AQUATIC CONSULTING & TESTING, INC.

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02 April 2023

Ms. Fran Pawlak, Executive Director
Dobson Ranch HOA
2719 South Reyes
Mesa, Arizona 85202

**March 2023 Lake Report**

The following abbreviated report presents the results of field inspections on the Dobson Ranch lakes for the month of March 2023. This report summarizes data collected under the revised program initiated in 2019 that includes comprehensive testing of one-half of the lakes on a monthly basis from March through October and bi-weekly field inspections twice per month throughout the year. Therefore, this report provides visual inspection and field data for Lakes 1-8 completed during the month. Field sheets for the inspections are also included. Additionally, special *E. coli* and total phosphorus data are presented for Lake 8.

## March 2023 Report Narrative Summary

The following pages provide a summary of the monthly survey results. A brief narrative description is provided for each lake.

### Lake 1

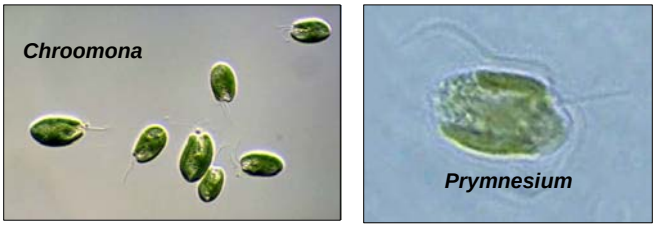
The Lake 1 temperature remained low and ranged from a high of 13.7 C to a low of 20.0 C. Water pH was 8.2-8.4 SU indicating low to moderate algae density. Dissolved oxygen (9.4-10.2 mg/L) was satisfactory for the fishery and fish activity appeared normal. Increases in dissolved oxygen concentration frequently occur during winter because of reduced respiration and decomposition rates at colder temperatures and the ability of cold water to hold more dissolved oxygen than warm water. Transparency was improved at over one meter and turbidity ranged from 4.2 to 6.1 NTU. Fountains were in service throughout the reporting period.

Waterfowl mean density was 42 per acre (42/A) which is considered poor (Arizona Game & Fish Department rating system shown below). No cormorants were noted. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.

**Waterfowl Density Ranking System (AZG&FD)**

| No. waterfowl per acre | Ranking |
|---|---|
| <3 | Excellent |
| 3-4 | Good |
| 5-6 | Fair |
| >6 | Poor |

No abnormal algae growth or submerged weeds were observed. The cryptophyte, *Chroomonas* dominated the phytoplankton. Cell density was very low. No golden algae (*Prymnesium parvum* or related species) were detected.




## Lake 2

The water temperature of Lake 2 was 13.1-18.8 C. Water pH ranged from 8.1-8.3 SU indicating probable low algae density. Dissolved oxygen (9.3-9.9 mg/L) was satisfactory for the fishery and fish activity appeared normal. Transparency was approximately one meter and turbidity was typical at 4.2-5.3 NTU. Fountains were in operation.

About twenty-seven birds per acre (27/A) were observed and the density is considered poor for an urban lake. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.

No abnormal algae growth or submerged weeds were observed. The dominant alga was *Chroomonas.* Total cell density was low in the lake. No golden algae (*Prymnesium parvum* or related species) were detected.

## Lake 3

Lake temperature range was 13.9 to 19.2 C. Water pH ranged from 8.1 to 8.2 SU. Dissolved oxygen concentration ranged from 10.2 to 9.3 mg/L and remained satisfactory for the fishery. Fish activity appeared normal. Transparency was stable at just under one meter. Turbidity was stable, ranging from 5.0 to 6.7 NTU. Fountains were not operating throughout the reporting period.

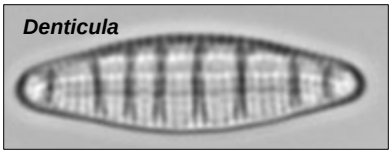
Waterfowl density ranged from 8 to 27 birds per acre (8-27/A); a “poor” rating. Minimal cormorants were observed. Decreased numbers of waterfowl was not expected during the migratory season. Adult midge flies did not appear to produce any nuisance issues o lakeside residents or visitors.

No abnormal algae growth or submerged weeds were observed. During March *Chroomonas w*as the dominant alga. Very low total phytoplankton density prevented any problems. No golden algae (*Prymnesium parvum* or related species) were detected.

**Lake 4**

The temperature of Lake 4 was 13.6-19.0 C. Water pH was moderate at 8.2-8.4 SU and indicated a low to moderate algae density. Dissolved oxygen (9.0-9.7 mg/L) was satisfactory for the fishery and fish activity appeared normal. Transparency was slightly over one meter and turbidity remained low (8.4-12.0 NTU). Fountains were in operation.

Waterfowl density was 11-20 per acre (11-20/A) which is considered poor. No cormorant issues were reported. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.

