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09 July 2023

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Mesa, Arizona 85202

June 2023 Lake Report

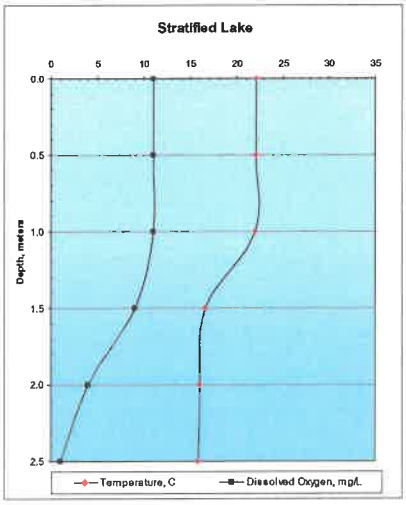
The following report presents the results of field inspections on the Dobson Ranch lakes for the month of June 2023. This report summarizes data collected under the updated program started in 2019 and expanded in 2020 that includes comprehensive testing of one-half of the lakes on a monthly basis from 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 (April 2023) are provided for those lakes. Field sheets for the inspection weeks are also included. Additional data requested for Lake 8 are provided at the end of the narrative report.

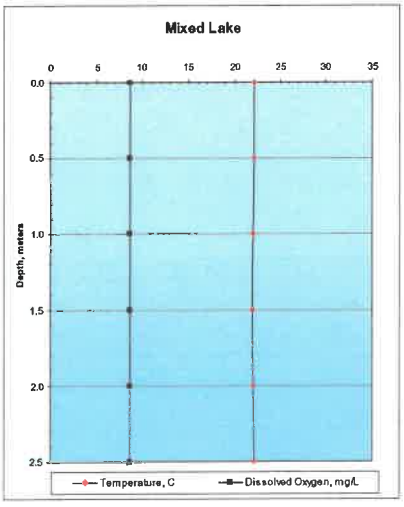
A number of tools have been used to evaluate and quantify the water quality of each lake. These include: Arizona Department of Environmental Quality Numeric Targets for Urban Lakes, the Carlson Trophic Status Index (TSI), and a Lake Report Card based on that used by Arizona Game and Fish Department that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

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

Temperature and Oxygen

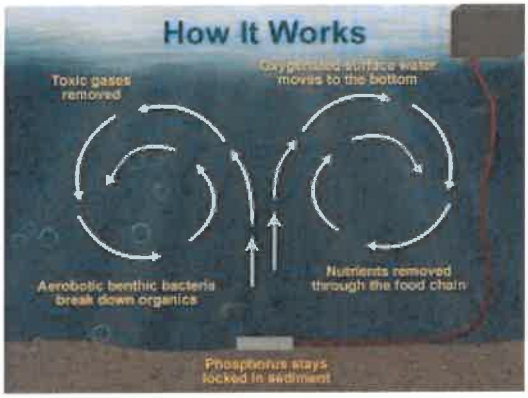
Density differences in water caused by temperature produce a physical barrier to the exchange of gases and nutrients between water layers. Typically warmer (less dense) water rests above deeper, cooler (more dense) water. Deep waters can become anoxic (oxygen poor) and cause the formation and release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





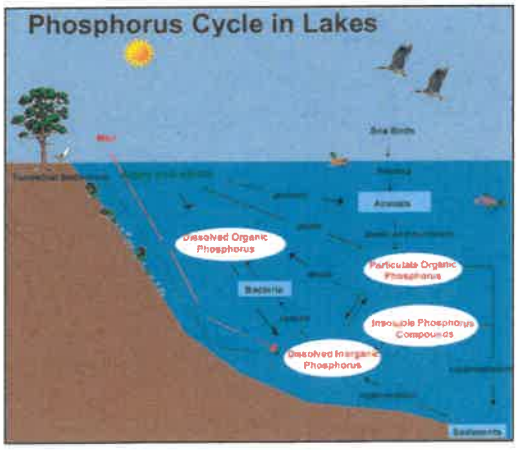
toxic gases as hydrogen sulfide and ammonia, and the release of plant nutrients as phosphates. A vertically mixed lake rarely suffers from such issues.

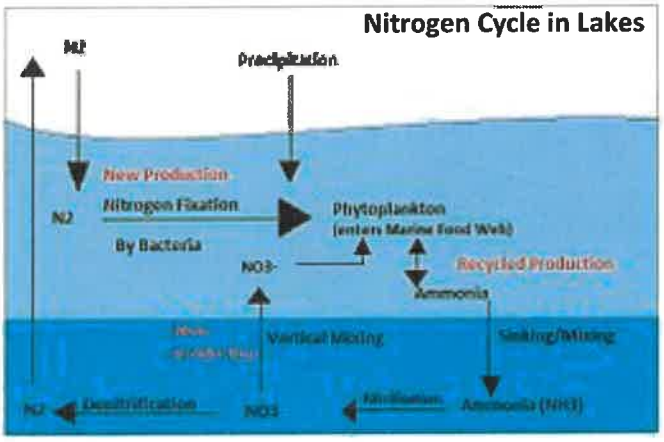
Aeration systems are designed to circulate and distribute oxygen vertically in the water column. Circulation is necessary for two primary purposes: (1) to deliver oxygen to the deeper waters for fish survival and (2) to maintain an aerobic environment throughout the lake to prevent the release and distribution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





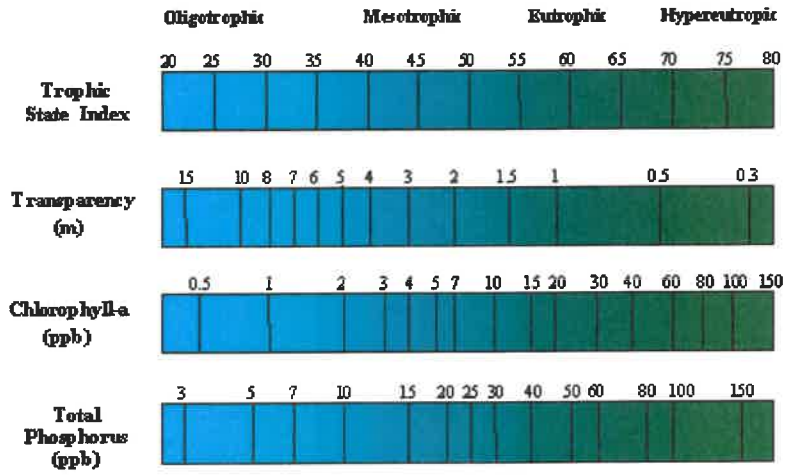
Algae and Aquatic Weeds

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.



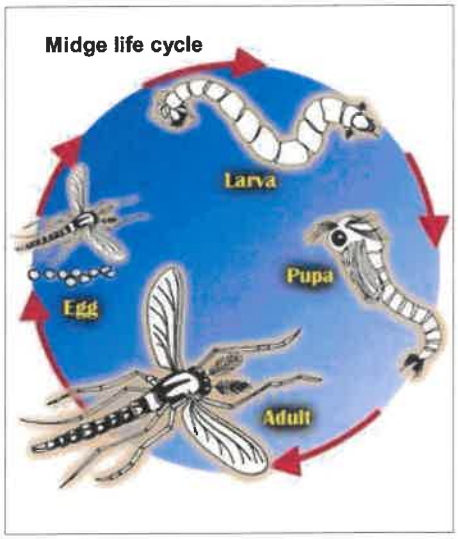
The Trophic Status report addendum provides each of these values for the sampling sites. For southern Arizona, a TSI of less than 60 is the target for reasonable aesthetic quality. Fisheries often flourish when TSI values are in the 55 to 65 range. Severe aesthetic and recreational problems occur when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

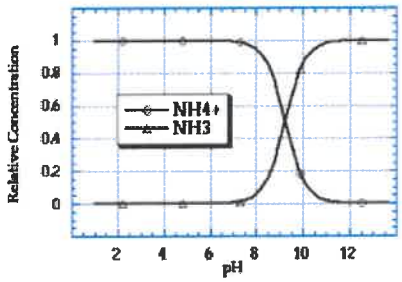
June 2023 Report Narrative Summary

The following pages provide a summary of the monthly survey results. Comprehensive analyses were conducted on Lakes 5-8 on 08 June 2023. 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 08 and 22 June 2023.

