



AQUATIC CONSULTING & TESTING, INC.

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Lic. No. AZ0003

13 May 2025

Dobson Ranch HOA
2719 South Reyes
Mesa, Arizona 85202

RE: April 2025 Report

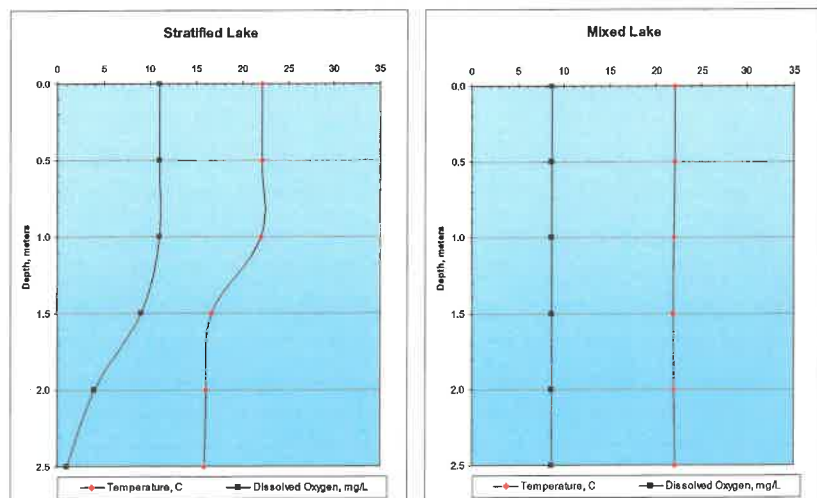
The following report presents the results of field inspections on the Dobson Ranch lakes for the month of April 2025. This report summarizes data collected under the updated program started in 2019 and expanded in 2020 that includes comprehensive testing of one-half of the lakes on a monthly basis from March through October and bi-weekly field inspections twice per month throughout the year. Comprehensive testing on Lakes 5-8 was completed during the month and laboratory reports are provided. Comparison to the last comprehensive test (October 2024) are provided for those lakes. Field sheets for the inspection weeks are also included.

A number of tools have been used to evaluate and quantify the water quality of each lake. These include: Arizona Department of Environmental Quality Numeric Targets for Urban Lakes, the Carlson Trophic Status Index (TSI), and a Lake Report Card based on that used by Arizona Game and Fish Department that was developed by Aquatic Consulting & Testing, Inc.

The following provides brief descriptions of some of the more important parameters.

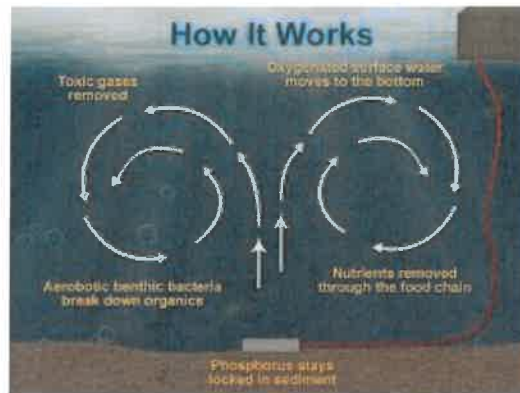
Temperature and Oxygen

Density differences in water caused by temperature produce a physical barrier to the exchange of gases and nutrients between water layers. Typically warmer (less dense) water rests above deeper, cooler (more dense) water. Deep waters can become anoxic (oxygen poor) and cause the formation and release of toxic gases as hydrogen sulfide and ammonia, and



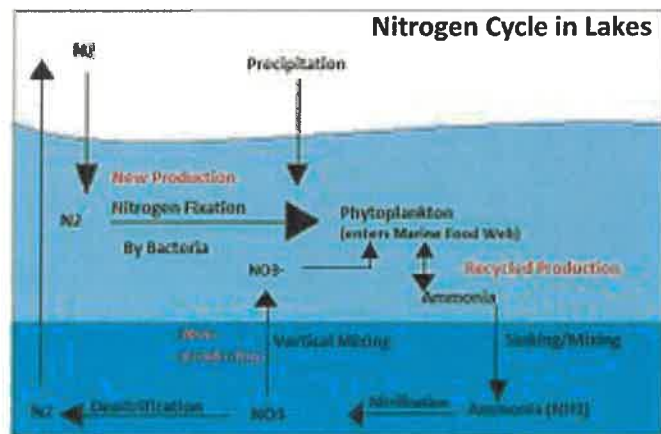
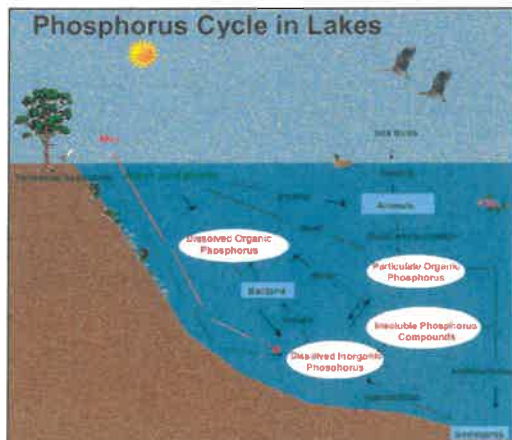
the release of plant nutrients as phosphates. A vertically mixed lake rarely suffers from such issues.

Aeration systems are designed to circulate and distribute oxygen vertically in the water column. Circulation is necessary for two primary purposes: (1) to deliver oxygen to the deeper waters for fish survival and (2) to maintain an aerobic environment throughout the lake to prevent the release and distribution of phosphates, ammonia, and sulfide from the anaerobic sediment.



Nutrients

Algae are plants and require nitrogen and phosphorus for growth. In the desert southwest, large growths of planktonic algae typically form in the summer when total phosphorus concentrations are above 0.030 mg/L. Nitrogen values usually need to be at least 10 times that of phosphorus and in a soluble, usable (nitrate or ammonia) form to stimulate algae growth. Phosphorus and nitrogen cycles in the aquatic environment are illustrated below.



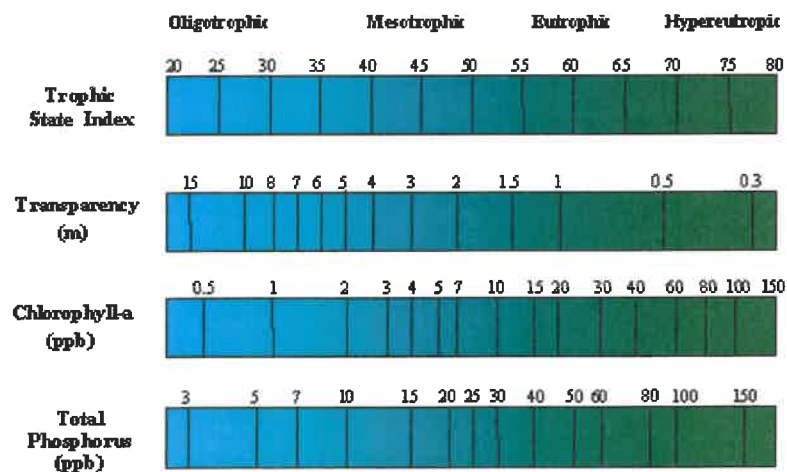
Algae and Aquatic Weeds

Algae are beneficial to a lake as they provide food for aquatic organisms and produce oxygen. However, some algae are undesirable and an overabundance of algae reduces aesthetic appeal and interferes with the ecological balance of the environment. Large die offs of algae can deplete dissolved oxygen in the water via bacterial utilization of the gas during decomposition of the plant biomass. Blue-green (Cyanophyta) algae are least desirable because some forms can form stringers (long filaments) and large colonies (masses) and are difficult to chemically manage because of their mucilaginous coatings.

Submerged weeds can be beneficial because they also produce oxygen and provide habitat and shelter for aquatic animals. However, an overabundance of weeds reduces aesthetic appeal, interferes with fishing and boating activities, interferes with the ecological balance of the environment, and can also deplete dissolved oxygen if a rapid die-off occurs.

Trophic Status Index

The Carlson Trophic Status Index (TSI) is a series of calculations that attempt to put a numerical value on water quality. The more algae and greener a lake is, the more nutrients a lake has, and the less transparent the water becomes, the higher the trophic status and the greater the TSI value. Three values are calculated using the Secchi disk depth, total phosphorus concentration, and chlorophyll measurement to obtain an average TSI. Those lakes with relatively low TSI values are unproductive and termed oligotrophic. Those lakes with very high TSI values are classified as productive (eutrophic). Those lakes with TSI values falling in between are considered mesotrophic.