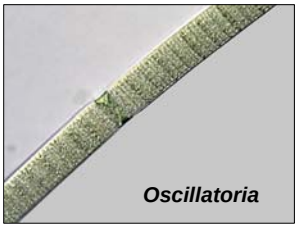



No abnormal algae growth or submerged weeds were observed. The unicellular diatom, *Denticula,* was the dominant form. This alga is not usually known to be problematic and the overall cell count was low. Total phytoplankton density also was relatively low. No golden algae (*Prymnesium parvum* or related species) were detected.

**Lake 5**

Lake temperature ranged from 13.4 to 19.3 C during the month. Water pH was 8.1 SU, indicative of a low to moderate algal density. Dissolved oxygen (7.9-10.3 mg/L) was more than satisfactory for the fishery and fish activity appeared normal. Transparency was just under one meter and turbidity ranged from 3.3 to 5.7 NTU.

Waterfowl density was 21-28 birds per acre (21-28/A); “poor” by the AZG&F ranking system. Few cormorants were observed. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.



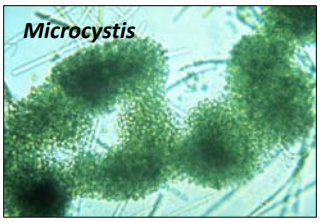

No abnormal algae growth or submerged weeds were observed. The dominant algae was the blue-green filament *Oscillatoria*. The total cell density was very low. Although this alga can produce problematic floating mats no issues were observed. No golden algae (*Prymnesium parvum* or related species) were detected.

**Lake 6**

The temperature of Lake 6 ranged from 14.2 to 19.7 C during the reporting period. Water pH was variable and elevated, ranging from a low of 7.9 to 8.7, indicating moderate to high algae density. Dissolved oxygen (9.2-10.9 mg/L) was more than satisfactory for the fishery and fish activity appeared normal. Turbidity ranged from 8.7-

10 NTU during the month and transparency was less than one meter. Data indicate increased algal growth.

Waterfowl density ranged from 39-44 per acre (39-44/A) which is considered poor. Cormorants were occasionally observed. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.




No abnormal algae growth (other than increased density) or submerged weeds were observed. The dominant alga was the blue-green (Cyanophyta) colony, *Microcystis.* This alga can be operationally problematic but no issue occurred. Golden algae (*Prymnesium parvum* or related species) were not detected.

**Lake 7**

Lake temperature was 14.0-18.8 C. Water pH ranged from 8.6 to 8.8 SU, indicating moderate algae density. Dissolved oxygen ranged from 10.1 to 10.3 mg/L and was more than satisfactory for the fishery. Fish activity appeared normal, although bass spawning activity was low at the end of the month. Transparency was about one meter, with turbidity of 3.3-3.9 NTU. Fountains were in operation.

Waterfowl density was about twenty-seven to fifty-two birds per acre (27-52/A); poor according to the Arizona Game & Fish Department rating system. No cormorants were noted. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.


The dominant suspended algae in the lake was again a problematic blue-green form; *Merismopedia.* Density of algae was elevated. The dominant algae can make the water turbid and can produce stringy mats. A few isolated cells of golden algae were identified in the lake at the end of the month.

**Lake 8**

Lake temperatures ranged from 13.1 to 19.1 C during the month. Water pH was 8.5-8.9 SU. Dissolved oxygen concentration was 9.3-10.9 mg/L and was satisfactory for the fishery. Fish activity appeared normal. Transparency was about one meter and turbidity correspondingly measured 7.8 NTU. Aerators were in operation.

Waterfowl density was variable; about seventeen to twenty-two (17-22/A). The rating would be poor based on the Arizona Game & Fish Department rating system. Cormorants were not observed. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.

No submerged weeds were observed. The phytoplankton was still dominated by blue-green algae colonies and filaments of *Merismopedia* and *Oscillatoria* respectively. The

alga can make the water appear turbid and olive green in color. Minor surface scum was observed. Cell density continued to decrease and remained in the moderate range. Golden algae was detected during the month. An algaecide application was conducted and post-treatment golden algae testing was negative.