Lakes 5-8

Lake 5

Lake 5 exhibited no thermal stratification and no significant loss of oxygen in the deep waters (see attached profiles). The surface dissolved oxygen concentration (7.0-7.1 mg/L) was above the target 6.0 mg/L concentration desired to protect the fishery and no fish stress was observed. Water pH was moderate at 8.2 to 8.5 SU and indicated a low to moderate suspended algae density. Low pH is advantageous because it prevents conversion of ammonium ions (NH_4^+) to toxic (to aquatic animals) ammonia (NH_3) gas (see figure below). Transparency (Secchi disk depth) decreased to 0.51 m (1.7 ft) and turbidity remained low at 4.2-5.3 NTU.

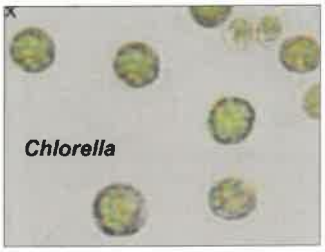


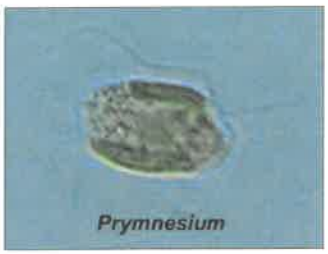
Alkalinity (144 mg/L as $CaCO_3$) and hardness (206 mg/L as $CaCO_3$) were very stable. Values are typical and expected from most waters in central Arizona. The total dissolved solids (mineral) concentration of the lake increased, but remained acceptable at 840 mg/L.

Waterfowl density ranged from four (4) to five (5) birds per acre which is considered in the range of good to fair (Arizona Game & Fish Department rating system). No cormorants were observed.

Midge fly density was remained low (120/m^2) and should produce no issues to lakeside residents or visitors. Maximum waterfowl density was 3.5-4.2 birds per acre which is considered in the good range (Arizona Game & Fish Department rating system). No cormorants were noted.

Bio-available nitrogen and total nitrogen decreased slightly to 0.27 mg/L and 1.39 mg/L, respectively. Phosphorus concentration increased to 0.053 mg/L. Ammonia was minimal at 0.08 mg/L. At ambient temperature and pH, no toxicity issues would result. Chlorophyll concentration, indicative of algal biomass, was stable at 1.28 ug/L. Algae density was correspondingly low (5.52 x 10^2 cells/mL). The dominant alga was *Chlorella* (Chlorophyta unicell). It is rarely problematic. The golden alga, *Prymnesium parvum*, was not observed. *P. parvum* can produce a toxin that destroys exposed cells in the gill tissue of fish, causing asphyxiation and death. No submerged weeds were observed.





The mean TSI value increased from 53 to 55 (range 33-71), with the lake remaining in the slightly eutrophic category. Increased phosphorus and reduced transparency were the responsible factors for the TSI increase. The lake may have decreased clarity and become less aesthetically pleasing, and could develop anoxia in the deep waters during the summer. It should be supportive of the fishery.

The *E. coli* concentration was 21 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 single sample maxima are 235 and 575 for FBC and PBC recreation (Dec 2022).

The Lake Report Card value for June 2023 was 47; down four (4) units from April, and moving down to the "good" category. High phosphorus and poor transparency were primary factors for the decreased score.

Lake 6

Lake 6 was vertically mixed. No substantial loss of oxygen in the deep waters occurred. (see attached profiles). The surface dissolved oxygen concentrations (6.4-6.5 mg/L) were above the target 6.0 mg/L concentration desired to protect the fishery and no fish stress was observed. Water pH was variable and in the range of 8.2-8.4 SU, and indicated a possible reduction in suspended (planktonic) algae density. Low pH is advantageous because it prevents conversion of ammonium ions (NH_4^+) to toxic (to aquatic animals) ammonia (NH_3) gas. Transparency (Secchi disk depth) improved to 0.61 m (2.0 ft) and turbidity ranged from 5.7 to 13.4 NTU.

Alkalinity (140 mg/L as $CaCO_3$) and hardness (215 mg/L as $CaCO_3$) increased slightly and remained elevated, as would be expected from most waters in central Arizona. The total dissolved solids (mineral) concentration decreased slightly to 452 mg/L.

Midge fly density remained quite low (<40/m^2) and should produce no issues to lakeside residents or visitors. Maximum waterfowl density was 3.7-4.5 birds per acre which is considered in the good range (Arizona Game & Fish Department rating system). No cormorants were noted.

Bio-available nitrogen concentration increased to 0.24 mg/L. Total nitrogen decreased slightly to 1.27 mg/L. Phosphorus concentration increased to 0.052 mg/L; a slightly elevated value. Ammonia concentration was 0.07 mg/L. At ambient temperature and pH, no toxicity issues would result.

Chlorophyll concentration, indicative of algal biomass, decreased to 3.2 ug/L. Algae density was stable at 4.46 x 10^3 cells/mL. *Navicula,* a diatom (Bacillariophyta) unicell was the dominant form. The alga is unlikely to cause problems. No potentially-toxic golden algae (*Prymnesium parvum* or related species) were found. *P. parvum* can produce a toxin that destroys exposed cells in the gill tissue of fish, causing asphyxiation and death. No submerged weeds were observed, including horned pondweed (*Zannichellia palustris*) and brittle naiad (*Najas marina*) that have been problematic in other lakes in the past.

The mean TSI value was 57 (range 42-67), maintaining the lake in the slightly-eutrophic category. Slightly eutrophic lakes are more desirable for an urban lake in terms of aesthetics, and reasonably supportive of a robust fishery. They sometimes tend to have dominance of blue-green algae, but this was not the case during the month.

The *E. coli* concentration was 11 MPN/100 mL and met the full body contact (swimming) and partial body contact (fishing and boating) recreation standards.

The Lake Report Card value for June 2023 was 45, a 1 point decrease compared to April 2023 data, and maintaining the lake within the "good" category.

Lake 7

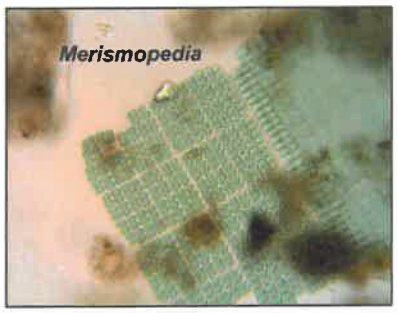
Lake 7 exhibited no thermal stratification (vertically mixed) and had no significant loss of oxygen in the deep waters (see attached profiles). The surface dissolved oxygen concentration (6.4 mg/L) at all depths met the minimum target of 6.0 mg/L desired to protect the fishery. No fish stress was observed. Water pH ranged from 8.2 to 8.4 SU and reflected a continuing decrease. Low pH is more advantageous because it prevents conversion of ammonium ions (NH_4^+) to toxic (to aquatic animals) ammonia (NH_3) gas. Transparency (Secchi disk depth) improved to 0.92 m (3.0 ft). Turbidity was moderate (4.6-7.0 NTU) during the month.

