants). Chara, sp. plants were scattered and low in the water.

East shore: Some curlyleaf pondweed plants dropped (chlorosis on plants). Chara, sp. plants were scattered and low in the water.

Island: Some curlyleaf pondweed plants dropped (chlorosis on plants). A few naiad plants were emerging from the hydrosol. Chara, sp. plants were scattered and low in the water.

Channel: Some curlyleaf pondweed plants dropped (chlorosis on plants). A few ribbonleaf pondweed plants were emerging from the hydrosol. Water lily plants showed chlorosis. Spirogyra, sp. was on the bottom.

East Cove: Some curlyleaf pondweed plants dropped (chlorosis on plants). A few naiad plants and ribbonleaf pondweed plants were emerging from the hydrosol. Spirogyra, sp. was on the bottom. Some pollen was on the surface.

Center: Some curlyleaf pondweed plants dropped (chlorosis on plants).

Water was turbid but the clarity was good.

Treated the lake with Fluridone (2<sup>nd</sup> half of split application) to control the growth of curlyleaf pondweed.

### **May 26**

Lake survey. Secchi depth: 11.0 feet. Temperature: 72.5 (F).

North lake: Curlyleaf pondweed plants dropped. Scattered naiad plants were emerging from the hydrosol. Chlorosis was observed on water lilies. Spirogyra, sp. was on the bottom. Some pollen was on the surface.

West shore: Curlyleaf pondweed plants dropped. Ribbonleaf pondweed plants were scattered and low in the water. Some naiad plants were emerging from the hydrosol. Chlorosis was observed on water lilies. Some pollen was on the surface.

South lake: Curlyleaf pondweed plants dropped. Some low ribbonleaf pondweed plants were observed. Some patchy low growth Chara, sp. plants were observed. Some pollen was on the surface.

East shore: Curlyleaf pondweed plants dropped. A few low ribbonleaf pondweed plants were observed. Scattered naiad plants were emerging from the hydrosol. Chara, sp. plants were patchy and low in the water.

Island: Curlyleaf pondweed plants dropped. A few low ribbonleaf pondweed plants were observed. Scattered naiad plants were emerging from the hydrosol. Chara, sp. plants were patchy and low in the water.

Channel: Curlyleaf pondweed plants dropped. Ribbonleaf pondweed plants were patchy and low in the water. Chlorosis was observed on water lilies. Spirogyra, sp. was on the bottom.

East Cove: Curlyleaf pondweed plants dropped. Ribbonleaf pondweed plants were patchy and low in the water. Scattered naiad plants were emerging from the hydrosol. Chlorosis was observed on water lilies. Spirogyra, sp. was on the bottom. Some pollen was on the surface.

Center: Most curlyleaf pondweed plants dropped. Scattered naiad plants were emerging from the hydrosol.

Water clarity was excellent. Outflow was low.

## June 7

Lake survey. Secchi depth: 8.5 feet. Temperature: 77 (F).

North lake: Naiad plants were scattered to patchy and low in the water. A few low ribbonleaf pondweed plants were observed. A few small pondweed plants were observed near the inflow.

West shore: Naiad plants were scattered and low in the water. Patchy low growth ribbonleaf pondweed plants were observed.

South lake: Chara, sp. and Ribbonleaf pondweed plants were patchy and low in the water. Naiad plants were scattered and low in the water.

East shore: Naiad and ribbonleaf pondweed plants were scattered to patchy and low in the water. Chara, sp. plant growth was patchy and low in the water.

Island: Naiad plants were scattered to patchy and low in the water. Ribbonleaf pondweed plants were scattered and low in the water. Chara, sp. plant growth was patchy and low in the water.

Channel: Ribbonleaf pondweed plants were patchy and low in the water. Chlorosis was observed on water lilies.

East Cove: Naiad plant growth was scattered and low in the water. Chara, sp. and ribbonleaf pondweed plants were patchy and low in the water. Chlorosis was on water lilies.