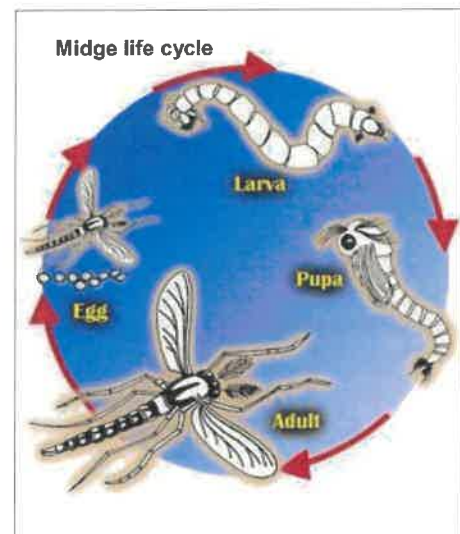
The Trophic Status report addendum provides each of these values for the sampling sites. For southern Arizona, a TSI of less than 60 is the target for reasonable aesthetic quality. Fisheries often flourish when TSI values are in the 55 to 65 range. Severe aesthetic and recreational problems occur when conditions result in TSI values of 80 or higher.

General Characteristics of Oligotrophic and Eutrophic Lakes

Condition	Oligotrophic	Eutrophic
Productivity	Low	High
Algae density	Low	High
Nutrient concentrations	Low	High
Hypolimnion oxygen content	High	Low
Sediment nutrient release	Low to none	High
Organic matter	Low	High
Light transparency	Deep	Shallow
Macrophyte (weed) density	Low	High

Midge flies

Midge flies are common inhabitants of most lakes. Adult females lay hundreds of eggs on the water surface. The eggs settle to the lake bottom and hatch in a few days. Larvae develop and grow in the superficial sediments over a three to four week period. In about 30 days the insect larvae become pupae, rise in the water column, and emerge as adult flies. The adults tend to swarm at dusk and dawn and become a nuisance. They fly into residents' eyes and mouths, congregate under eaves of houses, and leave a sticky messy residue when they die. Management techniques may include stocking of bottom-feeding fishes and application of bacterial or chemical larvicides. The primary control of midge flies has been stocking of fish that eat the larvae living in the lake sediment.



Waterfowl

The adverse impacts of excessive waterfowl include fecal matter deposition and public health issues, turf destruction, aesthetic detracting, and fish consumption. The Arizona Game and Fish Department has recently adopted the following classification for ducks

counts (per acre) in urban fishing lakes: <3 (excellent), 3-4 (good), 5-6 (fair), and >6 (poor; relocate non-migratory).

April 2025 Report Narrative Summary

The following pages provide a summary of the monthly survey results. Comprehensive analyses were conducted on Lakes 5-8 on 03 April 2025. A brief narrative description is provided for each lake. Data are additionally qualified in the Lake Report Card (See Supporting Documentation). Lakes 1-8 received visual examination and basic water quality testing on 03 and 17 April 2024.

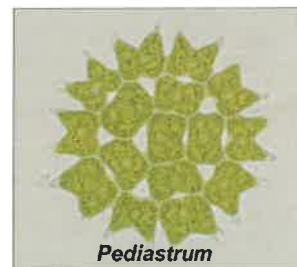
Lakes 5-8:

Lake 5

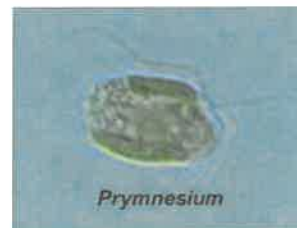
The Lake 5 temperatures ranged from 18.8 to 22.9 C (66-73 F). Water pH ranged from 8.0 to 8.1 SU indicating low to moderate algae density. Dissolved oxygen (5.6-7.0 mg/L) was lower than typical, but still satisfactory for the fishery and fish activity appeared normal. Lake 5 exhibited no thermal stratification and no significant loss of oxygen in the deep waters (see attached profiles). Transparency decreased to 0.81 m and turbidity increased but was stable at 9.1 NTU.

Alkalinity (153 mg/L as CaCO₃) and hardness (182 mg/L as CaCO₃) were fairly stable. Values are typical and expected from most waters in central Arizona. The total dissolved solids (mineral) concentration of the lake was good at 604 mg/L.

Although nutrient concentrations (nitrogen and phosphorus) increased, they supported a relatively low total algae density (4.02 x 10² cells/mL). The dominant alga remained the green (Chlorophyta) colony, *Pediastrum*; not a problematic form. Chlorophyll concentration, indicative of algal biomass, was low at 3.60 ug/L. No abnormal algae growth or submerged weeds were observed. No potentially toxic golden algae (*Prymnesium parvum* or related species) were detected.



Bio-available nitrogen and total nitrogen were 0.59 mg/L and 1.09 mg/L, respectively. Phosphorus concentration was a very desirable 0.028 mg/L. Ammonia concentration was elevated at 0.50 mg/L. However, at ambient temperature and pH, no toxicity issues would result.



Waterfowl mean density was under two birds per acre (<2/A) which is considered excellent (Arizona Game & Fish Department rating system shown below). No cormorants were noted.

Midge fly larvae density was low (200/m²) and should produce no issues to lakeside residents or visitors.

The mean TSI value increased six (6) units to 53. The lake moved into the slightly eutrophic category. The lake may have reduced clarity and become less aesthetically pleasing, and may have anoxia in the deep waters during the summer.

The *E. coli* concentration was 37 MPN/100 mL. The maximum bacteria level for full body contact (FBC=swimming) and partial body contact (PBC=fishing and boating) recreation, is 126/100 mL (30-day geometric mean).

The Lake Report Card value for April 2025 was 46; down five (5) units from September 2024. The score downgraded the lake into the “good” category. High nitrogen and poor transparency were the primary factors for the lower score.

Lake 6

Lake 6 temperatures were stable and ranged from 19.5 to 22.7 C (67-73 F). Water pH was 8.2 SU indicating low to moderate algae density. Dissolved oxygen (6.9-8.7 mg/L) increased and was satisfactory for the fishery and fish activity appeared normal. Lake 6 exhibited no thermal stratification and no significant loss of oxygen in the deep waters (see attached profiles). Transparency decreased to 0.48 m and turbidity range was 17.3-17.7 NTU.

Alkalinity (157 mg/L as CaCO₃) and hardness (267 mg/L as CaCO₃) increased. Values are typical and expected from most waters in central Arizona. The total dissolved solids (mineral) concentration of the lake increased but was satisfactory at 688 mg/L.

Nutrient concentrations (nitrogen and phosphorus) supported a low to moderate total algae density of 7.82 x 10³ cells/mL. The dominant alga was the green (Chlorophyta) colony, *Scenedesmus*, a rarely problematic form. Chlorophyll concentration, indicative of algal biomass, was moderate at 13.5 ug/L. No abnormal algae growth or submerged weeds were observed. No potentially toxic golden algae (*Prymnesium parvum* or related species) were detected.



Bio-available nitrogen and total nitrogen concentrations were elevated at 1.88 mg/L and 2.40 mg/L, respectively. Phosphorus concentration was slightly elevated at 0.044 mg/L. Ammonia was highly elevated at 1.88 mg/L. However, at ambient temperature and pH, the value falls just under the chronic toxicity limit.

Waterfowl mean density was 3-7 birds per acre which is considered fair to good (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. Midge fly larvae density was quite low at 80/m².

The mean TSI value increased 5 units to 62 and moved the lake into the eutrophic category. Traditionally, such lakes may have a dominance of blue-green algae, algal scum, and macrophyte (submerged weed) issues. However, lake management procedures as lake dye addition, aeration, and herbivorous fish stocking reduce potential for negative effects.

The *E. coli* concentration was 13 MPN/100 mL. The maximum bacteria level for full body contact (FBC=swimming) and partial body contact (PBC=fishing and boating) recreation, is 126/100 mL (30-day geometric mean).

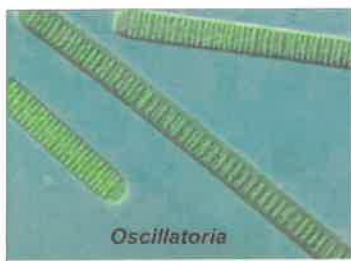
The Lake Report Card value for April 2025 was 41; down four (4) units from September 2024. The lake remained in the “good” category.