Waterfowl density was less than one bird per acre (<1/A) which is considered excellent (Arizona Game & Fish Department rating system). No cormorants were observed.

Midge fly density was low (<40/m^2) and should produce no issues to lakeside residents or visitors.

Alkalinity (149 mg/L as $CaCO_3$) and hardness (243 mg/L as $CaCO_3$) were fairly stable and remained slightly elevated as typical and expected from most waters in central Arizona. The total dissolved solids (mineral) concentration of the lake increased to 840 mg/L.

Bio-available nitrogen concentration increased to 0.21 mg/L, and total nitrogen increased to 1.24 mg/L. Phosphorus concentration decreased to 0.034 mg/L. The ammonia concentration was 0.07 mg/L and would not create any toxicity issues at ambient temperature and pH.



Chlorophyll concentration, indicative of algal biomass, decreased slightly to 8.01 ug/L. Algae density decreased slightly to 6.86 x 10^4 cells/mL. The dominant alga remained *Merismopedia,* a blue-green (Cyanophyta) colonial form. No significant issues with the alga or other than minor surface scum occurred. Golden algae were absent.

The mean TSI value was unchanged at 56 (range 51-61), with the lake remaining in the slightly-eutrophic category.

The *E. coli* concentration was 179 MPN/100 mL and met partial body contact recreation limits.

The Lake Report Card value for June 2023 was 47, up two units compared to April 2023 and maintaining the lake in the "good" category.

Lake 8

Lake 8 was vertically mixed with little loss of oxygen in the deep water (see attached profiles). The dissolved oxygen concentrations were reduced at 6.7-6.8 mg/L through the water column. Concentrations were satisfactory for the fishery and fish activity appeared normal. Water pH ranged from 7.6-8.2 SU and indicated a low moderate algae density and a significant change in water quality. Water transparency increased to 1.90 m (6.2 ft). Turbidity was low at 2.1 to 3.2 NTU.

Waterfowl density was 6.8 birds per acre which is considered fair to poor by the Arizona Game & Fish Department rating system. No cormorants were noted. Midge fly density was quite low (<40/m^2) and should produce no issues to lakeside residents or visitors.

Bio-available nitrogen concentrations increased to 0.24 mg/L, while totalnitrogen was stable at 1.36 mg/L. Phosphorus concentration increased slightly to 0.038 mg/L. The ammonia concentration remained low (0.08 mg/L). At ambient pH and temperature, acute or chronic ammonia toxicity to fish would not occur.

Algae density decreased to 5.03 x 10^4 cells/mL. The dominant alga was *Merismopedia*. These algae can cause surface scum and turbidity, but this was not the case a water clarity was excellent. The chlorophyll-a concentration (biomass indicator) decreased to 3.20 ug/L; a significant drop. No *Botryococcus* was found. The potentially toxic golden alga (*Prymnesium parvum*) was not present during the month.

The mean TSI value dropped eight (8) units to 50 (range 42-57) and moving the lake just into the mesotrophic category. The value indicates the lake should be much more desirable in terms of aesthetics, but possibly less supportive of a robust fishery.

The *E. coli* concentrations were 99 and 122 MPN/100 mL. The measurements met the bacteria maximum for partial body contact recreation (fishing and boating).

The Lake Report Card value for June 2023 was 46, a three-unit decrease from April, and kept the lake within the "good" category.

Lakes 1-4

Lake 1

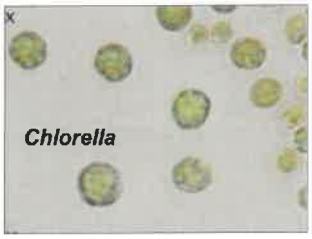
The Lake 1 temperature remained low and ranged from 26.7 C to 27.7 C (80-82 F). Water pH was 8.1-8.2 SU indicating low to moderate algae density. Dissolved oxygen (5.7-7.7 mg/L) was satisfactory for the fishery and fish activity appeared normal. Decreases in dissolved oxygen concentration often occur during the summer because of increased respiration and decomposition rates at higher temperatures and the inability of warm water to hold more dissolved oxygen than cold water. Transparency was over one meter and turbidity ranged from 2.0 to 3.2 NTU. Fountains were in service throughout the reporting period.

Waterfowl mean density was Less than one 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.

Waterfowl Density Ranking System (AZG&FD)

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

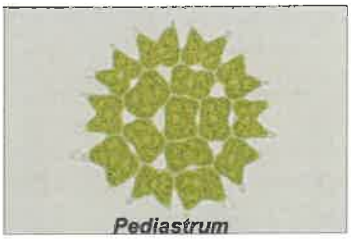
No abnormal algae growths or submerged weeds were observed. The green unicell, *Chlorella* dominated the phytoplankton. Cell density was very low (9.20 x 10^2 cells/mL). No golden algae (*Prymnesium parvum* or related species) were detected.



Lake 2

The water temperature of Lake 2 was 26.4-27.7 C (80-82 F). Water pH ranged from 8.1-8.2 SU indicating probable decreasing algae density. Dissolved oxygen (5.7-7.6 mg/L) was satisfactory for the fishery and fish activity appeared normal. Transparency was approximately one meter and turbidity was typical at 2.1-3.1 NTU. The fountain was not in service at the end of the reporting period.

Less than two (<2) birds per acre were observed and the density is considered excellent for an urban lake. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.


Pediastrum

No abnormal algae growth or submerged weeds were observed. The dominant alga was *Pediastrum*, a green (Chlorophyta) colony. The alga is rarely problematic. Total cell density remained quite low in the lake (9.66 x 10^2 cells/mL). No golden algae (*Prymnesium parvum* or related species) were detected.

Lake 3

Lake temperature range was 26.3 to 28.0 C 79-82 F). Water pH ranged from 8.2-8.3 SU. Dissolved oxygen concentration ranged from 5.7 to 7.1 mg/L and remained satisfactory for the fishery. Fish activity appeared normal. Transparency was stable at about one meter. Turbidity was stable at 5.7 NTU. The fountain was not operating at the end of the reporting period.

Waterfowl density ranged from 2 to 4 birds per acre; "excellent" to "good" ratings. Minimal cormorants were observed. Decreased numbers of waterfowl was expected outside the migratory season. Adult midge flies did not appear to produce any nuisance issues to lakeside residents or visitors.

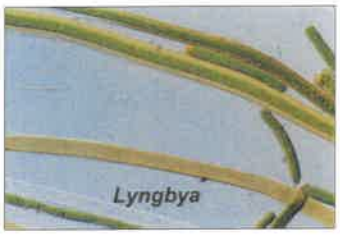
No abnormal algae growth or submerged weeds were observed. During June, *Pediastrum, w*as the dominant alga. The total cell density for the algae community was very low at 5.89 x 10^2 cells/mL. No golden algae (*Prymnesium parvum* or related species) were detected.

Lake 4

The temperature of Lake 4 ranged from 26.2-28.5 C (79-83 F). Water pH was moderate at 8.2-8.3 SU and indicated a low algae density. Dissolved oxygen (5.5-6.7 mg/L) was satisfactory for the fishery and fish activity appeared normal. Transparency was slightly less than one meter and turbidity remained low (6.8-7.4 NTU). Fountains were in operation.

Waterfowl density was about 7 per acre 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. *Lyngbya*, a sometimes problematic blue-green filament, was the dominant alga. However, the total phytoplankton density was very low 6.21 x 10^2 cells/mL). No golden algae (*Prymnesium parvum* or related species) were detected.