Center: Naiad plants were scattered to patchy and low in the water.

Water clarity was excellent.

## June 22

Lake survey. Secchi depth: 7.0 feet. Temperature: 75.2 (F).

North lake: Naiad plants were patchy and low in the water. Ribbonleaf pondweed plants were scattered and low in the water. A few small pondweed plants were observed near the inflow.

West shore: Naiad plants were scattered and low in the water. Some patchy low growth ribbonleaf pondweed plants were observed.

South lake: Ribbonleaf pondweed plants were patchy and low in the water. Naiad plants were scattered and low in the water. Chara, sp. plants were patchy and low in the water.

East shore: Naiad plants were patchy and low in the water. Ribbonleaf pondweed plants were patchy and low in the water. Chara, sp. plants were patchy and low in the water.

Island: Naiads were patchy and low in the water. Ribbonleaf pondweed plants were scattered and low in the water. Chara, sp. plants were patchy and low in the water.

Channel: Ribbonleaf pondweed plants were patchy. Naiad plant growth was scattered. Water lily growth was patchy.

East Cove: Naiad plants were scattered to patchy and low in the water. Chara, sp. and ribbonleaf pondweed plants were patchy and low in the water.

Center: Naiad plants were scattered to patchy and low in the water.

Water was slightly turbid but the clarity was good.

### **July 6**

Lake survey. Secchi depth: 7.5 feet. Temperature: 80.6 (F).

North lake: Low growth naiad patches were observed. Some patchy ribbonleaf pondweed plants were observed. A small patch of pondweed plants were observed near the inflow.

West shore: Naiad plants were patchy and low in the water. Patches of ribbonleaf pondweed plants were observed. Chara, sp. plants were patchy and low in the water.

South lake: Naiad plants were scattered to patchy and low in the water. Some patchy ribbonleaf pondweed plants were observed. Chara, sp. plants were patchy and low in the water.

East shore: Naiad plants were patchy and low in the water. Ribbonleaf pondweed plants were scattered to patchy. Chara, sp. plants were patchy and low in the water.

Island: Patches of low growth naiad plants were observed. Ribbonleaf pondweed plants were scattered and low in the water. Chara, sp. plants were patchy and low in the water.

Channel: Patchy growth of ribbonleaf pondweed and low naiad plants were observed. Chara, sp. plants were patchy and low in the water.

East Cove: Patches of low naiad plants were observed. Patches of ribbonleaf pondweed plants were observed. Chara, sp. plants were patchy and low in the water.

Center: Patches of low growth naiad plants were observed.

Water was slightly turbid but the clarity was good.

### **July 19**

Lake survey. Secchi depth: 5.5 feet. Temperature: 80.6 (F). Dissolved oxygen (mg/L): 5.4.

North lake: Patches of low growth naiad plants were observed. Ribbonleaf pondweed plant growth was patchy. Patchy low growth small pondweed plants were observed.

West shore: Patches of low growth naiad plants were observed (some brown leaves). Ribbonleaf pondweed plant growth was patchy. Small pondweed plant growth was scattered. Chara, sp. plants were patchy and low in the water.

South lake: Naiad plant growth was patchy and low in the water (some brown). Patchy growth of ribbonleaf pondweed plants were observed. Chara, sp. plant growth was patchy and low in the water.

East shore: Naiad plant growth was patchy and low in the water (some brown). Patchy growth of ribbonleaf pondweed plants were observed. Chara, sp. plants were patchy and low in the water.

Island: Patches of low growth naiad plants were observed (some brown). Ribbonleaf pondweed plants were scattered. Chara, sp. plants were patchy and low in the water.

Channel: Patches of low growth naiad plants were observed (some brown). Patchy ribbonleaf pondweed plants and low Chara, sp. were observed.

East Cove: Patches of low growth naiad plants were observed (some brown). Patchy ribbonleaf pondweed plants were observed. Chara, sp. plant growth was low in the water.

Center: Patches of low growth naiad plants were observed (some brown).