Lake 7

Lake 7 temperatures ranged from 19.7 C to 23.0 C (67-73 F). Water pH ranged from 8.6 to 8.7 SU indicating a possible elevated algae density. Dissolved oxygen (8.1-9.0 mg/L) was satisfactory for the fishery and fish activity appeared normal. Lake 7 exhibited no thermal stratification and no significant loss of oxygen in the deep waters (see attached profiles). Transparency was 0.76 m and turbidity was 5.1 NTU.

Alkalinity (135 mg/L as CaCO₃) and hardness (202 mg/L as CaCO₃) were very stable. Values are typical and expected from most waters in central Arizona. The total dissolved solids (mineral) concentration of the lake was also stable at 960 mg/L.

Nutrient concentrations (nitrogen and phosphorus) were moderate to slightly elevated and would typically support at least a moderate total algae density. Algae density was moderate at 3.96×10^4 cells/mL. Blue-green (Cyanophyta) algae were dominant and included *Oscillatoria*, *Coelosphaerium*, and *Merismopedia*. Chlorophyll concentration, indicative of algal biomass, was moderate at 16.8 ug/L. No abnormal algae growth or submerged weeds were observed. No potentially toxic golden algae (*Prymnesium parvum* or related species) were detected.



Bio-available nitrogen and total nitrogen concentrations were 0.83 mg/L and 1.80 mg/L, respectively. Phosphorus concentration was at a slightly elevated concentration of 0.043 mg/L. Ammonia was unusually high in concentration at 0.83 mg/L. However, at ambient temperature and pH, no toxicity issues would result.

Waterfowl mean density was less than two (<2) birds per acre which is considered excellent (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. Midge fly density was low (200/m²) and should produce minimal issues to lakeside residents or visitors.

The mean TSI value was 60, up four (4) units compared to September 2024. The lake still placed in the slightly eutrophic category. Traditionally, such lakes may have decreased transparency, low deep water oxygen concentrations during the summer and submerged macrophyte issues. However, lake management procedures as lake dye addition, aeration, and herbivorous fish stocking reduce potential for negative effects.

The *E. coli* concentration was 31 MPN/100 mL. The maximum bacteria level for full body contact (FBC=swimming) and partial body contact (PBC=fishing and boating) recreation, is 126/100 mL (30-day geometric mean).

The Lake Report Card value for April 2025 was 46; up one (1) unit from September 2024 and remaining in the "good" category.

Lake 8

Lake 8 temperatures ranged from 19.3 C to 22.8 C (68-73 F). Water pH ranged from 8.4 to 8.5 SU indicating a probable moderate algae density. Dissolved oxygen (7.5-8.0 mg/L) was satisfactory for the fishery and fish activity appeared normal. Lake 8 exhibited no thermal stratification and no significant loss of oxygen in the deep waters (see attached profiles). Transparency was 1.12 m (3.6 ft) and turbidity measured 4.0 NTU.

Alkalinity (183 mg/L as CaCO₃) and hardness (267 mg/L as CaCO₃) were within the typical range and similar to most waters in central Arizona. The total dissolved solids (mineral) concentration of the lake was stable at 1,220 mg/L.

Nutrient concentrations (nitrogen and phosphorus) were low to moderate and would typically support a low to moderate total algae density. Cell density corresponded to the nutrient levels at 2.69×10^4 cells/mL. Blue-green (Cyanophyta) colonies (*Microcystis*) and filaments (*Oscillatoria*) dominated the phytoplankton. *Oscillatoria* often grows on the sediment and may be deriving nutrients from it. Chlorophyll concentration, indicative of algal biomass, was moderate at 12.3 ug/L. No abnormal algae growth or submerged weeds were observed. No potentially toxic golden algae (*Prymnesium parvum* or related species) were detected.

Bio-available nitrogen and total nitrogen concentrations increased to 0.95 mg/L and 1.80 mg/L, respectively. Phosphorus concentration remained at a moderate level of 0.037 mg/L. As with the other lakes, ammonia was unusually high in concentration at

0.95 mg/L. At ambient temperature and pH, chronic toxicity issues could result. However, no signs of fish stress were observed.

Waterfowl mean density was four to eleven birds per acre (4-11/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. Midge fly density was low (<40/m²) and should produce no issues to lakeside residents or visitors.

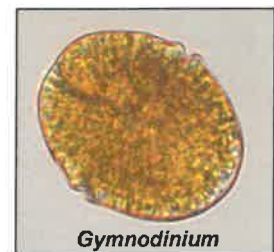
The mean TSI value was 58, up five (5) units from the September 2024 evaluation. The lake remained in the slightly eutrophic category. Traditionally, such lakes may have decreased transparency, low deep water oxygen concentrations during the summer and submerged macrophyte issues. However, lake management procedures as lake dye addition, aeration, and herbivorous fish stocking reduce potential for negative effects.

The *E. coli* concentration was 3 MPN/100 mL. The maximum bacteria level for full body contact (FBC=swimming) and partial body contact (PBC=fishing and boating) recreation, is 126/100 mL (30-day geometric mean).

The Lake Report Card value for April 2025 was 44; down four (4) units from September 2025, but remaining in the “good” category.

Lakes 1-4

Lake 1 had a moderate pH (8.0-8.1 SU) and adequate oxygen concentration (7.5-8.9 mg/L) to support the fishery. Water temperature ranged from 18.8-22.9 C (66-73 F). The lake was fairly clear with turbidity at 4.3 NTU. The dominant alga was *Gymnodinium*, a dinoflagellate (division Pyrrhophyta). No golden algae or related species were observed. No issues with algae, weeds, or fish occurred.



Lake 2 had a moderate pH (7.8-8.1 SU) and adequate oxygen concentration (7.4-8.1 mg/L) to support the fishery. Water temperature ranged from 18.8-22.7 C (66-73 F). The lake was fairly clear with turbidity at 3.2 NTU. The dominant alga was the green (Chlorophyta) colony, *Scenedesmus*. No golden algae or related species were observed and no issues with other algae, submerged weeds, or fish occurred.

Lake 3 pH ranged from 8.0 to 8.1 SU. The oxygen concentration ranged from 6.7 to 7.8 mg/L and supported the fishery. Temperature ranged from 19.0 to 22.3 C (66-72 F). Lake water was fairly clear with turbidity measuring 4.0 NTU. The dominant algae were *Scenedesmus* and *Pediastrum* (green colonies). No golden algae or related species were observed. No issues with algae, weeds, or fish occurred.

Lake 4 pH ranged from 7.7 to 7.9 SU. The oxygen concentration ranged from 6.2 to 7.3 mg/L and supported the fishery. Temperature ranged from 18.7 to 22.2 C (66-72 F). Lake clarity was diminished with turbidity of 20.0 NTU. No golden algae was observed. The dominant alga was the Chlorophyta colony, *Scenedesmus*.

Next Month:

Lakes 1-4 are scheduled for comprehensive monitoring in May. All lakes will be visually inspected and field data collected two times during the month and checked for golden algae weekly during the end of its season.

Respectfully:

Aquatic Consulting & Testing, Inc.



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



DOBSON RANCH REPORT CARD

DATE OF EVALUATION:	Apr-25	CONDITION	GOOD	SCORE	46	41	46	44
PREVIOUS EVALUATION:	Oct-24	CONDITION	GOOD	SCORE	51	45	45	48

Last complete

CONDITION	RATIONALE	4 pts EXCELLENT	3 pts GOOD	2 pts FAIR	1 pt POOR	SCORE Lake 5	SCORE Lake 6	SCORE Lake 7	SCORE Lake 8
Transparency - SDz (m) avg.	aesthetics	1.5-2.0	1.0-1.4	0.5-0.9	<0.5	2	2	3	3
Dissolved oxygen (mg/L) @1m	aquatic life, sediment nutrient release, odors	>7.0	5.6-6.9	4.0-5.5	<4.0	3	3	4	4
Nitrogen, total (mg/L)	algae and macrophyte growth	<0.5	0.5-1.0	1.0-2.0	>2.0	2	1	2	2
Phosphorus, total (mg/L)	algae and macrophyte growth	<0.03	0.03-0.05	0.06-0.10	>0.10	4	3	3	3
Turbidity (NTU) avg.	aesthetics, State std	<5	5-10	11-20	>20	3	2	3	4
Chlorophyll-a (ug/L) avg.	aesthetics, oxygen balance	<10	11-20	21-30	>30	4	3	3	3
Algae density (no./mL)	aesthetics	<5 x 10 ⁴	5x10 ⁴ - 9x10 ⁴	1 x 10 ⁵ - 5x 10 ⁵	>5 x 10 ⁵	4	4	4	4
Midge larvae (# per sq m)	aesthetics	<200	200-400	500-800	>800	3	4	4	4
Algae form (dominant)	aesthetics, treatability	greens; no floating mats	diatoms; no floating mats	blue-greens; no floating mats	blue-greens; floating mats common	4	4	2	2
pH (SU) avg.	swimming, fishery, ammonia toxicity	6.5-8.0	8.1-8.5	8.6-9.0	>9.0	3	3	3	2
Carlson Trophic Status	eutrophication	<50	50-60	61-70	>70	3	2	3	3
Fishery	recreation, aesthetics	no fish piping; no fish kills	some fish piping, gulping; no fish kills	fish piping before dawn; occasional fish kills	fish piping common; fish kills common	4	4	4	4
Waterfowl (per acre mean)	Aesthetics, public health	<3	3-4	5-6	>6	3	2	4	2
Shoreline/banks	Minimal Filamentous Algae	no evidence of salt crusts or algal scums	some white deposits and scums	numerous patches of salt deposits and algae scums	most of lake shore covered with crusts or scums	4	4	4	4