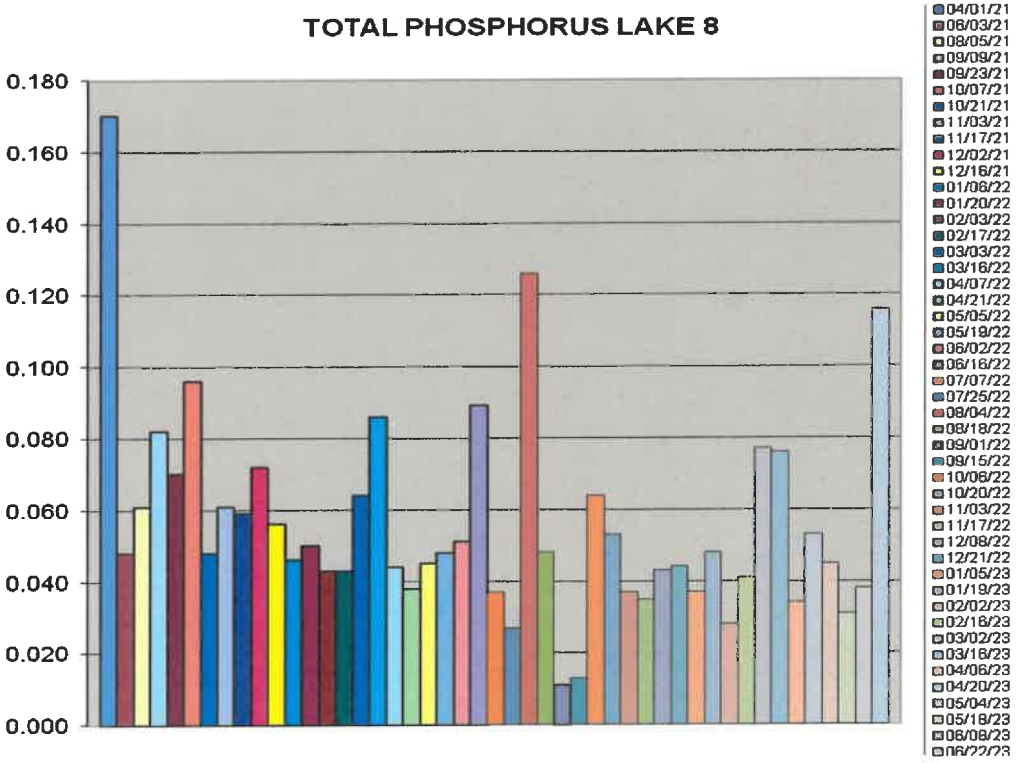
Special Testing

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
06-08-23	99	0.038
06-22-23	122	0.116

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

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



Next Month:

Lakes 1-4 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.

SUPPORTING DOCUMENTATION

- Laboratory reports
- Field Inspection Sheets
- Pesticide application documents

DOBSON RANCH REPORT CARD

DATE OF EVALUATION:	Jun-23	CONDITION	GOOD	SCORE	47 45 47 46
PREVIOUS EVALUATION: *Last complete*	Apr-23	CONDITION	GOOD	SCORE	51 46 46 49

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	4
Dissolved oxygen (mg/L) @1m	aquatic life, sediment nutrient release, odors	>7.0	5.6-6.9	4.0-5.5	<4.0	3	4	4	2
Nitrogen, total (mg/L)	algae and macrophyte growth	<0.5	0.5-1.0	1.0-2.0	>2.0	2	2	2	2
Phosphorus, total (mg/L)	algae and macrophyte growth	<0.03	0.03-0.05	0.06-0.10	>0.10	3	3	3	3
Turbidity (NTU) avg.	aesthetics, State std	<5	5-10	11-20	>20	3	2	4	4
Chlorophyll-a (ug/L) avg.	aesthetics, oxygen balance	<10	11-20	21-30	>30	4	4	4	4
Algae density (no./mL)	aesthetics	$<5 \times 10^4$	$5x10^4 - 9x10^4$	$1 \times 10^5 - 5x\ 10^5$	$>5 \times 10^5$	4	4	3	3
Midge larvae (# per sq m)	aesthetics	<200	200-400	500-800	>800	4	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	2	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	3
Carlson Trophic Status	eutrophication	<50	50-60	61-70	>70	3	4	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	3	4	4
Waterfowl (per acre mean)	Aesthetics, public health	<3	3-4	5-6	>6	4	4	4	4
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: 08-Jun-23

PARAMETER	LAKE 5	LAKE 6	LAKE 7	LAKE 8			
Secchi Disk Depth (m)	0.51	0.61	0.91	1.88			
Phosphorus, total (ug/L)	53	52	34	38			
Chlorophyll-a (ug/L)	1.3	3.2	8.0	3.2			

TSI VALUES	LAKE 5	LAKE 6	LAKE 7	LAKE 8			
Secchi Disk Depth	70	67	61	51			
Phosphorus, total	61	61	55	57			
Chlorophyll-a	33	42	51	42			
					average		
AVERAGE	55	57	56	50	54		

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.

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Tempe, Arizona 85281
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Lic. No. AZ0003

LABORATORY REPORT

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

Date Submitted: 06/08/23
Date Reported: 07/05/23

Attn: Lynelle Glysson, Community Mgr

Project: Monthly Lake 5-8 Monitoring

RESULTS

Client ID: Lake 1
ACT Lab No.: CF04084

Sample Type: Surface Water
Sample Time: 06/08/23 07:20

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	7.7	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.2	SU
Temperature, Field	06/08/23	06/08/23	SM2550 B	26.7	C
Turbidity	06/08/23	06/08/23	180.1	2.0	NTU

Client ID: Lake 2
ACT Lab No.: CF04085

Sample Type: Surface Water
Sample Time: 06/08/23 07:30

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	7.6	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.2	SU
Temperature, Field	06/08/23	06/08/23	SM2550 B	26.4	C
Turbidity	06/08/23	06/08/23	180.1	6.4	NTU

RESULTS

Client ID: Lake 3
ACT Lab No.: CF04086

Sample Type: Surface Water
Sample Time: 06/08/23 07:40

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	7.1	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.3	SU
Temperature, Field	06/08/23	06/08/23	SM2550 B	26.3	C
Turbidity	06/08/23	06/08/23	180.1	5.7	NTU

Client ID: Lake 4
ACT Lab No.: CF04087

Sample Type: Surface Water
Sample Time: 06/08/23 07:50

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	7.8	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.3	SU
Temperature, Field	06/08/23	06/08/23	SM2550 B	36.2	C
Turbidity	06/08/23	06/08/23	180.1	7.4	NTU