Special Testing

*E. coli* bacteria and total phosphorus were measured in Lake 8 on two dates during the month. Data are presented below.

| Date | *E. coli*, MPN/100 mL) | Phosphorus, mg/L |
|---|---|---|
| 03-02-23 | 118 | 0.077 |
| 03-16-23 | 135 | 0.076 |

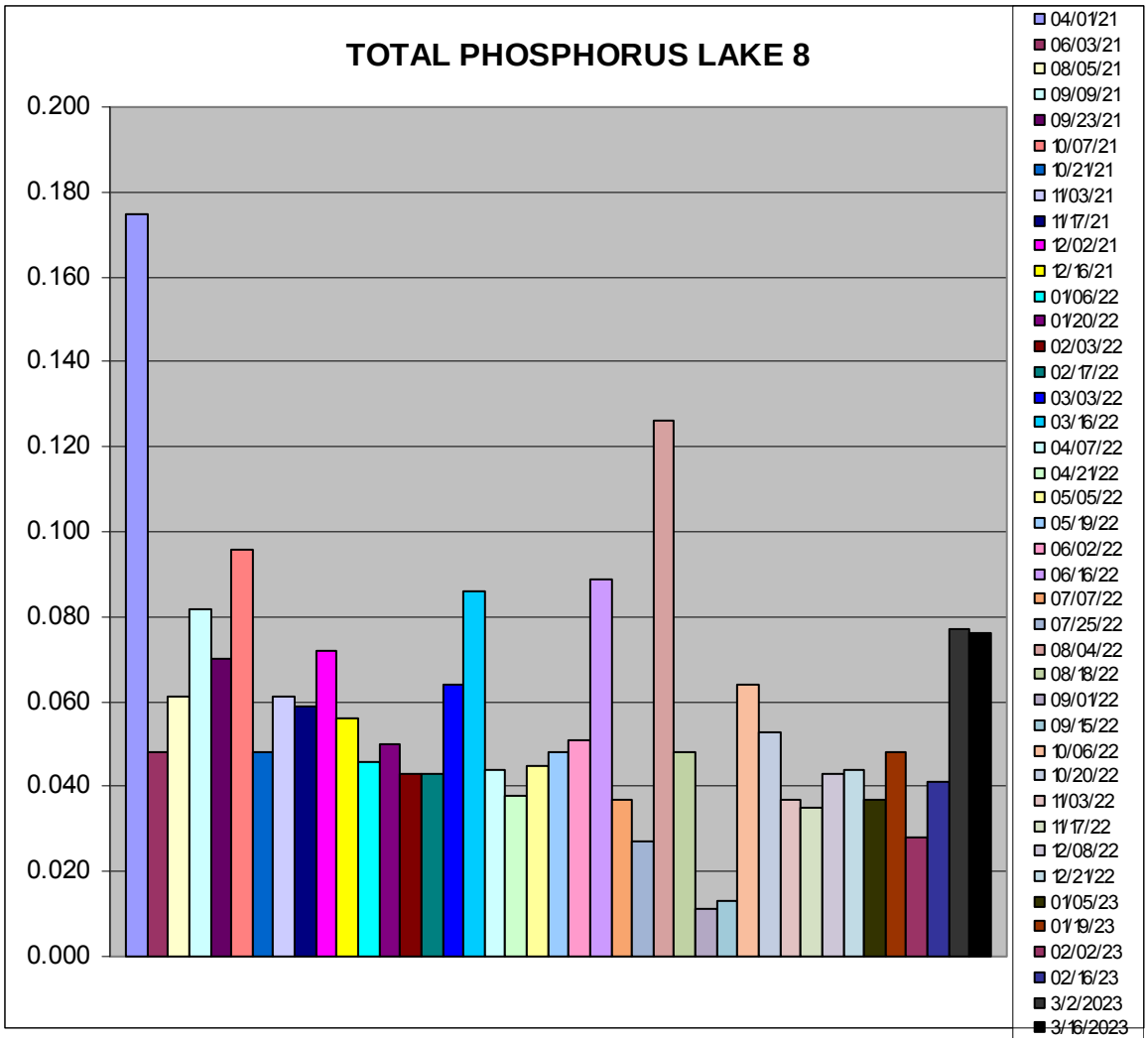
The measured bacteria concentrations are below the maximum levels established for partial and full body contact recreation by the State.

The table at the conclusion of the report summarizes phosphorus concentrations in Lake 8 during the recent study period. Noting the Phoslock® application occurred on 29 November 2021, no dramatic reduction in phosphorus is shown. However, the impact may be more long-term if it reduces recycling of phosphorus from the sediment. Data collection will be continued.

An application of 325 Kg of SchlixX Plus® was made in early November. The product is designed to degrade organic sludge at the lake bottom, while inactivating and preventing phosphorus recycling. The product was supplied by and application was assisted and supervised by the manufacturer (Oase, Horstel Germany) at no cost to Dobson Association. Sludge depth and phosphorus concentrations will be periodically monitored to track the success of the application.

**Next Month**:

Lakes 5-8 are scheduled for comprehensive monitoring next month. All lakes will be visually inspected and field data collected two times during the month. Additional monitoring of Lake 8 phosphorus and *E. coli* will continue.




Respectfully:

**Aquatic Consulting & Testing, Inc.**

Frederick A. Amalfi, Ph.D., C.L.M.