SCORING KEY:

Excellent	Good	Fair	Poor
50-56	41-49	30-40	<30

Definitions: Ratings

- Excellent: Lake aesthetic and operational conditions above level of expectation.
- Good: Lake aesthetic and operational conditions at level of expectation.
- Fair: Lake aesthetic and operational conditions slightly below level of expectation.
- Poor: Lake aesthetic and operational conditions considerably below level of expectation.

Definitions: Terms

Benthos: Bottom dwelling organisms

Carlson Trophic Index: A series of calculations incorporating transparency, chlorophyll and phosphorus data used to provide a quantitative estimate of the degree of eutrophication in a lake.

Chlorophyll: Pigment in green plants involved in photosynthesis used to estimate the density of algae in the water column.

Coliform bacteria: Enteric bacteria used as an indicator of the sanitary condition of the water.

Eutrophication: Process by which lakes age by increasing in nutrient (nitrogen and phosphorus) content and plant life.

Fecal bacteria: Any of the bacteria types provided by the fecal matter of warm-blooded organisms.

Macrophyte: Large plant, observable without the aid of a microscope, that may be floating, submerged or emergent.

Midge: Small, flying, non-biting "gnat-like" insect whose larval stage exists in the lake sediments (bloodworm).

N/A: not applicable; insufficient data or too early in development of lake (an arbitrary 3 rating is provided for these items).

pH: -log hydrogen ion conc.; amount of acid in the water identified on scale 1-14; 1 being most acid, 7 neutral, and 14 being most caustic.

Phytoplankton (algae): Microscopic plant fraction of the plankton community.

Piping: Act of fish coming to surface of water and capturing a bubble of air in their mouth; a sign of low oxygen concentrations.

Plankton: Organisms of relatively small size that have relatively small powers of locomotion or that drift in the water.

Sedimentation: Rate at which solids accumulate on the lake bottom.

Transparency (SDz): Depth to which a standard disk can be observed in the water column.

Turbidity: Degree to which particles and color in the water scatter light; the "cloudiness" of the water.

Zooplankton: Animal fraction of the plankton community

CLIENT: DOBSON RANCH

DATE: 03-Apr-25

	LAKE	LAKE	LAKE	LAKE			
PARAMETER	5	6	7	8			
Secchi Disk Depth (m)	0.81	0.48	0.76	1.12			
Phosphorus, total (ug/L)	28	44	43	37			
Chlorophyll-a (ug/L)	3.6	13.5	16.8	16.8			
	LAKE	LAKE	LAKE	LAKE			
TSI VALUES	5	6	7	8			
Secchi Disk Depth	63	71	64	58			
Phosphorus, total	52	59	58	56			
Chlorophyll-a	43	56	58	58			
					average		
AVERAGE	53	62	60	58	58		

SYNOPSIS OF TROPHIC STATUS RESULTS:

Carlson Trophic Status Index (TSI): The classical interpretation of various Index value ranges is provided below:

- TSI<30 **Classic Oligotrophic**; clear water, oxygenated hypolimnion throughout the year; suitable for cold water fishery in deep lakes.
- TSI 30-40 **Oligotrophic**; shallow lakes may exhibit anoxic hypolimnion in summer.
- TSI 41-50 **Mesotrophic**; moderately clear water, increasing chance of anoxia in hypolimnion during the summer.
- TSI 51-60 **Slightly Eutrophic**; decreased transparency, anoxia in hypolimnion during the summer expected, macrophyte problems possible, warm water fishery only.
- TSI 61-70 **Eutrophic**; dominance of blue-green algae and algal scums probable, can have extensive macrophyte problems.
- TSI 70-80 **Highly Eutrophic**; heavy algal blooms, dense macrophyte beds possible, limited light penetration.
- TSI>80 **Hypereutrophic**; algal scums, summertime fish kills, limited light penetration, few macrophytes.

Aquatic Consulting & Testing, Inc.

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: 04/03/25
Date Reported: 05/07/25

Attn: Executive Director

Project: Monthly Lake 5-8 Monitoring

RESULTS

Client ID: Lake 1
ACT Lab No.: CH01796

Sample Type: Surface Water
Sample Time: 04/03/25 07:10

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	7.5	mg/L as O ₂
pH, Field	04/03/25	04/03/25	SM4500H+ B	8.0	SU
Temperature, Field	04/03/25	04/03/25	SM2550 B	18.8	C
Turbidity	04/03/25	04/03/25	180.1	4.3	NTU

Client ID: Lake 2
ACT Lab No.: CH01797

Sample Type: Surface Water
Sample Time: 04/03/25 07:20

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	7.4	mg/L as O ₂
pH, Field	04/03/25	04/03/25	SM4500H+ B	7.8	SU
Temperature, Field	04/03/25	04/03/25	SM2550 B	18.8	C
Turbidity	04/03/25	04/03/25	180.1	3.2	NTU

Client ID: Lake 3
ACT Lab No.: CH01798

Sample Type: Surface Water
Sample Time: 04/03/25 07:30

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	6.7	mg/L as O ₂
pH, Field	04/03/25	04/03/25	SM4500H+ B	8.0	SU
Temperature, Field	04/03/25	04/03/25	SM2550 B	19.0	C
Turbidity	04/03/25	04/03/25	180.1	3.7	NTU

RESULTS

Client ID: Lake 4
ACT Lab No.: CH01799

Sample Type: Surface Water
Sample Time: 04/03/25 07:40

Parameter	Analysis Date		Method No.	Result	Unit
	Start	End			
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	6.2	mg/L as O2
pH, Field	04/03/25	04/03/25	SM4500H+ B	7.7	SU
Temperature, Field	04/03/25	04/03/25	SM2550 B	18.7	C
Turbidity	04/03/25	04/03/25	180.1	20.0	NTU

Client ID: Lake 5
ACT Lab No.: CH01800

Sample Type: Surface Water
Sample Time: 04/03/25 08:00

Parameter	Analysis Date		Method No.	Result	Unit
	Start	End			
Algae Count	04/24/25	04/24/25	SM 10200 F	See Attached	cells/mL
Algae Identification	04/24/25	04/24/25		See Attached	
Chl/Pheo Ratio	05/05/25	05/05/25	SM10200 H	1.46	
Chlorophyll a	05/05/25	05/05/25	SM10200 H	3.60	ug/L
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Midge count	04/03/25	04/03/25	SM10500 C	200	#/sq. meter
Pheophytin a	05/05/25	05/05/25	SM10200 H	1.86	ug/L
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	5.6	mg/L as O2
pH, Field	04/03/25	04/03/25	SM4500H+ B	8.1	SU
Secchi Disk Depth	04/03/25	04/03/25	NALMS	0.81	meters
Temperature, Field	04/03/25	04/03/25	SM2550 B	19.4	C
Alkalinity, Total	04/07/25	04/07/25	SM 2320 B	153	mg/L as CaCO3
Ammonia - N	04/11/25	04/11/25	SM4500NH3 D	0.50	mg/L as N
Nitrate + Nitrite - N	04/15/25	04/15/25	SM4500NO3 E	0.09	mg/L as N
Phosphorus, Total	04/11/25	04/12/25	365.3	0.028	mg/L as P
Total Hardness	04/04/25	04/04/25	SM2340C	182	mg/L as CaCO3
Total Kjeldahl Nitrogen	04/19/25	04/19/25	SMNorg C,NH3 C/D	1.0	mg/L as N
E. coli, Collert	04/03/25	04/04/25	SM 9223 B	37	MPN/100 mL
Total Dissolved Solids	04/08/25	04/08/25	SM2540 C	604	mg/L
Turbidity	04/03/25	04/03/25	180.1	9.1	NTU