RESULTS

Client ID: Lake 5
ACT Lab No.: CF04088

Sample Type: Surface Water
Sample Time: 06/08/23 08:10

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/16/23	06/16/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/16/23	06/16/23		See Attached	
Chl/Pheo Ratio	06/29/23	06/30/23	SM10200 H	1.80	
Chlorophyll a	06/29/23	06/30/23	SM10200 H	1.28	ug/L
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Midge count	06/08/23	06/08/23	SM10500 C	120	#/sq. meter
Pheophytin a	06/29/23	06/30/23	SM10200 H	<0.10	ug/L
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	6.7	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.5	SU
Secchi Disk Depth	06/08/23	06/08/23	NALMS	0.51	meters
Temperature, Field	06/08/23	06/08/23	SM2550 B	27.6	C
Alkalinity, Total	06/21/23	06/21/23	SM 2320 B	144.	mg/L as CaCO3
Ammonia - N	06/13/23	06/13/23	SM4500NH3 D	0.08	mg/L as N
Nitrate + Nitrite - N	07/03/23	07/03/23	SM4500NO3 E	0.19	mg/L as N
Phosphorus, Total	06/12/23	06/13/23	365.3	0.053	mg/L as P
Total Hardness	06/26/23	06/26/23	SM2340C	206.	mg/L as CaCO3
Total Kjeldahl Nitrogen	06/12/23	06/12/23	SMNorg C,NH3 C/D	1.2	mg/L as N
E. coli, Colilert	06/08/23	06/09/23	SM 9223 B	21	MPN/100 mL
Total Dissolved Solids	06/09/23	06/14/23	SM2540 C	840.	mg/L
Turbidity	06/08/23	06/08/23	180.1	5.3	NTU

RESULTS

Client ID: Lake 6
ACT Lab No.: CF04089

Sample Type: Surface Water
Sample Time: 06/08/23 08:40

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/16/23	06/16/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/16/23	06/16/23		See Attached	
Chl/Pheo Ratio	06/29/23	06/30/23	SM10200 H	1.75	
Chlorophyll a	06/29/23	06/30/23	SM10200 H	3.20	ug/L
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Midge count	06/08/23	06/08/23	SM10500 C	<40	#/sq. meter
Pheophytin a	06/29/23	06/30/23	SM10200 H	<0.10	ug/L
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	8.3	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.2	SU
Secchi Disk Depth	06/08/23	06/08/23	NALMS	0.61	meters
Temperature, Field	06/08/23	06/08/23	SM2550 B	27.6	C
Alkalinity, Total	06/21/23	06/21/23	SM 2320 B	140.	mg/L as CaCO3
Ammonia - N	06/13/23	06/13/23	SM4500NH3 D	0.07	mg/L as N
Nitrate + Nitrite - N	07/03/23	07/03/23	SM4500NO3 E	0.17	mg/L as N
Phosphorus, Total	06/12/23	06/13/23	365.3	0.052	mg/L as P
Total Hardness	06/26/23	06/26/23	SM2340C	215.	mg/L as CaCO3
Total Kjeldahl Nitrogen	06/12/23	06/12/23	SMNorg C,NH3 C/D	1.1	mg/L as N
E. coli, Colilert	06/08/23	06/09/23	SM 9223 B	11	MPN/100 mL
Total Dissolved Solids	06/15/23	06/22/23	SM2540 C	452.	mg/L
Turbidity	06/08/23	06/08/23	180.1	13.	NTU

RESULTS

Client ID: Lake 7
ACT Lab No.: CF04090

Sample Type: Surface Water
Sample Time: 06/08/23 09:10

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/16/23	06/16/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/16/23	06/16/23		See Attached	
Chl/Pheo Ratio	06/29/23	06/30/23	SM10200 H	1.83	
Chlorophyll a	06/29/23	06/30/23	SM10200 H	8.01	ug/L
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Midge count	06/08/23	06/08/23	SM10500 C	<40	#/sq. meter
Pheophytin a	06/29/23	06/30/23	SM10200 H	<0.10	ug/L
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	8.8	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.4	SU
Secchi Disk Depth	06/08/23	06/08/23	NALMS	0.91	meters
Temperature, Field	06/08/23	06/08/23	SM2550 B	27.8	C
Alkalinity, Total	06/21/23	06/21/23	SM 2320 B	149.	mg/L as CaCO3
Ammonia - N	06/13/23	06/13/23	SM4500NH3 D	0.07	mg/L as N
Nitrate + Nitrite - N	07/03/23	07/03/23	SM4500NO3 E	0.14	mg/L as N
Phosphorus, Total	06/12/23	06/13/23	365.3	0.034	mg/L as P
Total Hardness	06/26/23	06/26/23	SM2340C	243.	mg/L as CaCO3
Total Kjeldahl Nitrogen	06/12/23	06/12/23	SMNorg C,NH3 C/D	1.1	mg/L as N
E. coli, Colilert	06/08/23	06/09/23	SM 9223 B	179	MPN/100 mL
Total Dissolved Solids	06/15/23	06/22/23	SM2540 C	840.	mg/L
Turbidity	06/08/23	06/08/23	180.1	4.6	NTU

RESULTS

Client ID: Lake 8
ACT Lab No.: CF04091

Sample Type: Surface Water
Sample Time: 06/08/23 09:40

Parameter	Analysis Date Start	End	Method No.	Result	Unit
Algae Count	06/16/23	06/16/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/16/23	06/16/23		See Attached	
Chl/Pheo Ratio	06/29/23	06/30/23	SM10200 H	1.67	
Chlorophyll a	06/29/23	06/30/23	SM10200 H	3.20	ug/L
Golden Algae	06/08/23	06/08/23	P/C Microscopy	Absent	Pres/Abs
Midge count	06/08/23	06/08/23	SM10500 C	<40	#/sq. meter
Pheophytin a	06/29/23	06/30/23	SM10200 H	0.16	ug/L
Oxygen, Dissolved Field	06/08/23	06/08/23	SM4500 O G	4.0	mg/L as O2
pH, Field	06/08/23	06/08/23	SM4500H+ B	8.2	SU
Secchi Disk Depth	06/08/23	06/08/23	NALMS	1.88	meters
Temperature, Field	06/08/23	06/08/23	SM2550 B	27.0	C
Alkalinity, Total	06/21/23	06/21/23	SM 2320 B	158.	mg/L as CaCO3
Ammonia - N	06/13/23	06/13/23	SM4500NH3 D	0.08	mg/L as N
Nitrate + Nitrite - N	07/03/23	07/03/23	SM4500NO3 E	0.16	mg/L as N
Phosphorus, Total	06/12/23	06/13/23	365.3	0.038	mg/L as P
Total Hardness	06/26/23	06/26/23	SM2340C	302.	mg/L as CaCO3
Total Kjeldahl Nitrogen	06/12/23	06/12/23	SMNorg C,NH3 C/D	1.2	mg/L as N
E. coli, Colilert	06/08/23	06/09/23	SM 9223 B	99	MPN/100 mL
Total Dissolved Solids	06/15/23	06/22/23	SM2540 C	1040.	mg/L
Turbidity	06/08/23	06/08/23	180.1	2.1	NTU

Reviewed by: _____

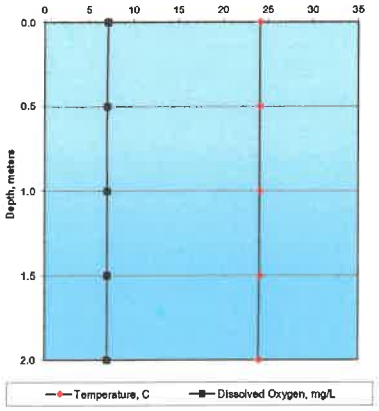
Frederick A. Amalfi, Ph.D.
Laboratory Director

Field Data for 06-08-23 Sampling Event
Aquatic Consulting & Testing, Inc.

DOBSON RANCH LAKE 5

Depth, m	Temp, C	Oxygen, mg/L
0.0	24.1	7.1
0.5	24.1	7.0
1.0	24.1	7.0
1.5	24.1	7.0
2.0	24.0	7.0

DOBSON RANCH
TEMPERATURE-OXYGEN PROFILE
Lake 5

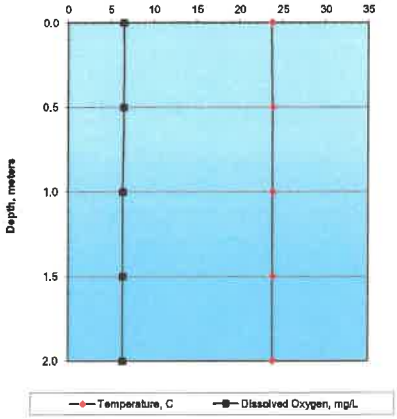


Field Data for 06-08-23 Sampling Event
Aquatic Consulting & Testing, Inc.