North American Lake Management Society
NALMS
Frederick Amalfi
#91-01M
Certified Lake Manager

## SUPPORTING DOCUMENTATION

- Laboratory reports
- Field Inspection Sheets
- Pesticide application documents

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Lic. No. AZ0003


## LABORATORY REPORT

**Client:** Dobson Ranch Association
2719 South Reyes Road
Mesa, AZ 85202

**Date Submitted:** 03/02/23
**Date Reported:** 03/29/23

**Attn:** Lynelle Glysson, Community Mgr

**Project:** Monthly Lake 1-4 Monitoring

## RESULTS

**Client ID:** Lake 1
**ACT Lab No.:** CF01641

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 09:40

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Algae Count | 03/15/23 | 03/15/23 | SM 10200 F | See Attached | cells/mL |
| Algae Identification | 03/15/23 | 03/15/23 | | See Attached | |
| Chl/Pheo Ratio | 03/16/23 | 03/17/23 | SM10200 H | 1.75 | |
| Chlorophyll a | 03/16/23 | 03/17/23 | SM10200 H | 0.80 | ug/L |
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Midge count | 03/02/23 | 03/02/23 | SM10500 C | <40 | #/sq. meter |
| Pheophytin a | 03/16/23 | 03/17/23 | SM10200 H | <0.10 | ug/L |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 10.2 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.2 | SU |
| Secchi Disk Depth | 03/02/23 | 03/02/23 | NALMS | 1.04 | meters |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 13.7 | C |
| Alkalinity, Total | 03/17/23 | 03/17/23 | SM 2320 B | 158. | mg/L as CaCO3 |
| Ammonia - N | 03/03/23 | 03/03/23 | SM4500NH3 D | 0.08 | mg/L as N |
| Nitrate + Nitrite - N | 03/10/23 | 03/10/23 | SM4500NO3 E | 0.44 | mg/L as N |
| Phosphorus, Total | 03/06/23 | 03/06/23 | 365.3 | 0.033 | mg/L as P |
| Total Hardness | 03/23/23 | 03/23/23 | SM2340C | 219. | mg/L as CaCO3 |
| Total Kjeldahl Nitrogen | 03/03/23 | 03/03/23 | SMNorg C,NH3 C/D | 1.2 | mg/L as N |
| E. coli, Colilert | 03/02/23 | 03/03/23 | SM 9223 B | 17 | MPN/100 mL |
| Total Dissolved Solids | 03/08/23 | 03/09/23 | SM2540 C | 528. | mg/L |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 6.1 | NTU |

## RESULTS

**Client ID:** Lake 2
**ACT Lab No.:** CF01642

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 10:00

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Algae Count | 03/15/23 | 03/15/23 | SM 10200 F | See Attached | cells/mL |
| Algae Identification | 03/15/23 | 03/15/23 | | See Attached | |
| Chl/Pheo Ratio | 03/16/23 | 03/17/23 | SM10200 H | 1.7 | |
| Chlorophyll a | 03/16/23 | 03/17/23 | SM10200 H | 1.60 | ug/L |
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Midge count | 03/02/23 | 03/02/23 | SM10500 C | <40 | #/sq. meter |
| Pheophytin a | 03/16/23 | 03/17/23 | SM10200 H | <0.10 | ug/L |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 9.9 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.1 | SU |
| Secchi Disk Depth | 03/02/23 | 03/02/23 | NALMS | 1.42 | meters |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 13.1 | C |
| Alkalinity, Total | 03/17/23 | 03/17/23 | SM 2320 B | 135. | mg/L as CaCO3 |
| Ammonia - N | 03/03/23 | 03/03/23 | SM4500NH3 D | 0.07 | mg/L as N |
| Nitrate + Nitrite - N | 03/10/23 | 03/10/23 | SM4500NO3 E | 0.47 | mg/L as N |
| Phosphorus, Total | 03/06/23 | 03/06/23 | 365.3 | 0.044 | mg/L as P |
| Total Hardness | 03/23/23 | 03/23/23 | SM2340C | 200. | mg/L as CaCO3 |
| Total Kjeldahl Nitrogen | 03/03/23 | 03/03/23 | SMNorg C,NH3 C/D | 1.1 | mg/L as N |
| E. coli, Colilert | 03/02/23 | 03/03/23 | SM 9223 B | 19 | MPN/100 mL |
| Total Dissolved Solids | 03/08/23 | 03/09/23 | SM2540 C | 468. | mg/L |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 4.2 | NTU |