RESULTS

Client ID: Lake 6
ACT Lab No.: CH01801

Sample Type: Surface Water
Sample Time: 04/03/25 08:30

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Algae Count	04/24/25	04/24/25	SM 10200 F	See Attached	cells/mL
Algae Identification	04/24/25	04/24/25		See Attached	
Chl/Pheo Ratio	05/05/25	05/05/25	SM10200 H	1.60	
Chlorophyll a	05/05/25	05/05/25	SM10200 H	13.5	ug/L
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Midge count	04/03/25	04/03/25	SM10500 C	80	#/sq. meter
Pheophytin a	05/05/25	05/05/25	SM10200 H	2.13	ug/L
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	6.9	mg/L as O2
pH, Field	04/03/25	04/03/25	SM4500H+ B	8.2	SU
Secchi Disk Depth	04/03/25	04/03/25	NALMS	0.48	meters
Temperature, Field	04/03/25	04/03/25	SM2550 B	19.5	C
Alkalinity, Total	04/07/25	04/07/25	SM 2320 B	157	mg/L as CaCO3
Ammonia - N	04/11/25	04/11/25	SM4500NH3 D	1.88	mg/L as N
Nitrate + Nitrite - N	04/15/25	04/15/25	SM4500NO3 E	<0.05	mg/L as N
Phosphorus, Total	04/11/25	04/12/25	365.3	0.044	mg/L as P
Total Hardness	04/04/25	04/04/25	SM2340C	267	mg/L as CaCO3
Total Kjeldahl Nitrogen	04/19/25	04/19/25	SMNorg C,NH3 C/D	2.4	mg/L as N
E. coli, Colilert	04/03/25	04/04/25	SM 9223 B	13	MPN/100 mL
Total Dissolved Solids	04/08/25	04/08/25	SM2540 C	688	mg/L
Turbidity	04/03/25	04/03/25	180.1	17.3	NTU

RESULTS

Client ID: Lake 7
ACT Lab No.: CH01802

Sample Type: Surface Water
Sample Time: 04/03/25 09:30

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Algae Count	04/24/25	04/24/25	SM 10200 F	See Attached	cells/mL
Algae Identification	04/24/25	04/24/25		See Attached	
Chl/Pheo Ratio	05/05/25	05/05/25	SM10200 H	1.68	
Chlorophyll a	05/05/25	05/05/25	SM10200 H	16.8	ug/L
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Midge count	04/03/25	04/03/25	SM10500 C	200	#/sq. meter
Pheophytin a	05/05/25	05/05/25	SM10200 H	0.56	ug/L
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	8.1	mg/L as O2
pH, Field	04/03/25	04/03/25	SM4500H+ B	8.6	SU
Secchi Disk Depth	04/03/25	04/03/25	NALMS	0.76	meters
Temperature, Field	04/03/25	04/03/25	SM2550 B	19.7	C
Alkalinity, Total	04/07/25	04/07/25	SM 2320 B	135	mg/L as CaCO3
Ammonia - N	04/11/25	04/11/25	SM4500NH3 D	0.83	mg/L as N
Nitrate + Nitrite - N	04/15/25	04/15/25	SM4500NO3 E	<0.05	mg/L as N
Phosphorus, Total	04/11/25	04/12/25	365.3	0.043	mg/L as P
Total Hardness	04/04/25	04/04/25	SM2340C	202	mg/L as CaCO3
Total Kjeldahl Nitrogen	04/19/25	04/19/25	SMNorg C,NH3 C/D	1.8	mg/L as N
E. coli, Colilert	04/03/25	04/04/25	SM 9223 B	31	MPN/100 mL
Total Dissolved Solids	04/08/25	04/08/25	SM2540 C	960	mg/L
Turbidity	04/03/25	04/03/25	180.1	5.1	NTU

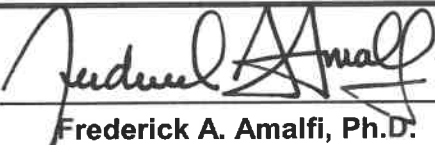
RESULTS

Client ID: Lake 8
ACT Lab No.: CH01803

Sample Type: Surface Water
Sample Time: 04/03/25 09:50

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Algae Count	04/24/25	04/24/25	SM 10200 F	See Attached	cells/mL
Algae Identification	04/24/25	04/24/25		See Attached	
Chl/Pheo Ratio	05/05/25	05/05/25	SM10200 H	1.64	
Chlorophyll a	05/05/25	05/05/25	SM10200 H	12.3	ug/L
Golden Algae	04/03/25	04/03/25	P/C Microscopy	Absent	Pres/Abs
Midge count	04/03/25	04/03/25	SM10500 C	<40	#/sq. meter
Pheophytin a	05/05/25	05/05/25	SM10200 H	1.09	ug/L
Oxygen, Dissolved Field	04/03/25	04/03/25	SM4500 O G	7.5	mg/L as O2
pH, Field	04/03/25	04/03/25	SM4500H+ B	8.5	SU
Secchi Disk Depth	04/03/25	04/03/25	NALMS	1.12	meters
Temperature, Field	04/03/25	04/03/25	SM2550 B	19.3	C
Alkalinity, Total	04/07/25	04/07/25	SM 2320 B	183	mg/L as CaCO3
Ammonia - N	04/11/25	04/11/25	SM4500NH3 D	0.95	mg/L as N
Nitrate + Nitrite - N	04/15/25	04/15/25	SM4500NO3 E	<0.05	mg/L as N
Phosphorus, Total	04/11/25	04/12/25	365.3	0.037	mg/L as P
Total Hardness	04/04/25	04/04/25	SM2340C	267	mg/L as CaCO3
Total Kjeldahl Nitrogen	04/19/25	04/19/25	SMNorg C,NH3 C/D	1.8	mg/L as N
E. coli, Colilert	04/03/25	04/04/25	SM 9223 B	3	MPN/100 mL
Total Dissolved Solids	04/08/25	04/08/25	SM2540 C	1220	mg/L
Turbidity	04/03/25	04/03/25	180.1	4.0	NTU

Reviewed by:


 Frederick A. Amalfi, Ph.D.

Laboratory Director

ALGAE IDENTIFICATION

AC&T Lab No.
Client I.D.CH01800
Lake 5Date Collected
Collected By04/03/25
AC&TDivisions: bac=Bacillariophyta; chl=Chlorophyta; cry=Chrysophyta; cyn=Cyanophyta; eug=Euglenophyta;
hap=Haptophyta; pyr=Pyrrhophyta Forms: u=unicell; c=colony; f=filament; g= flagellate