DOBSON RANCH LAKE 6

Depth, m	Temp, C	Oxygen, mg/L
0.0	23.7	6.5
0.5	23.8	6.5
1.0	23.8	6.4
1.5	23.8	6.4
2.0	23.8	6.4

DOBSON RANCH
TEMPERATURE-OXYGEN PROFILE
Lake 6

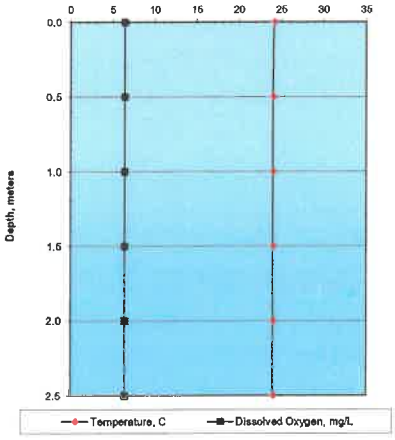


Field Data for 06-08-23 Sampling Event
Aquatic Consulting & Testing, Inc.

DOBSON RANCH LAKE 7

Depth, m	Temp, C	Oxygen, mg/L
0.0	24.1	6.4
0.5	24.0	6.4
1.0	24.0	6.4
1.5	24.0	6.4
2.0	24.0	6.4
2.5	24.0	6.4

DOBSON RANCH
TEMPERATURE-OXYGEN PROFILE
Lake 7

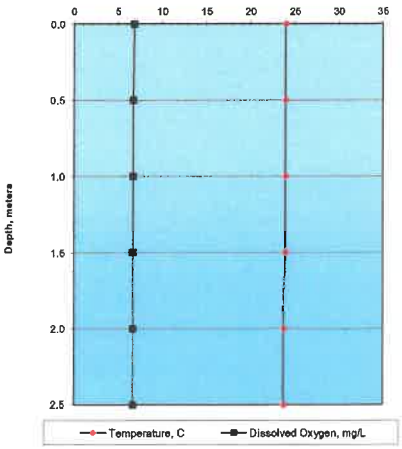


Field Data for 06-08-23 Sampling Event
Aquatic Consulting & Testing, Inc.

DOBSON RANCH LAKE 8

Depth, m	Temp, C	Oxygen, mg/L
0.0	23.9	6.8
0.5	23.9	6.7
1.0	23.9	6.7
1.5	23.9	6.7
2.0	23.7	6.7
2.5	23.7	6.7

DOBSON RANCH
TEMPERATURE-OXYGEN PROFILE
Lake 8



Aquatic Consulting & Testing, Inc.
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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: 4/80-831-8314
E:

AC&T Sampler: Ann

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	6/8/23	720	SW											X	X	X	2						CF 4084
Lake 2		730	SW											X	X	X	2						4085
Lake 3		740	SW											X	X	X	2						4086
Lake 4		750	SW											X	X	X	2						4087
Lake 5		810	SW	X	X	X	X	X	X	X	X	X	X	X	X	X	3	1		1	1		4088
Lake 6		840	SW	X	X	X	X	X	X	X	X	X	X	X	X	X	3	1		1	1		4089
Lake 7		910	SW	X	X	X	X	X	X	X	X	X	X	X	X	X	3	1		1	1		4090
Lake 8		940	SW	X	X	X	X	X	X	X	X	X	X	X	X	X	3	1		1	1		4091

Page1 of 1

Project Location:	A C & T Sample Receipt:			1. RELINQUISHED BY:	3. RELINQUISHED BY:
Dobson Ranch	Total # Containers:	43		Signature: Andrew Mynett	Signature:
PO#:	Received Intact:	YES	NO	Print Name: Andrew Mynett	Print Name:
Lakes Contract	# Bottles Preserved: 2	# Non:	36	Date: 6/8/23 Time: 1330	Date: Time:
Notes:	Samples On Ice:	YES	NO	2. RECEIVED BY:	4. RECEIVED BY:
	Ice Type:	WET	BLUE	Signature:	Signature:
	Sample Receipt Temperature:	25°C		Print Name: A Brindley	Print Name:
				Date: 6/8/23 Time: 1330	Date: Time:

AQUATIC CONSULTING & TESTING, INC.

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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: 06/22/23
Date Reported: 07/05/23

Attn: Lynelle Glysson, Community Mgr

Project: Monthly Lake 1-8 Monitoring

RESULTS

Client ID: Lake 1
ACT Lab No.: CF04408

Sample Type: Surface Water
Sample Time: 06/22/23 08:30

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	5.7	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.1	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	27.7	C
Turbidity	06/22/23	06/22/23	180.1	3.2	NTU

Client ID: Lake 2
ACT Lab No.: CF04409

Sample Type: Surface Water
Sample Time: 06/22/23 08:40

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	5.7	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.1	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	27.7	C
Turbidity	06/22/23	06/22/23	180.1	5.4	NTU

RESULTS

Client ID: Lake 3
ACT Lab No.: CF04410

Sample Type: Surface Water
Sample Time: 06/22/23 08:50

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	5.7	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.2	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	28.0	C
Turbidity	06/22/23	06/22/23	180.1	6.7	NTU

Client ID: Lake 4
ACT Lab No.: CF04411

Sample Type: Surface Water
Sample Time: 06/22/23 09:00

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	5.5	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.2	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	28.5	C
Turbidity	06/22/23	06/22/23	180.1	6.8	NTU

Client ID: Lake 5
ACT Lab No.: CF04412

Sample Type: Surface Water
Sample Time: 06/22/23 09:10

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	5.2	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.2	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	28.7	C
Turbidity	06/22/23	06/22/23	180.1	4.2	NTU

RESULTS

Client ID: Lake 6
ACT Lab No.: CF04413

Sample Type: Surface Water
Sample Time: 06/22/23 09:20

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	6.5	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.4	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	29.3	C
Turbidity	06/22/23	06/22/23	180.1	5.7	NTU

Client ID: Lake 7
ACT Lab No.: CF04414

Sample Type: Surface Water
Sample Time: 06/22/23 09:30

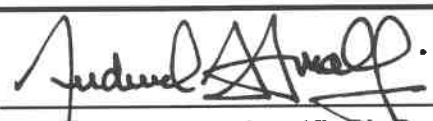
Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	7.4	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	8.8	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	28.9	C
Turbidity	06/22/23	06/22/23	180.1	7.0	NTU

RESULTS

Client ID: Lake 8
ACT Lab No.: CF04415

Sample Type: Surface Water
Sample Time: 06/22/23 09:40

Parameter	Analysis Date Start	Analysis Date End	Method No.	Result	Unit
Algae Count	06/30/23	06/30/23	SM 10200 F	See Attached	cells/mL
Algae Identification	06/30/23	06/30/23		See Attached	
Golden Algae	06/22/23	06/22/23	P/C Microscopy	Absent	Pres/Abs
Oxygen, Dissolved Field	06/22/23	06/22/23	SM4500 O G	5.5	mg/L as O2
pH, Field	06/22/23	06/22/23	SM4500H+ B	7.6	SU
Temperature, Field	06/22/23	06/22/23	SM2550 B	28.8	C
Phosphorus, Total	06/27/23	06/28/23	365.3	0.116	mg/L as P
E. coli, Colilert	06/22/23	06/23/23	SM 9223 B	122	MPN/100 mL
Turbidity	06/22/23	06/22/23	180.1	3.1	NTU