## RESULTS

**Client ID:** Lake 3
**ACT Lab No.:** CF01643

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 10:30

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Algae Count | 03/15/23 | 03/15/23 | SM 10200 F | See Attached | cells/mL |
| Algae Identification | 03/15/23 | 03/15/23 | | See Attached | |
| Chl/Pheo Ratio | 03/16/23 | 03/17/23 | SM10200 H | 1.7 | |
| Chlorophyll a | 03/16/23 | 03/17/23 | SM10200 H | 1.60 | ug/L |
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Midge count | 03/02/23 | 03/02/23 | SM10500 C | <40 | #/sq. meter |
| Pheophytin a | 03/16/23 | 03/17/23 | SM10200 H | <0.10 | ug/L |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 10.2 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.2 | SU |
| Secchi Disk Depth | 03/02/23 | 03/02/23 | NALMS | 0.99 | meters |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 13.9 | C |
| Alkalinity, Total | 03/17/23 | 03/17/23 | SM 2320 B | 144. | mg/L as CaCO3 |
| Ammonia - N | 03/03/23 | 03/03/23 | SM4500NH3 D | 0.09 | mg/L as N |
| Nitrate + Nitrite - N | 03/10/23 | 03/10/23 | SM4500NO3 E | 0.40 | mg/L as N |
| Phosphorus, Total | 03/06/23 | 03/06/23 | 365.3 | 0.032 | mg/L as P |
| Total Hardness | 03/23/23 | 03/23/23 | SM2340C | 191. | mg/L as CaCO3 |
| Total Kjeldahl Nitrogen | 03/03/23 | 03/03/23 | SMNorg C,NH3 C/D | 1.3 | mg/L as N |
| E. coli, Colilert | 03/02/23 | 03/03/23 | SM 9223 B | 210 | MPN/100 mL |
| Total Dissolved Solids | 03/08/23 | 03/09/23 | SM2540 C | 392. | mg/L |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 5.0 | NTU |

## RESULTS

**Client ID:** Lake 4
**ACT Lab No.:** CF01644

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 11:00

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Algae Count | 03/15/23 | 03/15/23 | SM 10200 F | See Attached | cells/mL |
| Algae Identification | 03/15/23 | 03/15/23 | | See Attached | |
| Chl/Pheo Ratio | 03/16/23 | 03/17/23 | SM10200 H | 1.7 | |
| Chlorophyll a | 03/16/23 | 03/17/23 | SM10200 H | 3.20 | ug/L |
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Midge count | 03/02/23 | 03/02/23 | SM10500 C | <40 | #/sq. meter |
| Pheophytin a | 03/16/23 | 03/17/23 | SM10200 H | <0.10 | ug/L |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 9.7 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.4 | SU |
| Secchi Disk Depth | 03/02/23 | 03/02/23 | NALMS | 1.22 | meters |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 13.6 | C |
| Alkalinity, Total | 03/17/23 | 03/17/23 | SM 2320 B | 149. | mg/L as CaCO3 |
| Ammonia - N | 03/03/23 | 03/03/23 | SM4500NH3 D | 0.07 | mg/L as N |
| Nitrate + Nitrite - N | 03/10/23 | 03/10/23 | SM4500NO3 E | 0.42 | mg/L as N |
| Phosphorus, Total | 03/06/23 | 03/06/23 | 365.3 | 0.040 | mg/L as P |
| Total Hardness | 03/23/23 | 03/23/23 | SM2340C | 224. | mg/L as CaCO3 |
| Total Kjeldahl Nitrogen | 03/03/23 | 03/03/23 | SMNorg C,NH3 C/D | 1.2 | mg/L as N |
| E. coli, Colilert | 03/02/23 | 03/03/23 | SM 9223 B | 17 | MPN/100 mL |
| Total Dissolved Solids | 03/08/23 | 03/09/23 | SM2540 C | 516. | mg/L |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 12. | NTU |

**Client ID:** Lake 5
**ACT Lab No.:** CF01645

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 11:15

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 10.3 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.1 | SU |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 13.4 | C |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 3.3 | NTU |

**Client ID:** Lake 6
**ACT Lab No.:** CF01646

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 11:25

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 9.2 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 7.9 | SU |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 14.2 | C |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 10. | NTU |

## RESULTS

**Client ID:** Lake 7
**ACT Lab No.:** CF01647

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 11:35

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 10.3 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.6 | SU |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 14.0 | C |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 3.3 | NTU |

**Client ID:** Lake 8
**ACT Lab No.:** CF01648

**Sample Type:** Surface Water
**Sample Time:** 03/02/23 11:45

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/02/23 | 03/02/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/02/23 | 03/02/23 | SM4500 O G | 10.9 | mg/L as O2 |
| pH, Field | 03/02/23 | 03/02/23 | SM4500H+ B | 8.5 | SU |
| Temperature, Field | 03/02/23 | 03/02/23 | SM2550 B | 13.1 | C |
| Phosphorus, Total | 03/06/23 | 03/06/23 | 365.3 | 0.077 | mg/L as P |
| E. coli, Colilert | 03/02/23 | 03/03/23 | SM 9223 B | 118 | MPN/100 mL |
| Turbidity | 03/02/23 | 03/02/23 | 180.1 | 7.8 | NTU |