Genus	Div.- Form	Rel. Count	Total per mL	Comp.	Genus	Div.- Form	Rel. Count	Total per mL	Comp.
<i>Achnanthes</i>	bac-u				<i>Microcystis</i>	cyn-c			
<i>Anabaena</i>	cyn-f				<i>Microspora</i>	chl-f			
<i>Ankistrodesmus</i>	chl-u				<i>Mougeotia</i>	chl-f			
<i>Aphanocapsa</i>	cyn-c				<i>Navicula</i>	bac-u	1	17	4.17%
<i>Asterionella</i>	bac-c				<i>Nitzschia</i>	bac-u	1	17	4.17%
<i>Botryococcus</i>	chl-c				<i>Ocystis</i>	chl-c			
<i>Carteria</i>	chl-ug				<i>Oscillatoria</i>	cyn-f			
<i>Cephalomonas</i>	chl-ug				<i>Pandorina</i>	chl-cg			
<i>Ceratium</i>	pyr-ug				<i>Pediastrum</i>	chl-c	8	134	33.33%
<i>Chlamydomonas</i>	chl-ug	2	33	8.33%	<i>Peridinium</i>	pyr-ug			
<i>Chlorella</i>	chl-u	1	17	4.17%	<i>Phacotus</i>	chl-ug			
<i>Chlorococcum</i>	chl-c				<i>Phacus</i>	chl-ug			
<i>Chroococcus</i>	cyn-c				<i>Pinnularia</i>	bac-u			
<i>Chroomonas</i>	crp-ug	7	117	29.17%	<i>Pithophora</i>	chl-f			
<i>Closterium</i>	chl-u				<i>Prymnesium</i>	hap-ug			
<i>Cocconeis</i>	bac-u				<i>Pseudokirchneriella</i>	chl-u			
<i>Coelastrum</i>	chl-c				<i>Rhizoclonium</i>	chl-f			
<i>Cosmarium</i>	chl-u				<i>Rhoicosphenia</i>	bac-u			
<i>Coelosphaerium</i>	cyn-c				<i>Rhopalodia</i>	bac-u			
<i>Crucigenia</i>	chl-c				<i>Scenedesmus</i>	chl-c	2	33	8.33%
<i>Cryptomonas</i>	crp-ug				<i>Schroederia</i>	chl-u	1	17	4.17%
<i>Cyclotella</i>	bac-u				<i>Sphaerocystis</i>	chl-c			
<i>Cymbella</i>	bac-u	1	17	4.17%	<i>Spondylumorum</i>	chl-c			
<i>Diatoma</i>	bac-u				<i>Spirulina</i>	cyn-f			
<i>Dinobryon</i>	bac-c				<i>Stauroneis</i>	bac-u			
<i>Dunaliella</i>	chl-u				<i>Stephanodiscus</i>	bac-u			
<i>Epithemia</i>	bac-u				<i>Stigeoclonium</i>	chl-f			
<i>Euglena</i>	eug-ug				<i>Surirella</i>	bac-u			
<i>Fragilaria</i>	bac-u				<i>Synechococcus</i>	cyn-u			
<i>Frustulia</i>	bac-u				<i>Synechocystis</i>	cyn-c			
<i>Glenodinium</i>	pyr-ug				<i>Synedra</i>	bac-u			
<i>Golenkinia</i>	chl-c				<i>Synura</i>	cry-cg			
<i>Gomphonema</i>	bac-u				<i>Tetraedron</i>	chl-u			
<i>Gonium</i>	chl-cg				<i>Tetrastrum</i>	chl-c			
<i>Gonyaulax</i>	pyr-ug				<i>Trachelomonas</i>	eug-ug			
<i>Gyrosigma</i>	bac-u				<i>Vaucheria</i>	chl-f			
<i>Hydrodictyon</i>	chl-c				<i>Volvox</i>	chl-cg			
<i>Lyngbya</i>	cyn-f				<i>Zygnema</i>	chl-f			
<i>Melosira</i>	bac-f								
<i>Meridion</i>	bac-u								
<i>Merismopedia</i>	cyn-c								

check 100.00%

Aquatic Consulting & Testing, Inc.
1525 W. University Dr., Suite 106
Tempe, Arizona 85281

Count (cells/mL) 4.02E+02

ALGAE IDENTIFICATION

AC&T Lab No.	CH01801	Date Collected	04/03/25
Client I.D.	Lake 6	Collected By	AC&T

Divisions: bac=Bacillariophyta; chl=Chlorophyta; cry=Chrysophyta; cyn=Cyanophyta; eug=Euglenophyta; hap=Haptophyta; pyr=Pyrrhophyta
Forms: u=unicell; c=colony; f=filament; g= flagellate

Genus	Div.- Form	Rel. Count	Total per mL	Comp.	Genus	Div.- Form	Rel. Count	Total per mL.	Comp
<i>Achnanthes</i>	bac-u				<i>Microcystis</i>	cyn-c			
<i>Anabaena</i>	cyn-f				<i>Microspora</i>	chl-f			
<i>Ankistrodesmus</i>	chl-u				<i>Mougeotia</i>	chl-f			
<i>Aphanocapsa</i>	cyn-c				<i>Navicula</i>	bac-u	1	92	1.18%
<i>Asterionella</i>	bac-c				<i>Nitzschia</i>	bac-u			
<i>Botryococcus</i>	chl-c				<i>Oocystis</i>	chl-c	1	92	1.18%
<i>Carteria</i>	chl-ug				<i>Oscillatoria</i>	cyn-f			
<i>Cephalomonas</i>	chl-ug				<i>Pandorina</i>	chl-cg			
<i>Ceratium</i>	pyr-ug				<i>Pediastrum</i>	chl-c			
<i>Chlamydomonas</i>	chl-ug	9	828	10.59%	<i>Peridinium</i>	pyr-ug			
<i>Chlorella</i>	chl-u				<i>Phacotus</i>	chl-ug			
<i>Chlorococcum</i>	chl-c				<i>Phacus</i>	chl-ug			
<i>Chroococcus</i>	cyn-c				<i>Pinnularia</i>	bac-u			
<i>Chroomonas</i>	crp-ug	7	644	8.24%	<i>Pithophora</i>	chl-f			
<i>Closterium</i>	chl-u				<i>Prymnesium</i>	hap-ug			
<i>Cocconeis</i>	bac-u				<i>Pseudokirchneriella</i>	chl-u			
<i>Coelastrum</i>	chl-c				<i>Rhizoclonium</i>	chl-f			
<i>Cosmarium</i>	chl-u	2	184	2.35%	<i>Rhoicosphenia</i>	bac-u			
<i>Coelosphaerium</i>	cyn-c				<i>Rhopalodia</i>	bac-u			
<i>Crucigenia</i>	chl-c				<i>Scenedesmus</i>	chl-c	27	2485	31.76%
<i>Cryptomonas</i>	crp-ug	5	460	5.88%	<i>Schroederia</i>	chl-u	4	368	4.71%
<i>Cyclotella</i>	bac-u	1	92	1.18%	<i>Sphaerocystis</i>	chl-c			
<i>Cymbella</i>	bac-u				<i>Spondylumorum</i>	chl-c			
<i>Diatoma</i>	bac-u				<i>Spirulina</i>	cyn-f			
<i>Dinobryon</i>	bac-c				<i>Stauroneis</i>	bac-u			
<i>Dunaliella</i>	chl-u				<i>Stephanodiscus</i>	bac-u			
<i>Epithemia</i>	bac-u				<i>Stigeoclonium</i>	chl-f			
<i>Euglena</i>	eug-ug				<i>Surirella</i>	bac-u			
<i>Fragilaria</i>	bac-u				<i>Synechococcus</i>	cyn-u			
<i>Frustulia</i>	bac-u				<i>Synechocystis</i>	cyn-c			
<i>Glenodinium</i>	pyr-ug				<i>Synedra</i>	bac-u	9	828	10.59%
<i>Golenkinia</i>	chl-c				<i>Synura</i>	cry-cg			
<i>Gomphonema</i>	bac-u				<i>Tetraedron</i>	chl-u	1	92	1.18%
<i>Gonium</i>	chl-cg				<i>Tetrastrum</i>	chl-c			
<i>Gymnodinium</i>	pyr-ug	2	184	2.35%	<i>Trachelomonas</i>	eug-ug			
<i>Gyrosigma</i>	bac-u				<i>Vaucheria</i>	chl-f			
<i>Hydrodictyon</i>	chl-c				<i>Volvox</i>	chl-cg			
<i>Lyngbya</i>	cyn-f				<i>Zygnema</i>	chl-f			
<i>Melosira</i>	bac-f								
<i>Meridion</i>	bac-u								
<i>Merismopedia</i>	cyn-c	16	1473	18.82%					

check 100.00%

Aquatic Consulting & Testing, Inc.
1525 W. University Dr., Suite 106
Tempe, Arizona 85281

Count (cells/mL) 7.82E+03

ALGAE IDENTIFICATION

AC&T Lab No.	CH01802	Date Collected	04/03/25
Client I.D.	Lake 7	Collected By	AC&T

Divisions: bac=Bacillariophyta; chl=Chlorophyta; cry=Chrysophyta; cyn=Cyanophyta; eug=Euglenophyta; hap=Haptophyta; pyr=Pyrrhophyta
Forms: u=unicell; c=colony; f=filament; g= flagellate