Reviewed by: 

Frederick A. Amalfi, Ph.D.
Laboratory Director

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04408	Date Collected	06/22/23
Client I.D.	Lake 1	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
Achnanthes	bac-u				*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				*Navicula*	bac-u			
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				***Oscillatoria***	cyn-f	7	161	17.50%
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				*Pediastrum*	chl-c			
Chlamydomonas	chl-ug	2	46	5.00%	*Peridinium*	pyr-ug			
Chlorella	chl-u	14	322	35.00%	*Phacotus*	chl-ug			
Chlorococcum	chl-c				*Phacus*	chl-ug			
Chroococcus	cyn-c				*Pinnularia*	bac-u			
Chroomonas	crp-ug	1	23	2.50%	*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c	8	184	20.00%	*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				***Scenedesmus***	chl-c	8	184	20.00%
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u				*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dunaliella	chl-u				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug				*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				*Synedra*	bac-u			
Golenkinia	chl-c				*Synura*	cry-cg			
Gomphonema	bac-u				*Tetraedron*	chl-u			
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c								

check 100.00%

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

Count (cells/mL) 9.20E+02

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04409	Date Collected	06/22/23
Client I.D.	Lake 2	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
Achnanthes	bac-u				*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				***Navicula***	bac-u	1	23	2.38%
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				*Oscillatoria*	cyn-f			
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				***Pediastrum***	chl-c	24	552	57.14%
Chlamydomonas	chl-ug	1	23	2.38%	*Peridinium*	pyr-ug			
Chlorella	chl-u	5	115	11.90%	*Phacotus*	chl-ug			
Chlorococcum	chl-c				*Phacus*	chl-ug			
Chroococcus	cyn-c	2	46	4.76%	*Pinnularia*	bac-u			
Chroomonas	crp-ug				*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				***Scenedesmus***	chl-c	2	46	4.76%
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u	4	92	9.52%	*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u	1	23	2.38%	*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug	1	23	2.38%	*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug	1	23	2.38%	*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				*Synedra*	bac-u			
Golenkinia	chl-c				*Synura*	cry-cg			
Gomphonema	bac-u				*Tetraedron*	chl-u			
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c								

check 100.00%

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Count (cells/mL) 9.66E+02

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04410	Date Collected	06/22/23
Client I.D.	Lake 3	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
Achnanthes	bac-u				*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				*Navicula*	bac-u			
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				*Oscillatoria*	cyn-f			
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				***Pediastrum***	chl-c	24	442	75.00%
Chlamydomonas	chl-ug	1	18	3.13%	*Peridinium*	pyr-ug			
Chlorella	chl-u	3	55	9.38%	*Phacotus*	chl-ug			
Chlorococcum	chl-c				*Phacus*	chl-ug			
Chroococcus	cyn-c				*Pinnularia*	bac-u			
Chroomonas	crp-ug	2	37	6.25%	*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				*Scenedesmus*	chl-c			
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u	1	18	3.13%	*Spondylumorum*	chl-c			
Denticula	bac-u				*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug				***Surirella***	bac-u	1	18	3.13%
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				*Synedra*	bac-u			
Golenkinia	chl-c				*Synura*	cry-cg			
Gomphonema	bac-u				*Tetraedron*	chl-u			
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c								

check 100.00%

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Tempe, Arizona 85281

Count (cells/mL) 5.89E+02

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04411	Date Collected	06/22/23
Client I.D.	Lake 4	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
Achnanthes	bac-u				*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				*Navicula*	bac-u			
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				*Oscillatoria*	cyn-f			
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				*Pediastrum*	chl-c			
Chlamydomonas	chl-ug	7	161	25.93%	*Peridinium*	pyr-ug			
Chlorella	chl-u	4	92	14.81%	*Phacotus*	chl-ug			
Chlorococcum	chl-c				*Phacus*	chl-ug			
Chroococcus	cyn-c				*Pinnularia*	bac-u			
Chroomonas	crp-ug	4	92	14.81%	*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				*Scenedesmus*	chl-c			
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u				*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug	1	23	3.70%	*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				*Synedra*	bac-u			
Golenkinia	chl-c				*Synura*	cry-cg			
Gomphonema	bac-u				***Tetraedron***	chl-u	1	23	3.70%
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f	10	230	37.04%	*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c								

check 100.00%

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1525 W. University Dr., Suite 106
Tempe, Arizona 85281

Count (cells/mL) 6.21E+02

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04412	Date Collected	06/22/23
Client I.D.	Lake 5	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
Achnanthes	bac-u				*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				*Navicula*	bac-u			
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				*Oscillatoria*	cyn-f			
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				*Pediastrum*	chl-c			
Chlamydomonas	chl-ug	6	158	28.57%	*Peridinium*	pyr-ug			
Chlorella	chl-u	12	315	57.14%	*Phacotus*	chl-ug			
Chlorogonium	chl-ug	1	26	4.76%	*Phacus*	chl-ug			
Chroococcus	cyn-c				*Pinnularia*	bac-u			
Chroomonas	crp-ug	1	26	4.76%	*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				*Scenedesmus*	chl-c			
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u				*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug				*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				*Synedra*	bac-u			
Golenkinia	chl-c	1	26	4.76%	*Synura*	cry-cg			
Gomphonema	bac-u				*Tetraedron*	chl-u			
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c								

check 100.00%

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

Count (cells/mL) 5.52E+02

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04413	Date Collected	06/22/23
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
Achnanthes	bac-u				***Microcystis***	cyn-c	21	773	17.36%
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				***Navicula***	bac-u	6	221	4.96%
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				***Oscillatoria***	cyn-f	53	1951	43.80%
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				*Pediastrum*	chl-c			
Chlamydomonas	chl-ug	4	147	3.31%	*Peridinium*	pyr-ug			
Chlorella	chl-u	1	37	0.83%	*Phacotus*	chl-ug			
Chlorogonium	chl-ug				*Phacus*	chl-ug			
Chroococcus	cyn-c				*Pinnularia*	bac-u			
Chroomonas	crp-ug	4	147	3.31%	*Pithophora*	chl-f			
Closterium	chl-u	2	74	1.65%	*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				***Scenedesmus***	chl-c	4	147	3.31%
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				***Selanastrum***	chl-u	2	74	1.65%
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u				***Spirulina***	cyn-f	10	368	8.26%
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug				*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				***Synedra***	bac-u	7	258	5.79%
Golenkinia	chl-c	1	37	0.83%	*Synura*	cry-cg			
Gomphonema	bac-u				***Tetraedron***	chl-u	3	110	2.48%
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gymnodinium	pyr-ug	3	110	2.48%	*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c								

check 100.00%

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

Count (cells/mL) 4.46E+03

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04414	Date Collected	06/22/23
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
Achnanthes	bac-u	1	460	0.67%	*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				***Navicula***	bac-u	1	460	0.67%
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug	1	460	0.67%	***Oscillatoria***	cyn-f	45	20710	30.20%
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				*Pediastrum*	chl-c			
Chlamydomonas	chl-ug				***Peridinium***	pyr-ug	1	460	0.67%
Chlorella	chl-u	2	920	1.34%	*Phacotus*	chl-ug			
Chlorogonium	chl-ug				*Phacus*	chl-ug			
Chroococcus	cyn-c	10	4602	6.71%	*Pinnularia*	bac-u			
Chroomonas	crp-ug	1	460	0.67%	*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				*Scenedesmus*	chl-c			
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u				*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug				*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				***Synedra***	bac-u	1	460	0.67%
Golenkinia	chl-c				*Synura*	cry-cg			
Gomphonema	bac-u				*Tetraedron*	chl-u			
Gonium	chl-cg				*Thoracomonas*	chl-u			
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c	86	39578	57.72%					