**Reviewed by:**
**Frederick A. Amalfi, Ph.D.**
**Laboratory Director**

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**1525 W. University Drive, Suite 106**
**Tempe, AZ 85281**
**480-921-8044 fax: 480-921-0049**
**lab@aquaticconsulting.com**

# Chain of Custody

**Client Project Info:**

*Lake 1-4 Monthly Monitoring*
*Dobson Ranch Association*

**AC&T Client Reporting Information:**

Dobson Ranch Association
2719 South Reyes
Mesa, AZ 85202

Attn: Fran Pawlak, Community Manager
P: 4/80-831-8314
E:

**AC&T Sampler:** Fran

| Sample Location ID: | Date: | Time: | Matrix: | P-T | NO3+NO2 | TKN-Elec | Ammonia (NH3) | Hardness | Alkalinity | TDS | E. Coli | #Chl/Pheo | Alage - ID + # | Golden algae | Turb | Field Measurements: pH, Temp, O2 | Sample Containers # / Preservation: None Preserved | Na2S2O3 (Sterile) | HNO3 (Nitric) | H2SO4 (Sulfuric) | Lugols | Other: | AC&T Laboratory Sample Identification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lake 1 | 3/2/23 | 940 | SW | X | X | X | X | X | X | X | X | X | X | X | X | X | 3 | 1 | | 1 | 1 | | CF01641 |
| Lake 2 | | 1000 | SW | X | X | X | X | X | X | X | X | X | X | X | X | X | 3 | 1 | | 1 | 1 | | 1642 |
| Lake 3 | | 1030 | SW | X | X | X | X | X | X | X | X | X | X | X | X | X | 3 | 1 | | 1 | 1 | | 1643 |
| Lake 4 | | 1100 | SW | X | X | X | X | X | X | X | X | X | X | X | X | X | 3 | 1 | | 1 | 1 | | 1644 |
| Lake 5 | | 1115 | SW | | | | | | | | | | | X | X | X | ½1 | | | | | | 1645 |
| Lake 6 | | 1125 | SW | | | | | | | | | | | X | X | X | ½1 | | | | | | 1646 |
| Lake 7 | | 1135 | SW | | | | | | | | | | | X | X | X | ½1 | | | | | | 1647 |
| Lake 8 | | 1145 | SW | X | | | | | | | X | | | X | X | X | ½1 | 1 | | 1 | | | 1648 |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |

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| Project Location: | A C & T Sample Receipt: | | | 1. RELINQUISHED BY: | 3. RELINQUISHED BY: |
|---|---|---|---|---|---|
| Dobson Ranch | Total # Containers: | 30 | | Signature: Andrew Mussett | Signature: |
| PO#: | Received Intact: | (YES) | NO | Print Name: Andrew Mussett | Print Name: |
| Lakes Contract | # Bottles Preserved: 13 | # Non: | 17 | Date: 3/2/23 Time: 1415 | Date: Time: |
| Notes: | Samples On Ice: | YES | (NO) | 2. RECEIVED BY: | 4. RECEIVED BY: |
| | Ice Type: | WET | BLUE | Signature: MJ | Signature: |
| | Sample Receipt Temperature: | 12°C | | Print Name: MJ | Print Name: |
| | | | | Date: 03/02/23 Time: 1415 pm | Date: Time: |

# AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • Fax: (480) 921-0049 Lic. No. AZ0003


## LABORATORY REPORT

**Client:** Dobson Ranch Association
2719 South Reyes Road
Mesa, AZ 85202

**Date Submitted:** 03/16/23
**Date Reported:** 03/31/23

**Attn:** Lynelle Glysson, Community Mgr

**Project:** Monthly Lake 1-8 Monitoring

## RESULTS

**Client ID:** Lake 1
**ACT Lab No.:** CF02020

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 09:45

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 9.4 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.4 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 20.0 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 4.2 | NTU |

**Client ID:** Lake 2
**ACT Lab No.:** CF02021

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 09:55

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 9.3 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.3 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 18.8 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 5.3 | NTU |

**Client ID:** Lake 3
**ACT Lab No.:** CF02022

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 10:05

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 9.3 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.1 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 19.2 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 6.7 | NTU |

## RESULTS

**Client ID:** Lake 4
**ACT Lab No.:** CF02023

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 10:15

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 9.0 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.2 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 19.0 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 8.4 | NTU |

**Client ID:** Lake 5
**ACT Lab No.:** CF02024

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 10:20

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 7.9 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.1 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 19.3 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 5.7 | NTU |

**Client ID:** Lake 6
**ACT Lab No.:** CF02025

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 10:25

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Absent | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 10.9 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.7 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 19.7 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 8.7 | NTU |