A temperature/dissolved oxygen profile indicated that the lake had turned over. Fish were evenly distributed. Water was green with planktonic algae cells visible in the water column. No clumping or slicking was observed. Small detritus was scattered on the surface.

A temperature (C) and dissolved oxygen (mg/L) profile was measured from the surface to the bottom at 1 foot intervals with a Yellow Springs meter.

Depth (Feet)	Temperature (C)	Dissolved oxygen (mg/L)
Surface	27.0	5.4
1 foot	27.0	5.3
2 feet	26.5	5.1
3 feet	26.5	4.8
4 feet	26.5	4.6
5 feet	26.0	4.5
6 feet	25.5	4.4
7 feet	25.5	4.3
8 feet	25.5	4.2
9 feet	25.5	3.8
10 feet	25.0	2.7

August 3

Lake survey. Secchi depth: 5.0 feet. Temperature: 74.3 (F). Dissolved oxygen (mg/L): 5.3

North lake: Patches of low growth naiad plants were observed (some dropped). Ribbonleaf pondweed plant growth was patchy. Small pondweed plants were patchy and low in the water.

West shore: Patches of low growth naiad plants were observed (some dropped). Ribbonleaf pondweed plant growth was patchy. Small pondweed plant growth was scattered. Chara, sp. plants were patchy and low in the water. Fine particles of detritus were on the surface.

South lake: Patches of naiad plants were low in the water (some dropped). Patchy growth of ribbonleaf pondweed plants were observed. Chara, sp. plants were patchy and low in the water. Fine particles of detritus were on the surface.

East shore: Naiad plants were low in the water (some dropped). Patchy growth of ribbonleaf pondweed plants were observed. Chara, sp. plants were patchy and low in the water.

Island: Patches of low growth naiad plants were observed (some dropped). Ribbonleaf pondweed plants were scattered. Chara, sp. plants were patchy and low in the water.

Channel: Patches of low growth naiad plants were observed (some brown). Ribbonleaf pondweed and Chara, sp. plant growth was patchy.

East Cove: Patches of low growth naiad plants were observed (some dropped). Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water.

Center: Naiad plants were scattered to patchy and low in the water (many plants dropped).

Water clarity was good but planktonic algae cells were visible in the water column. Some light streaking was observed along the West Shore, by the dam, and in the Channel by the Island. Fish were observed in the upper 5' of the water column.

A temperature (C) and dissolved oxygen (mg/L) profile was measured from the surface to the bottom at 1 foot intervals with a Yellow Springs meter.

Depth (Feet)	Temperature (C)	Dissolved oxygen (mg/L)
Surface	23.5	5.3
1 foot	23.5	5.2
2 feet	23.5	5.2
3 feet	23.5	5.1
4 feet	23.5	5.0
5 feet	23.5	4.8

6 feet	23.5	4.6
7 feet	23.5	4.5
8 feet	23.5	4.3
9 feet	23.5	2.1
10 feet	23.0	0.6

**August 17**

Lake survey. Secchi depth: 7.5 feet. Temperature: 79.7 (F). Dissolved oxygen (mg/L): 3.9.

North lake: Patches of naiad plants were observed (mostly low, some dropped). Ribbonleaf pondweed plant growth was patchy. Small pondweed plants dropped. A small amount of filamentous algae and detritus was observed.

West shore: Patches of naiad plants were observed (mostly low, some dropped). Ribbonleaf pondweed plant growth was patchy. Small pondweed plant growth was scattered. Chara, sp. plants were patchy and low in the water. Some detritus was on the surface.

South lake: Patches of naiad plants were low in the water (many brown). Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water.

East shore: Patches of naiad plants were patchy (mostly low, some dropped). Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water.

Island: Patches of low naiad plants were observed (many brown). Ribbonleaf pondweed plant growth was scattered. Chara, sp. plants were patchy and low in the water.

Channel: Patches of naiad plants were observed (some brown). Ribbonleaf pondweed and Chara, sp. plant growth was patchy.