Genus	Div.-Form	Rel. Count	Total per mL	Comp.	Genus	Div.-Form	Rel. Count	Total per mL	Comp.
<i>Achnanthes</i>	bac-u				<i>Microcystis</i>	cyn-c			
<i>Anabaena</i>	cyn-f				<i>Microspora</i>	chl-f			
<i>Ankistrodesmus</i>	chl-u				<i>Mougeotia</i>	chl-f			
<i>Aphanocapsa</i>	cyn-c				<i>Navicula</i>	bac-u			
<i>Asterionella</i>	bac-c				<i>Nitzschia</i>	bac-u			
<i>Botryococcus</i>	chl-c				<i>Ocystis</i>	chl-c			
<i>Carteria</i>	chl-ug				<i>Oscillatoria</i>	cyn-f	19	5829	14.73%
<i>Cephalomonas</i>	chl-ug				<i>Pandorina</i>	chl-cg			
<i>Ceratium</i>	pyr-ug				<i>Pediastrum</i>	chl-c			
<i>Chlamydomonas</i>	chl-ug	33	10125	25.58%	<i>Peridinium</i>	pyr-ug			
<i>Chlorella</i>	chl-u				<i>Phacotus</i>	chl-ug			
<i>Chlorococcum</i>	chl-c				<i>Phacus</i>	chl-ug			
<i>Chroococcus</i>	cyn-c				<i>Pinnularia</i>	bac-u			
<i>Chroomonas</i>	crp-ug	1	307	0.78%	<i>Pithophora</i>	chl-f			
<i>Closterium</i>	chl-u				<i>Prymnesium</i>	hap-ug			
<i>Cocconeis</i>	bac-u				<i>Pseudokirchneriella</i>	chl-u			
<i>Coelastrum</i>	chl-c				<i>Rhizoclonium</i>	chl-f			
<i>Cosmarium</i>	chl-u				<i>Rhoicosphenia</i>	bac-u			
<i>Coelosphaerium</i>	cyn-c	32	9818	24.81%	<i>Rhopalodia</i>	bac-u			
<i>Crucigenia</i>	chl-c				<i>Scenedesmus</i>	chl-c			
<i>Cryptomonas</i>	crp-ug				<i>Scytonema</i>	chl-f			
<i>Cyclotella</i>	bac-u				<i>Sphaerocystis</i>	chl-c	16	4909	12.40%
<i>Cymbella</i>	bac-u				<i>Spondylumorum</i>	chl-c			
<i>Diatoma</i>	bac-u				<i>Spirulina</i>	cyn-f			
<i>Dinobryon</i>	bac-c				<i>Stauroneis</i>	bac-u			
<i>Dunaliella</i>	chl-u				<i>Stephanodiscus</i>	bac-u			
<i>Epithemia</i>	bac-u				<i>Stigeoclonium</i>	chl-f			
<i>Euglena</i>	eug-ug				<i>Surirella</i>	bac-u			
<i>Fragilaria</i>	bac-u				<i>Synechococcus</i>	cyn-u			
<i>Frustulia</i>	bac-u				<i>Synechocystis</i>	cyn-c			
<i>Glenodinium</i>	pyr-ug				<i>Synedra</i>	bac-u			
<i>Golenkinia</i>	chl-c				<i>Synura</i>	cry-cg			
<i>Gomphonema</i>	bac-u				<i>Tetraedron</i>	chl-u			
<i>Gonium</i>	chl-cg				<i>Tetrastrum</i>	chl-c			
<i>Gonyaulax</i>	pyr-ug				<i>Trachelomonas</i>	eug-ug			
<i>Gyrosigma</i>	bac-u				<i>Vaucheria</i>	chl-f			
<i>Hydrodictyon</i>	chl-c				<i>Volvox</i>	chl-cg			
<i>Lyngbya</i>	cyn-f				<i>Zygnema</i>	chl-f			
<i>Melosira</i>	bac-f								
<i>Meridion</i>	bac-u								
<i>Merismopedia</i>	cyn-c	28	8591	21.71%					

check 100.00%

Aquatic Consulting & Testing, Inc.
1525 W. University Dr., Suite 106
Tempe, Arizona 85281

Count (cells/mL) 3.96E+04

ALGAE IDENTIFICATION

AC&T Lab No.	CH01803	Date Collected	04/03/25
Client I.D.	Lake 8	Collected By	AC&T

Divisions: bac=Bacillariophyta; chl=Chlorophyta; cry=Chrysophyta; cyn=Cyanophyta; eug=Euglenophyta; hap=Haptophyta; pyr=Pyrrhophyta
Forms: u=unicell; c=colony; f=filament; g= flagellate

Genus	Div.- Form	Rel. Count	Total per mL	Comp.	Genus	Div.- Form	Rel. Count	Total per mL	Comp
<i>Achnanthes</i>	bac-u				<i>Microcystis</i>	cyn-c	36	8284	30.77%
<i>Anabaena</i>	cyn-f				<i>Microspora</i>	chl-f			
<i>Ankistrodesmus</i>	chl-u				<i>Mougeotia</i>	chl-f			
<i>Aphanocapsa</i>	cyn-c				<i>Navicula</i>	bac-u			
<i>Asterionella</i>	bac-c				<i>Nitzschia</i>	bac-u			
<i>Botryococcus</i>	chl-c				<i>Ocystis</i>	chl-c			
<i>Carteria</i>	chl-ug				<i>Oscillatoria</i>	cyn-f	24	5523	20.51%
<i>Cephalomonas</i>	chl-ug				<i>Palmellococcus</i>	chl-u	18	4142	15.38%
<i>Ceratium</i>	pyr-ug				<i>Pediastrum</i>	chl-c			
<i>Chlamydomonas</i>	chl-ug	9	2071	7.69%	<i>Peridinium</i>	pyr-ug			
<i>Chlorella</i>	chl-u	4	920	3.42%	<i>Phacotus</i>	chl-ug			
<i>Chlorococcum</i>	chl-c				<i>Phacus</i>	chl-ug			
<i>Chroococcus</i>	cyn-c				<i>Pinnularia</i>	bac-u			
<i>Chroomonas</i>	crp-ug	3	690	2.56%	<i>Pithophora</i>	chl-f			
<i>Closterium</i>	chl-u				<i>Prymnesium</i>	hap-ug			
<i>Cocconeis</i>	bac-u				<i>Pseudokirchneriella</i>	chl-u			
<i>Coelastrum</i>	chl-c				<i>Rhizoclonium</i>	chl-f			
<i>Cosmarium</i>	chl-u				<i>Rhoicosphenia</i>	bac-u			
<i>Coelosphaerium</i>	cyn-c				<i>Rhopalodia</i>	bac-u			
<i>Crucigenia</i>	chl-c				<i>Scenedesmus</i>	chl-c			
<i>Cryptomonas</i>	crp-ug				<i>Scytonema</i>	chl-f			
<i>Cyclotella</i>	bac-u				<i>Sphaerocystis</i>	chl-c			
<i>Cymbella</i>	bac-u				<i>Spondylumorum</i>	chl-c			
<i>Diatoma</i>	bac-u				<i>Spirulina</i>	cyn-f	1	230	0.85%
<i>Dinobryon</i>	bac-c				<i>Stauroneis</i>	bac-u			
<i>Dunaliella</i>	chl-u				<i>Stephanodiscus</i>	bac-u			
<i>Epithemia</i>	bac-u				<i>Stigeoclonium</i>	chl-f			
<i>Euglena</i>	eug-ug				<i>Surirella</i>	bac-u			
<i>Fragilaria</i>	bac-u				<i>Synechococcus</i>	cyn-u			
<i>Frustulia</i>	bac-u				<i>Synechocystis</i>	cyn-c			
<i>Glenodinium</i>	pyr-ug				<i>Synedra</i>	bac-u			
<i>Golenkinia</i>	chl-c	1	230	0.85%	<i>Synura</i>	cry-cg			
<i>Gomphonema</i>	bac-u				<i>Tetraedron</i>	chl-u	1	230	0.85%
<i>Gonium</i>	chl-cg				<i>Tetrastrum</i>	chl-c			
<i>Gonyaulax</i>	pyr-ug				<i>Trachelomonas</i>	eug-ug			
<i>Gyrosigma</i>	bac-u				<i>Vaucheria</i>	chl-f			
<i>Holopedium</i>	cyn-c	8	1841	6.84%	<i>Volvox</i>	chl-cg			
<i>Lyngbya</i>	cyn-f				<i>Zygnema</i>	chl-f			
<i>Melosira</i>	bac-f								
<i>Meridion</i>	bac-u								
<i>Merismopedia</i>	cyn-c	12	2761	10.26%					

check 100.00%

Aquatic Consulting & Testing, Inc.
1525 W. University Dr., Suite 106
Tempe, Arizona 85281

Count (cells/mL) 2.69E+04

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 5-8 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: 480-831-8314

E:

FP

AC&T Sampler:

Sample Location ID:	Date:	Time:	Matrix:
Lake 1	4/3/25	7:10	SW
Lake 2		7:20	SW
Lake 3		7:30	SW
Lake 4		7:40	SW
Lake 5		8:00	SW
Lake 6		8:30	SW
Lake 7		9:30	SW
Lake 8		9:50	SW

1. RELINQUISHED BY:										2. RECEIVED BY:										3. RELINQUISHED BY:												
Signature:	<i>Andrew Marvel</i>										Signature:	<i>Brandon</i>										Signature:										
Print Name:	Andrew Marvel										Print Name:	Brandon										Print Name:										
Date:	4/3/25										Date:	4/3/25										Date:										
Time:	1315										Time:	1315										Time:										

A C & T Sample Receipt:									
Total # Containers:	36		YES	NO					
Received Intact:	30		YES	NO					
# Bottles Preserved:	8		YES	NO					
Samples On Ice:	18°C		WET	BLUE					
Ice Type:									
Sample Receipt Temperature:	18°C								

Sample Containers # / Preservation:	None Preserved	Na2S2O3 (Sterile)	HNO3 (Nitric)	H2SO4 (Sulfuric)	Lugols	Other:
	2					CH01796
	2					1797
	2					1798
	2					1799
	3	1	1	1		1800
	3	1	1	1		1801
	3	1	1	1		1802
	3	1	1	1		1803

Field Measurements:	pH, Temp, O2	Turb	Golden algae	Algae - ID + #	#Chl/Phco	E. Coli	TDS	Alkalinity	Hardness	Ammonia (NH3)	TKN-Elec	NO3+NO2	P-T
	X	X	X									X	X
	X	X	X									X	X
	X	X	X									X	X
	X	X	X									X	X
	X	X	X				X	X	X	X	X	X	X
	X	X	X				X	X	X	X	X	X	X
	X	X	X				X	X	X	X	X	X	X



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Lic. No. AZ0003

LABORATORY REPORT

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

Date Submitted: 04/17/25
Date Reported: 04/22/25

Attn: Executive Director

Project: Monthly Lake 1-8 Monitoring

RESULTS

Client ID: Lake 1
ACT Lab No.: CH02070

Sample Type: Surface Water
Sample Time: 04/17/25 06:50

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	5.2	NTU

Client ID: Lake 2
ACT Lab No.: CH02071

Sample Type: Surface Water
Sample Time: 04/17/25 07:00

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	4.6	NTU

Client ID: Lake 3
ACT Lab No.: CH02072

Sample Type: Surface Water
Sample Time: 04/17/25 07:10

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	2.3	NTU

Client ID: Lake 4
ACT Lab No.: CH02073

Sample Type: Surface Water
Sample Time: 04/17/25 07:20

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	21.	NTU

RESULTS

Client ID: Lake 5
ACT Lab No.: CH02074

Sample Type: Surface Water
Sample Time: 04/17/25 07:30

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	6.9	NTU

Client ID: Lake 6
ACT Lab No.: CH02075

Sample Type: Surface Water
Sample Time: 04/17/25 07:40

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	40.	NTU

Client ID: Lake 7
ACT Lab No.: CH02076

Sample Type: Surface Water
Sample Time: 04/17/25 07:50

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	2.6	NTU

Client ID: Lake 8
ACT Lab No.: CH02077

Sample Type: Surface Water
Sample Time: 04/17/25 08:00

<u>Parameter</u>	<u>Analysis Date</u>		<u>Method No.</u>	<u>Result</u>	<u>Unit</u>
	<u>Start</u>	<u>End</u>			
Golden Algae	04/17/25	04/17/25	P/C Microscopy	Absent	Pres/Abs
Turbidity	04/17/25	04/17/25	180.1	2.7	NTU

Reviewed by: _____



Frederick A. Amalfi, Ph.D.
Laboratory Director

Aquatic Consulting & Testing, Inc.
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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: 480-831-8314

Am

AC&T Sampler:

Sample Location ID:	Date:	Time:	Matrix:
Lake 1	4/17/25	650	SW
Lake 2		700	SW
Lake 3		710	SW
Lake 4		720	SW
Lake 5		730	SW
Lake 6		740	SW
Lake 7		750	SW
Lake 8		800	SW

Sample Containers # / Preservation:	None Preserved	Na2S2O3 (Sterile)	HNO3 (Nitric)	H2SO4 (Sulfuric)	Lugols	Other:
	1					CH02070
	1					2071
	1					2072
	1					2073
	1					2074
	1					2075
	1					2076
	1					2077

Field Measurements:

Ammonia (NH3)	TKN-Elec	NO3+NO2	E. Coll	#Chl/Pheo	Algae - ID + #	Golden algae	Turb	pH, Temp, O2
						X	X	
						X	X	
						X	X	
						X	X	
						X	X	
						X	X	
						X	X	
						X	X	

Project Location:	A C & T Sample Receipt:	1. RELINQUISHED BY:	3. RELINQUISHED BY:
Dobson Ranch	Total # Containers: 18 Received Intact: YES # Bottles Preserved: 18 Non: 18	Signature: Andrew Murrett Print Name: Andrew Murrett Date: 4/17/25 Time: 1130	Signature: Print Name: Date: Time:
Notes:	Samples On Ice: YES Ice Type: WET Sample Receipt Temperature: 24°C	2. RECEIVED BY: Signature: Ba Print Name: Brandon Date: 4/17/25 Time: 1130	4. RECEIVED BY: Signature: Print Name: Date: Time:

-008

DOBSON RANCH LAKES Bi-Monthly Lake Inspection

Date: 4/17/25
By: Ann

Lake	Temp	Dis. oxygen	pH	Clarity	Algae	Submerged weeds	Fish behavior	Waterfowl density	Insect activity	Mechanical issues
1	<u>22.9</u> C	<u>8.9</u> mg/L	<u>8.1</u> SU	SDz <u>4.3</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>24</u> No/A <u>1.5</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input type="checkbox"/> Operating <input checked="" type="checkbox"/> No service
2	<u>22.7</u> C	<u>8.1</u> mg/L	<u>8.1</u> SU	SDz <u>3.7</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>10</u> No/A <u>2.0</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service
3	<u>23.3</u> C	<u>7.8</u> mg/L	<u>8.1</u> SU	SDz <u>3.7</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input checked="" type="checkbox"/> Present <input type="checkbox"/> Absent <i>light filamentous</i>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>6</u> No/A <u>1.5</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input type="checkbox"/> Operating <input checked="" type="checkbox"/> No service
4	<u>22.7</u> C	<u>7.3</u> mg/L	<u>7.9</u> SU	SDz <u>20.0</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>7</u> No/A <u>2.3</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service
5	<u>22.7</u> C	<u>7.0</u> mg/L	<u>7.9</u> SU	SDz <u>0.7</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>14</u> No/A <u>3.5</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	
6	<u>22.7</u> C	<u>7.6</u> mg/L	<u>8.2</u> SU	SDz <u>17.3</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>37</u> No/A <u>6.2</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	
7	<u>23.0</u> C	<u>9.6</u> mg/L	<u>8.7</u> SU	SDz <u>5.1</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>16</u> No/A <u><1</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service
8	<u>22.8</u> C	<u>8.0</u> mg/L	<u>8.4</u> SU	SDz <u>4.0</u> NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>28</u> No/A <u>1.2</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Aerators <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service

Notes and recommendations for treatment/operation:

183 Fountain off

DOBSON RANCH LAKES Bi-Monthly Lake Inspection

Date: 4/3/25

By: Am

Lake	Temp	Dis. oxygen	pH	Clarity	Algae	Submerged weeds	Fish behavior	Waterfowl density	Insect activity	Mechanical issues
1	18.8c	7.5 mg/L	8.0 su	SDZ 4.3 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input type="checkbox"/> Absent	<input type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>17</u> No/A <u>1.1</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input type="checkbox"/> Operating <input checked="" type="checkbox"/> No service
2	18.8c	7.4 mg/L	7.8 su	SDZ 3.2 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>10</u> No/A <u>1.7</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service
3	19.0c	6.7 mg/L	8.0 su	SDZ 3.7 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input checked="" type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>6</u> No/A <u>1.5</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input type="checkbox"/> Operating <input checked="" type="checkbox"/> No service
4	18.7c	6.2 mg/L	7.7 su	SDZ 20.6 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>9</u> No/A <u>3.0</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service
5	19.4c	5.6 mg/L	8.1 su	0.8 SDZ 9.1 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>14</u> No/A <u>3.5</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	
6	19.5c	6.9 mg/L	8.7 su	0.48 SDZ 17.3 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>41</u> No/A <u>6.8</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	
7	19.7c	8.1 mg/L	8.6 su	0.76 SDZ 5.7 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>24</u> No/A <u>1.1</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Fountain <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service
8	19.3c	7.5 mg/L	8.5 su	1.0 SDZ 4.0 NTU	<input type="checkbox"/> Suspended <input type="checkbox"/> Floating <input type="checkbox"/> Bottom <input type="checkbox"/> Attached	<input type="checkbox"/> Present <input checked="" type="checkbox"/> Absent	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Distress <input type="checkbox"/> Dead	No. <u>11</u> No/A <u>1.4</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Infestation	Aerators <input checked="" type="checkbox"/> Operating <input type="checkbox"/> No service

Notes and recommendations for treatment/operation:

1) Fountain off & #3