**Client ID:** Lake 7
**ACT Lab No.:** CF02026

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 10:35

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Present 1 | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 10.1 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.8 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 18.8 | C |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 3.9 | NTU |

## RESULTS

**Client ID:** Lake 8
**ACT Lab No.:** CF02027

**Sample Type:** Surface Water
**Sample Time:** 03/16/23 10:40

| Parameter | Analysis Date Start | Analysis Date End | Method No. | Result | Unit |
|---|---|---|---|---|---|
| Golden Algae | 03/16/23 | 03/16/23 | P/C Microscopy | Present 2 | Pres/Abs |
| Oxygen, Dissolved Field | 03/16/23 | 03/16/23 | SM4500 O G | 9.3 | mg/L as O2 |
| pH, Field | 03/16/23 | 03/16/23 | SM4500H+ B | 8.9 | SU |
| Temperature, Field | 03/16/23 | 03/16/23 | SM2550 B | 19.1 | C |
| Phosphorus, Total | 03/27/23 | 03/29/23 | 365.3 | 0.076 | mg/L as P |
| E. coli, Colilert | 03/16/23 | 03/17/23 | SM 9223 B | 135 | MPN/100 mL |
| Turbidity | 03/16/23 | 03/16/23 | 180.1 | 7.8 | NTU |

**Reviewed by:** _____

**Frederick A. Amalfi, Ph.D.**
**Laboratory Director**

**Aquatic Consulting & Testing, Inc.**
**1525 W. University Drive, Suite 106**
**Tempe, AZ 85281**
**480-921-8044 fax: 480-921-0049**
**lab@aquaticconsulting.com**

# Chain of Custody

**Client Project Info:**

*Lake 1-8 Monthly Monitoring*
*Dobson Ranch Association*

**AC&T Client Reporting Information:**

Dobson Ranch Association
2719 South Reyes
Mesa, AZ 85202

Attn: Fran Paqwlak, Community Manager
P: 4/80-831-8314
E:

**AC&T Sampler:** Ann

| Sample Location ID: | Date: | Time: | Matrix: | P-T | NO3+NO2 | TKN-Elec | Ammonia (NH3) | E. Coli | #Chl/Pheo | Alage - ID + # | Golden algae | Turb | Field Measurements: pH, Temp, O2 | Sample Containers # / Preservation: None Preserved | Na2S2O3 (Sterile) | HNO3 (Nitric) | H2SO4 (Sulfuric) | Lugols | Other: | AC&T Laboratory Sample Identification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lake 1 | 3/16/23 | 945 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | CF02020 |
| Lake 2 | | 955 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | 2021 |
| Lake 3 | | 1005 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | 2022 |
| Lake 4 | | 1015 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | 2023 |
| Lake 5 | | 1020 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | 2024 |
| Lake 6 | | 1025 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | 2025 |
| Lake 7 | | 1035 | SW | | | | | | | | X | X | X | 1 | 2 | | | | | 2026 |
| Lake 8 | | 1040 | SW | X | | | | X | | | X | X | X | 1 | 2 | 1 | | 1 | | 3027 |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

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| Project Location: | A C & T Sample Receipt: | | | 1. RELINQUISHED BY: | 3. RELINQUISHED BY: |
|---|---|---|---|---|---|
| Dobson Ranch | Total # Containers: | 18 | | Signature: Andrew Murroff | Signature: |
| PO#: | Received Intact: | YES | NO | Print Name: Andrew Murroff | Print Name: |
| Lakes Contract | # Bottles Preserved: 2 | # Non: | 16 | Date: 3/16/23 Time: 1510 | Date: Time: |
| Notes: | Samples On Ice: | YES | NO | 2. RECEIVED BY: | 4. RECEIVED BY: |
| | Ice Type: | WET | BLUE | Signature: MJ | Signature: |
| | Sample Receipt Temperature: | 21°c | | Print Name: MJ | Print Name: |
| | | | | Date: 3-16-23 Time: 1510 | Date: Time: |

1317

# DOBSON RANCH LAKES
## Bi-Monthly Lake Inspection

Date: 3/2/23

By: [illegible]

| Lake | Temp | Dis. oxygen | pH | Clarity | Algae | Submerged weeds | Fish behavior | Waterfowl density | Insect activity | Mechanical issues |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13.7 C | 10.2 mg/L | 8.2 SU | 41" SDz 6.1 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 42 No/A ___ | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 2 | 13.1 C | 9.9 mg/L | 8.1 SU | 56" SDz 4.2 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 27 No/A ___ | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 3 | 13.9 C | 10.2 mg/L | 8.2 SU | 36" SDz 5.2 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 27 No/A ___ | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 4 | 13.6 C | 9.7 mg/L | 8.4 SU | 48" SDz 16.7 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 20 No/A ___ | ☑ Normal ☐ Infestation | Fountain ☐ Operating ☑ No service |
| 5 | 13.4 C | 10.3 mg/L | 8.1 SU | SDz 3.3 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 28 No/A ___ | ☑ Normal ☐ Infestation | |
| 6 | 14.2 C | 9.7 mg/L | 7.9 SU | SDz 10.4 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 44 No/A ___ | ☑ Normal ☐ Infestation | |
| 7 | 14.0 C | 10.3 mg/L | 8.6 SU | SDz 3.3 NTU | ☑ Suspended ☑ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 53 No/A ___ | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 8 | 13.1 C | 12.9 mg/L | 8.5 SU | SDz 7.6 NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead ___ | No. 22 No/A ___ | ☑ Normal ☐ Infestation | Aerators ☑ Operating ☐ No service |

Notes and recommendations for treatment/operation:

1) Very light Botryococcus

2020

**DOBSON RANCH LAKES**
**Bi-Monthly Lake Inspection**

Date: 3/16/23
By: [signature]

| Lake | Temp | Dis. oxygen | pH | Clarity | Algae | Submerged weeds | Fish behavior | Waterfowl density | Insect activity | Mechanical issues |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 9.4 mg/L | 8.4 SU | 4.7 SDz NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 27 No/A | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 2 | 18.8 C | 9.3 mg/L | 8.3 SU | 5.3 SDz NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 18 No/A | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 3 | 19.2 C | 9.3 mg/L | 8.1 SU | 6.7 SDz NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 8 No/A | ☑ Normal ☐ Infestation | Fountain ☐ Operating ☑ No service |
| 4 | 19.0 C | 9.6 mg/L | 8.2 SU | 8.4 SDz NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 11 No/A | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 5 | 19.3 C | 7.9 mg/L | 8.1 SU | 5.7 SDz NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 21 No/A | ☑ Normal ☐ Infestation | |
| 6 | 19.7 C | 10.9 mg/L | 8.7 SU | 8.7 SDz NTU | ☐ Suspended ☐ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 39 No/A | ☑ Normal ☐ Infestation | |
| * 7 | 18.8 C | 10.1 mg/L | 8.8 SU | 3.9 SDz NTU | ☐ Suspended ☑ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 27 No/A | ☑ Normal ☐ Infestation | Fountain ☑ Operating ☐ No service |
| 8 | 19.1 C | 9.3 mg/L | 8.4 SU | 7.8 SDz NTU | ☐ Suspended ☑ Floating ☐ Bottom ☐ Attached | ☐ Present ☑ Absent | ☑ Normal ☐ Distress ☐ Dead | No. 17 No/A | ☑ Normal ☐ Infestation | Aerators ☑ Operating ☐ No service |

Notes and recommendations for treatment/operation:

* 7) light Botryococcus 8) Same

**AQUATIC CONSULTING & TESTING, INC.**
1525 West University Drive, Suite 106
Tempe, Arizona 85281
Phone: 480-921-8044 Fax 480-921-0049

## PESTICIDE TREATMENT NOTICE & RECORD

| |
|---|
| Client: Dobson Association |
| 2719 S Reyes |
| Mesa, AZ 85202 |
| Phone/fax: 480-831-8314 Lynelle Glysson |

| |
|---|
| Location: Location: Lake 8 |

| Date: | Time: | Start | Finish |
|---|---|---|---|
| 3-22-23 | 0900 | Conditions: clear **pt cloudy** overcast cold **cool**<br>Wind Direction & speed: slight breeze<br>Other : | Conditions: **clear** pt cloudy overcast cold mild **cool**<br>Wind Direction & speed: breezy<br>Other: |

| Material: | Reg. No. (*restricted) | Tot. Qty: | Acres/Volume: |
|---|---|---|---|
| Cutrine plus | 8959-10 | 12 gal | 2.5A |
| | | | |
| | | | |

| |
|---|
| Pretreatment Surveillance |
| Target organism: Golden algae/ planktonic blue-green algae |

| | |
|---|---|
| Application method/calculations: lake 8: 2.5 sa x 8' x 0.6 gal/aft= 12 gallons | |
| Dosage/rate: 0.18 ppm Cu | Percent active ingredient: copper=27.9% |
| | |

| |
|---|
| Applicator: J. Cook Cert. No. 18000 |

Visual monitoring: Note effects on target and any non-target species.
During application: No unusual circumstances or effects

Post application: Date:
□ change in water quality ◙ target species impact □ non-target species impact
Explain: No dead fish or other adverse effect observed; GA negative tests.

***Precautionary Statement:***

**Warning-Pesticides can be harmful. Keep children and pets away from pesticide applications until dry, dissipated, or aerated. For more information contact Aquatic Consulting & Testing, Inc. at 480-921-8044 and ask for Dr. Rick Amalfi. AC&T License No. 4418 F. A. Amalfi QP#1360 Cert. No. 900496**