East Cove: Patches of naiad plants were observed (mostly low, some dropped). Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water. A small amount of filamentous algae and detritus was observed.

Center: Most naiad plants dropped.

A temperature (C) and dissolved oxygen (mg/L) profile was measured from the surface to the bottom at 1 foot intervals with a Yellow Springs meter.

Depth (Feet)	Temperature (C)	Dissolved oxygen (mg/L)
Surface	26.5	3.9
1 foot	26.5	4.2
2 feet	26.5	4.4

3 feet	26.5	4.4
4 feet	26.0	4.4
5 feet	26.0	4.3
6 feet	26.0	4.3
7 feet	26.0	4.2
8 feet	25.5	4.1
9 feet	25.5	3.8
10 feet	25.0	0.9

### September 7

Lake survey. Secchi depth: 7.0 feet. Temperature: 73.4 (F). Dissolved oxygen (mg/L): 5.8.

North lake: Most naiad plants dropped. Ribbonleaf pondweed plant growth was patchy.

West shore: Most naiad plants dropped. Ribbonleaf pondweed plant growth was patchy. Small pondweed plant growth was scattered. Chara, sp. plants were patchy and low in the water. Some planktonic algae streaking was observed.

South lake: Most naiad plants dropped. Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water.

East shore: Many naiad plants dropped. Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water.

Island: Many naiad plants dropped. Ribbonleaf pondweed plant growth was scattered. Chara, sp. plants were patchy and low in the water.

Channel: Some naiad plants dropped. Ribbonleaf pondweed and Chara, sp. plant growth was patchy. Patches of water lily plants were observed.

East Cove: Many naiad plants dropped. Ribbonleaf pondweed plant growth was patchy. Chara, sp. plants were patchy and low in the water.

Center: Some scattered naiad plants were observed.

Water was somewhat turbid but the clarity was good. Small ball shaped clumps of planktonic algae cells were observed in the water column in a few areas along the west shore and by the dam.

A temperature (C) and dissolved oxygen (mg/L) profile was measured from the surface to the bottom at 1 foot intervals with a Yellow Springs meter.

Depth (Feet)	Temperature (C)	Dissolved oxygen (mg/L)
Surface	23.0	5.8
1 foot	23.0	5.6
2 feet	22.0	5.5
3 feet	21.5	5.4
4 feet	21.0	4.8
5 feet	20.5	4.6
6 feet	20.0	4.5
7 feet	19.5	4.2
8 feet	19.5	3.9
9 feet	19.0	1.4
10 feet	18.5	0.6

### **September 20**

Lake survey. Secchi depth: 7.5 feet. Temperature: 73.4 (F). Dissolved oxygen (mg/L): 7.6. pH: 7.0

North lake: Ribbonleaf pondweed plant growth was patchy. Naiad plants were scattered and low in the water.

West shore: Ribbonleaf pondweed plant growth was patchy. Scattered growth of small pondweed and naiads were observed. Chara, sp. plants were patchy and low in the water.

South lake: Ribbonleaf pondweed plant growth was patchy. A few naiad plants were observed. Chara, sp. plants were patchy and low in the water. Scattered small clumps of planktonic algae were observed.

East shore: Ribbonleaf pondweed plant growth was scattered to patchy. Naiad plants were scattered and low in the water. Chara, sp. plants were patchy and low in the water.

Island: Ribbonleaf pondweed plants and low growth naiad plants were scattered. Chara, sp. plants were patchy and low in the water.

Channel: Patches of ribbonleaf pondweed and Chara, sp. plant growth were observed. Naiad plants were scattered. Patches of water lily plants were observed.

East Cove: Ribbonleaf pondweed plant growth was patchy. Naiad plants were scattered and low in the water. Chara, sp. plants were patchy and low in the water.

Center: Naiad plants were scattered and low in the water.

Water was slightly turbid but the clarity was good.

Treated the lake (Rodeo/adjuvants) to control the growth of cattails in the East Cove and along the Southwest Shore.