check 100.00%

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

Count (cells/mL) 6.86E+04

ALGAE IDENTIFICATION

AC&T Lab No.	CF-04415	Date Collected	06/22/23
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
Achnanthes	bac-u				*Microcystis*	cyn-c			
Anabaena	cyn-f				*Microspora*	chl-f			
Ankistrodesmus	chl-u				*Nanochloris*	chl-u			
Aphanothece	cyn-c				*Navicula*	bac-u			
Asterionella	bac-c				*Nitzschia*	bac-u			
Botryococcus	chl-c				*Oocystis*	chl-c			
Carteria	chl-ug				***Oscillatoria***	cyn-f	20	6136	12.20%
Cephalomonas	chl-ug				*Pandorina*	chl-cg			
Ceratium	pyr-ug				*Pediastrum*	chl-c			
Chlamydomonas	chl-ug				*Peridinium*	pyr-ug			
Chlorella	chl-u	2	614	1.22%	*Phacotus*	chl-ug			
Chlorogonium	chl-ug				*Phacus*	chl-ug			
Chroococcus	cyn-c	3	920	1.83%	*Pinnularia*	bac-u			
Chroomonas	crp-ug	1	307	0.61%	*Pithophora*	chl-f			
Closterium	chl-u				*Planktosphaeria*	chl-c			
Cocconeis	bac-u				*Rhizoclonium*	chl-f			
Coelastrum	chl-c				*Rhoicosphenia*	bac-u			
Cosmarium	chl-u				*Rhopalodia*	bac-u			
Cosmocladium	chl-c				*Scenedesmus*	chl-c			
Crucigenia	chl-c				*Schroederia*	chl-u			
Cryptomonas	crp-ug				*Selanastrum*	chl-u			
Cyclotella	bac-u				*Sphaerocystis*	chl-c			
Cymbella	bac-u				*Spondylumorum*	chl-c			
Denticula	bac-u				*Spirulina*	cyn-f			
Dinobryon	bac-c				*Staurastrum*	chl-u			
Dysmorphococcus	chl-ug				*Stephanodiscus*	bac-u			
Eremosphaeria	chl-u				*Stigeoclonium*	chl-f			
Euglena	eug-ug				*Surirella*	bac-u			
Fragilaria	bac-u				*Synechococcus*	cyn-u			
Frustulia	bac-u				*Synechocystis*	cyn-c			
Glenodinium	pyr-ug				*Synedra*	bac-u			
Golenkinia	chl-c				*Synura*	cry-cg			
Gomphonema	bac-u				*Tetraedron*	chl-u			
Gonium	chl-cg				***Thoracomonas***	chl-u	2	614	1.22%
Gonyaulax	pyr-ug				*Trachelomonas*	eug-ug			
Gymnodinium	bac-u				*Vaucheria*	chl-f			
Holopedium	cyn-u				*Volvox*	chl-cg			
Lyngbya	cyn-f				*Zygnema*	chl-f			
Mastogloia	bac-u								
Meridion	bac-u								
Merismopedia	cyn-c	136	41726	82.93%					

check 100.00%

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

Count (cells/mL) 5.03E+04

DOBSON RANCH LAKES
Bi-Monthly Lake Inspection

Date: 6/22/23
By: AM

Lake	Temp	Dis. oxygen	pH	Clarity	Algae	Submerged weeds	Fish behavior	Waterfowl density	Insect activity	Mechanical issues
1	27.2 C	5.7 mg/L	8.1 SU	~~37~~ SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. 21 No/A 1.3	☑ Normal ☐ Infestation	Fountain ☑ Operating ☐ No service
2	27.7 C	5.7 mg/L	8.1 SU	5.4 SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. 11 No/A 1.8	☑ Normal ☐ Infestation	Fountain ☐ Operating ☑ No service
3	28.0 C	5.7 mg/L	8.2 SU	6.7 SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☐ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. 16 No/A 2.5	☐ Normal ☐ Infestation	Fountain ☐ Operating ☑ No service
4	~~28.5~~ 28.5 C	5.5 mg/L	8.2 SU	6.0 SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. 8 No/A 2.7	☑ Normal ☐ Infestation	Fountain ☑ Operating ☐ No service
5	28.7 C	5.7 mg/L	8.2 SU	~~7.0~~ SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. 17 No/A 4.2	☑ Normal ☐ Infestation	
6	29.3 C	6.5 mg/L	8.4 SU	5.7 SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. ~~22~~ 22 No/A 3.7	☑ Normal ☐ Infestation	
7	~~28.2~~ 28.2 C	7.4 mg/L	8.8 SU	~~7.0~~ SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☑ Normal ☐ Distress ☐ Dead ___	No. 29 No/A <1	☑ Normal ☐ Infestation	Fountain ☑ Operating ☐ No service
8	~~28.8~~ 28.8 C	5.5 mg/L	7.6 SU	3.1 SDz NTU	☐ Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☑ Absent	☐ Normal ☐ Distress ☐ Dead ___	No. 17 No/A 6.8	☐ Normal ☐ Infestation	Aerators ☐ Operating ☐ No service

Notes and recommendations for treatment/operation:

DOBSON RANCH LAKES
Bi-Monthly Lake Inspection

Date: 6/8/23 (Thurs)
By: AM

Lake	Temp	Dis. oxygen	pH	Clarity	Algae	Submerged weeds	Fish behavior	Waterfowl density	Insect activity	Mechanical issues
1	26.7 C	7.7 mg/L	8.2 SU	___ SDz 2.0 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 21 No/A 1.3	☒ Normal ☐ Infestation	Fountain ☒ Operating ☐ No service
2	26.4 C	7.6 mg/L	8.7 SU	___ SDz 6.4 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 11 No/A 1.8	☒ Normal ☐ Infestation	Fountain ☒ Operating ☐ No service
3	26.3 C	7.1 mg/L	8.3 SU	___ SDz 5.7 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 14 No/A 3.5	☒ Normal ☐ Infestation	Fountain ☒ Operating ☐ No service
4	26.2 C	7.8 mg/L	8.3 SU	___ SDz 2.4 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 9 No/A 3.0	☒ Normal ☐ Infestation	Fountain ☒ Operating ☐ No service
5	27.6 C	6.7 mg/L	8.5 SU	20" SDz 5.3 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 14 No/A 3.5	☒ Normal ☐ Infestation	
6	27.6 C	8.3 mg/L	8.2 SU	24" SDz 13.4 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 27 No/A 4.5	☒ Normal ☐ Infestation	
7	27.8 C	8.8 mg/L	8.4 SU	36" SDz 4.6 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 24 No/A <1	☒ Normal ☐ Infestation	Fountain ☒ Operating ☐ No service
8	27.0 C	4.0 mg/L	8.2 SU	74" SDz 2.1 NTU	☐Suspended ☐ Floating ☐ Bottom ☐ Attached	☐ Present ☒ Absent	☒ Normal ☐ Distress ☐ Dead ___	No. 17 No/A 1.8	☒ Normal ☐ Infestation	Aerators ☐ Operating ☒ No service

Notes and recommendations for treatment/operation: