

## RE: Unicorn Lake - Fish Kill

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From: Gange, Michael (michael.gange@cityofdenton.com)

To: mikesmithco@yahoo.com

Date: Monday, August 25, 2025 at 04:29 PM CDT

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Mike,

Attached is a PDF of the report that was sent to the Texas Parks and Wildlife Department (TPWD) regarding the fish kill.

Additionally, the bacteriological sample results from Saturday are attached as well.

Regards,

**Michael A. Gange**

Director

Environmental Services & Sustainability

(940) 349-7165



Good evening,

A fish kill occurred at Unicorn Lake in Denton, TX. Below are details:

- Location, date and time:
  - Unicorn Lake at Unicorn Lake Blvd and Shoreline Dr
  - 2025-08-25
  - 0936
- Water color, clarity and any odor
  - Normal murkiness and color for a small pond

- No noticeable sheens, colors or odors
- Number, size and species of affected organisms
  - Fish – all species, all sizes
- Recent weather
  - Last rain amount: 0.55" on 2025-08-22
  - 95 °F
- Condition and behavior of animals or organisms
  - No other affected animals
  - No living fish
  - Fish carcasses show red blotches on gills, scales and mouths. Eyes are cloudy.
- Are plants or other organisms affected?
  - No

Samples were taken at the locations described on the below map. See chart for sample results. The pond is privately owned.





Parameter`	Site 1 (1401)	Site 2 (1432)	Site 3 (1447)	Site 4 (1507)	Site 5 (1600)
Temperature (°C)	32.8	31.7	31.6	31.6	32.2
Barometer (mmHg)	745	744.84	744.8	744.2	744.1
Dissolved Oxygen (%)	125	61	75	60	88
Dissolved Oxygen (mg/L)	8.8	4.4	5.4	4.3	6.3
Specific Conductivity (us/cm)	261.6	262.4	261.6	264.3	642.2
Total Dissolved Solids (mg/L)	170	171	170	172	172
Salinity (ppt)	0.12	0.12	0.12	0.12	0.12
pH (-log[H+])	8.69	7.66	7.95	7.73	8.11
pH (millivolts)	-105.5	-51.4	-66.5	-54.8	-74.9
Oxidation-Reduction Potential (millivolts)	230.4	352.2	209.2	233.7	224.8

Turbidity (Nephelometric Turbidity Units)	8.36	9.51	15.44	10.73	9.38
Depth	0	0	0.140	0	0.051

Kind regards,

**Jennifer Rovezzi, CFM**

Watershed Protection Coordinator

Environmental Services & Sustainability

1100 S Mayhill Rd

Denton, TX 76208

Office: (940) 349-7141

[www.cityofdenton.com](http://www.cityofdenton.com)



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**From:** Gange, Michael

**Sent:** Monday, August 25, 2025 10:23 AM

**To:** mikesmithco@yahoo.com

**Cc:** Sassenus, Nikki <Nikki.Sassenus@cityofdenton.com>

**Subject:** Unicorn Lake - Fish Kill

Mr. Smith,

I will be sending the data collected on Saturday later today once the QA/QC process is complete.

The City's Animal Services Director, Nikki Sassenus is copied on this email as she may be able to assist you navigate any dead fish removal or handling. Her phone number is 940-349-7469.

Regards,

**Michael A. Gange**

Director

Environmental Services & Sustainability

1001 S. Mayhill Rd.

Denton, TX 76208

(940) 349-7165

[www.cityofdenton.com](http://www.cityofdenton.com)



WS592025IDDE.pdf

1 MB



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3.7 MB



Fish 1.jpg

525.1 KB



Fish 3.jpg

437.6 KB



Fish 4.jpg

531.8 KB



Fish2.jpg

257.1 KB



Fish 5.jpg

367.9 KB



Fish 1.jpg

525.1 KB



Fish 3.jpg

437.6 KB



Fish 4.jpg

531.8 KB



Fish2.jpg

257.1 KB



Fish 5.jpg

367.9 KB



WS592025IDDE.pdf

1 MB

**Laboratory Report  
Watershed Protection**

<i>Date Sampled</i>				<i>08/23/25</i>	<i>08/23/25</i>	<i>08/23/25</i>	<i>08/23/25</i>	<i>08/23/25</i>
<i>Time Sampled</i>				<i>1415</i>	<i>1435</i>	<i>1445</i>	<i>1540</i>	<i>1600</i>
			Location	UniLK Spillway	UniLK Near Brickhouse	UniLK 2nd Site W of Brickhouse	UniLK 4th Site W of Brickhouse	UniLK W Bank
Analyte	Unit	Method	Analysis Date					
<b>E. coli</b>	MPN/100mL	Quanti-Tray	08/23/25	109.0	86.0	10.0	148.0	52.0

<b>Quality Control</b>						
Analyte	Unit	Method	Analysis Date	Method Blank (mg/L)	Duplicate RPD	Duplicate ID
<b>E. Coli</b>	MPN/100mL	Quanti-Tray	08/23/25	<1.0	9.8%	PC Eff 0823

## Flags

- NR Not Recorded - Lab Error.
- Q0 LCS recovery outside control limits (90-110%).
- Q1 Sample Matrix Spike recovery outside control limits (80-120%).
- Q2 Sample/Duplicate RPD outside control limits (Max. 20%)
- Q3 Analyte found in method blank at concentration higher than stated MDL.
- Q6 Method blank outside of required test level. Result accepted after review of all data.
- Q10 BOD Seed Control result out of range (198 ± 30.5 mg/L).
- Q11 BOD Blank Average Depletion > 0.20 mg/L.
- S1 Sample improperly preserved.
- M1 Analysis occurred after holding time as described in 40 CFR part 136 Table II.
- TE Exhibiting characteristics that may be consistent with a "toxicity effect". Best available Data reported.
- Geo Calculated using Geomean

*Values in italics indicate above LOD yet below LOQ*



**CHAIN OF CUSTODY**

Client COC No.: \_\_\_\_\_

CODML Lab No.: 105 592025 IDDE

Municipal Laboratory • 1100 S. Mayhill Rd • Denton, TX 76208

Client (Bill to) Name: Watershed Protection

Client (Bill to) Address: \_\_\_\_\_

Sample ID.: Uni. Lk Spillway

Location: \_\_\_\_\_

Sample Matrix: water

Collected by: DM

Date/Time Collected: 8/23/25 14:15

Relinquished by: D. McCarty

Date/Time Received: 8/23/25 16:35

Received by: B

Attention: JoEtta Dailey

Telephone #: (940) 349-7153

Relinquished Sealed (Y, N)

Received Sealed (Y, N)

Anions

\_\_\_ Chloride

\_\_\_ Sulfate

\_\_\_ Nitrate

\_\_\_ Nitrite

Nutrients

\_\_\_ Ammonia Nitrogen

\_\_\_ Phosphorus-Ortho

\_\_\_ Phosphorus-Total

\_\_\_ Total Kjeldahl Nitrogen

Biological

\_\_\_ 5-Day Total BOD

\_\_\_ Fecal Coliforms(Filt.)

E. Coli (MPN-Q, Suspected Low)

E. Coli (MPN-Q Suspected High)

\_\_\_ Total Coliforms

Metals

\_\_\_ All

\_\_\_ All filtered

\_\_\_ Aluminum

\_\_\_ Antimony

\_\_\_ Arsenic

\_\_\_ Cadmium

\_\_\_ Calcium

\_\_\_ Chromium

\_\_\_ Copper

\_\_\_ Iron

\_\_\_ Lead

\_\_\_ Magnesium

\_\_\_ Manganese

\_\_\_ Molybdenum

\_\_\_ Nickel

\_\_\_ Potassium

\_\_\_ Selenium

\_\_\_ Silver

\_\_\_ Sodium

\_\_\_ Zinc

Database category

\_\_\_ Dry Weather Screening

\_\_\_ Stormwater

\_\_\_ MSGP Airport, PCWRP & Service Center

IDDE

\_\_\_ Construction sites

\_\_\_ HCWPP Monitoring

\_\_\_ Lentic Sites

Special Instructions/Description of Samples Collected: \_\_\_\_\_

Comments: temp. 7.1°C / 6.7°C

No. of Cont.	Type*	Volume	Preservative
<u>1</u>	<u>P</u>	<u>250ml</u>	<u>NONE</u>

Laboratory Official: B

Date Reported: 8/25/25

\*= G(glass), P(plastic), VOC(vials)

revised: 03/21/2021



**CHAIN OF CUSTODY**

Client COC No.: \_\_\_\_\_  
 CODML Lab No.: WS92025 IDDE

Municipal Laboratory • 1100 S. Mayhill Rd • Denton, TX 76208

Client (Bill to) Name: Watershed Protection  
 Client (Bill to) Address: \_\_\_\_\_

Sample ID.: Uni. Lk Near Brickhouse  
 Location: \_\_\_\_\_  
 Sample Matrix: water  
 Collected by: DM  
 Date/Time Collected: 8/23/25 14:35  
 Relinquished by: D. McCarty  
 Date/Time Received: 8/23/25 1635  
 Recieved by: S

Attention: JoEtta Dailey  
 Telephone #: (940) 349-7153

Relinquished Sealed (Y, N)  
 Received Sealed (Y, N)

- |  |  |                                       |
|--|--|---------------------------------------|
| <b><u>Anions</u></b>                             | <b><u>Biological</u></b>   | <b><u>Metals</u></b>                  |
| <input type="checkbox"/> Chloride                | <input type="checkbox"/> 5-Day Total BOD                           | <input type="checkbox"/> All          |
| <input type="checkbox"/> Sulfate                 | <input type="checkbox"/> Fecal Coliforms(Filt.)                    | <input type="checkbox"/> All filtered |
| <input type="checkbox"/> Nitrate                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q, Suspected Low) | <input type="checkbox"/> Aluminum     |
| <input type="checkbox"/> Nitrite                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q Suspected High) | <input type="checkbox"/> Antimony     |
| <b><u>Nutrients</u></b>                          | <input type="checkbox"/> Total Coliforms                           | <input type="checkbox"/> Arsenic      |
| <input type="checkbox"/> Ammonia Nitrogen        |  | <input type="checkbox"/> Cadmium      |
| <input type="checkbox"/> Phosphorus-Ortho        |  | <input type="checkbox"/> Calcium      |
| <input type="checkbox"/> Phosphorus-Total        |  | <input type="checkbox"/> Chromium     |
| <input type="checkbox"/> Total Kjeldahl Nitrogen |  | <input type="checkbox"/> Copper       |
|  |  | <input type="checkbox"/> Iron         |
|  |  | <input type="checkbox"/> Lead         |
|  |  | <input type="checkbox"/> Magnesium    |
|  |  | <input type="checkbox"/> Manganese    |
|  |  | <input type="checkbox"/> Molybdenum   |
|  |  | <input type="checkbox"/> Nickel       |
|  |  | <input type="checkbox"/> Potassium    |
|  |  | <input type="checkbox"/> Selenium     |
|  |  | <input type="checkbox"/> Silver       |
|  |  | <input type="checkbox"/> Sodium       |
|  |  | <input type="checkbox"/> Zinc         |

**Database category**

- Dry Weather Screening  
 Stormwater  
 MSGP Airport, PCWRP & Service Center  
 IDDE  
 Construction sites  
 HCWPP Monitoring  
 Lentic Sites

Special Instructions/Description of Samples Collected: \_\_\_\_\_  
 Comments: temp. 13.2° / 12.8°

No. of Cont.	Type*	Volume	Preservative
<u>1</u>	<u>P</u>	<u>250 ml</u>	<u>None</u>

Laboratory Official: S  
 Date Reported: 8/25/25

\*= G(glass), P(plastic), VOC(vials)  
 revised: 03/21/2021  
 ZJP



**CHAIN OF CUSTODY**

Client COC No.: \_\_\_\_\_  
 CODML Lab No.: W359 2025 IDDE

Municipal Laboratory • 1100 S. Mayhill Rd • Denton, TX 76208

Client (Bill to) Name: Watershed Protection  
 Client (Bill to) Address: \_\_\_\_\_

Sample ID.: Uni. Lk 2nd Site W of Brickhouse  
 Location: \_\_\_\_\_  
 Sample Matrix: water  
 Collected by: DM  
 Date/Time Collected: 8/23/25 14:45  
 Relinquished by: D. McCartney  
 Date/Time Received: 8/23/25 14:35  
 Received by: S

Attention: JoEtta Dailey  
 Telephone #: (940) 349-7153

Relinquished Sealed (Y, N)  
 Received Sealed (Y, N)

- |  |  |                                       |
|--|--|---------------------------------------|
| <b><u>Anions</u></b>                             | <b><u>Biological</u></b>   | <b><u>Metals</u></b>                  |
| <input type="checkbox"/> Chloride                | <input type="checkbox"/> 5-Day Total BOD                           | <input type="checkbox"/> All          |
| <input type="checkbox"/> Sulfate                 | <input type="checkbox"/> Fecal Coliforms(Filt.)                    | <input type="checkbox"/> All filtered |
| <input type="checkbox"/> Nitrate                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q, Suspected Low) | <input type="checkbox"/> Aluminum     |
| <input type="checkbox"/> Nitrite                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q Suspected High) | <input type="checkbox"/> Antimony     |
| <b><u>Nutrients</u></b>                          | <input type="checkbox"/> Total Coliforms                           | <input type="checkbox"/> Arsenic      |
| <input type="checkbox"/> Ammonia Nitrogen        |  | <input type="checkbox"/> Cadmium      |
| <input type="checkbox"/> Phosphorus-Ortho        |  | <input type="checkbox"/> Calcium      |
| <input type="checkbox"/> Phosphorus-Total        |  | <input type="checkbox"/> Chromium     |
| <input type="checkbox"/> Total Kjeldahl Nitrogen |  | <input type="checkbox"/> Copper       |
|  |  | <input type="checkbox"/> Iron         |
|  |  | <input type="checkbox"/> Lead         |
|  |  | <input type="checkbox"/> Magnesium    |
|  |  | <input type="checkbox"/> Manganese    |
|  |  | <input type="checkbox"/> Molybdenum   |
|  |  | <input type="checkbox"/> Nickel       |
|  |  | <input type="checkbox"/> Potassium    |
|  |  | <input type="checkbox"/> Selenium     |
|  |  | <input type="checkbox"/> Silver       |
|  |  | <input type="checkbox"/> Sodium       |
|  |  | <input type="checkbox"/> Zinc         |

**Database category**

- Dry Weather Screening  
 Stormwater  
 MSGP Airport, PCWRP & Service Center  
 IDDE  
 Construction sites  
 HCWPP Monitoring  
 Lentic Sites

Special Instructions/Description of Samples Collected: \_\_\_\_\_  
 Comments: temp. 13.2°C / 12.8°C

No. of Cont.	Type*	Volume	Preservative
<u>1</u>	<u>P</u>	<u>250 ml</u>	<u>None</u>

Laboratory Official: S

Date Reported: 8/25/25

\*= G(glass), P(plastic), VOC(vials)  
 revised: 03/21/2021  
 ZJP



# CHAIN OF CUSTODY

Client COC No.: \_\_\_\_\_

CODML Lab No.: WS5912025 100E

Municipal Laboratory • 1100 S. Mayhill Rd • Denton, TX 76208

Client (Bill to) Name: Watershed Protection

Client (Bill to) Address: \_\_\_\_\_

Sample ID.: Uni. Lk 4th site W of Brickhouse  
 Location: \_\_\_\_\_  
 Sample Matrix: water  
 Collected by: DM  
 Date/Time Collected: 8/23/25 15:40  
 Relinquished by: D. McCarty  
 Date/Time Received: 8/23/25 16:35  
 Recieved by: B

Attention: JoEtta Dailey

Telephone #: (940) 349-7153

Relinquished Sealed (Y, N)

Received Sealed (Y, N)

- |  |  |                                       |
|--|--|---------------------------------------|
| <b><u>Anions</u></b>                             | <b><u>Biological</u></b>   | <b><u>Metals</u></b>                  |
| <input type="checkbox"/> Chloride                | <input type="checkbox"/> 5-Day Total BOD                           | <input type="checkbox"/> All          |
| <input type="checkbox"/> Sulfate                 | <input type="checkbox"/> Fecal Coliforms(Filt.)                    | <input type="checkbox"/> All filtered |
| <input type="checkbox"/> Nitrate                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q, Suspected Low) | <input type="checkbox"/> Aluminum     |
| <input type="checkbox"/> Nitrite                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q Suspected High) | <input type="checkbox"/> Antimony     |
| <b><u>Nutrients</u></b>                          | <input type="checkbox"/> Total Coliforms                           | <input type="checkbox"/> Arsenic      |
| <input type="checkbox"/> Ammonia Nitrogen        |  | <input type="checkbox"/> Cadmium      |
| <input type="checkbox"/> Phosphorus-Ortho        |  | <input type="checkbox"/> Calcium      |
| <input type="checkbox"/> Phosphorus-Total        |  | <input type="checkbox"/> Chromium     |
| <input type="checkbox"/> Total Kjeldahl Nitrogen |  | <input type="checkbox"/> Copper       |
|  |  | <input type="checkbox"/> Iron         |
|  |  | <input type="checkbox"/> Lead         |
|  |  | <input type="checkbox"/> Magnesium    |
|  |  | <input type="checkbox"/> Manganese    |
|  |  | <input type="checkbox"/> Molybdenum   |
|  |  | <input type="checkbox"/> Nickel       |
|  |  | <input type="checkbox"/> Potassium    |
|  |  | <input type="checkbox"/> Selenium     |
|  |  | <input type="checkbox"/> Silver       |
|  |  | <input type="checkbox"/> Sodium       |
|  |  | <input type="checkbox"/> Zinc         |

**Database category**

- Dry Weather Screening
- Stormwater
- MSGP Airport, PCWRP & Service Center
- IDDE
- Construction sites
- HCWPP Monitoring
- Lentic Sites

Special Instructions/Description of Samples Collected: \_\_\_\_\_  
 Comments: Temp. 16.5°C / 16.1°C

No. of Cont.	Type*	Volume	Preservative
<u>1</u>	<u>P</u>	<u>250ml</u>	<u>None</u>

Laboratory Official: B

Date Reported: 8/25/25

\*= G(glass), P(plastic), VOC(vials)  
 revised: 03/21/2021  
 ZJP



### CHAIN OF CUSTODY

Client COC No.: \_\_\_\_\_  
 CODML Lab No.: WS592025 IDDE

Municipal Laboratory • 1100 S. Mayhill Rd • Denton, TX 76208

Client (Bill to) Name: Watershed Protection  
 Client (Bill to) Address: \_\_\_\_\_

Sample ID.: Uni-Lk W. Bank  
 Location: \_\_\_\_\_  
 Sample Matrix: water  
 Collected by: DM  
 Date/Time Collected: 8/23/25 16:00  
 Relinquished by: D. McCarty  
 Date/Time Received: 8/23/25 10:55  
 Received by: [Signature]

Attention: JoEtta Dailey  
 Telephone #: (940) 349-7153

Relinquished Sealed (Y, N)

Received Sealed (Y, N)

- |  |  |                                       |
|--|--|---------------------------------------|
| <u>Anions</u>                                    | <u>Biological</u>  | <u>Metals</u>                         |
| <input type="checkbox"/> Chloride                | <input type="checkbox"/> 5-Day Total BOD                           | <input type="checkbox"/> All          |
| <input type="checkbox"/> Sulfate                 | <input type="checkbox"/> Fecal Coliforms(Filt.)                    | <input type="checkbox"/> All filtered |
| <input type="checkbox"/> Nitrate                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q, Suspected Low) | <input type="checkbox"/> Aluminum     |
| <input type="checkbox"/> Nitrite                 | <input checked="" type="checkbox"/> E. Coli (MPN-Q Suspected High) | <input type="checkbox"/> Antimony     |
| <u>Nutrients</u>                                 | <input type="checkbox"/> Total Coliforms                           | <input type="checkbox"/> Arsenic      |
| <input type="checkbox"/> Ammonia Nitrogen        |  | <input type="checkbox"/> Cadmium      |
| <input type="checkbox"/> Phosphorus-Ortho        |  | <input type="checkbox"/> Calcium      |
| <input type="checkbox"/> Phosphorus-Total        |  | <input type="checkbox"/> Chromium     |
| <input type="checkbox"/> Total Kjeldahl Nitrogen |  | <input type="checkbox"/> Copper       |
|  |  | <input type="checkbox"/> Iron         |
|  |  | <input type="checkbox"/> Lead         |
|  |  | <input type="checkbox"/> Magnesium    |
|  |  | <input type="checkbox"/> Manganese    |
|  |  | <input type="checkbox"/> Molybdenum   |
|  |  | <input type="checkbox"/> Nickel       |
|  |  | <input type="checkbox"/> Potassium    |
|  |  | <input type="checkbox"/> Selenium     |
|  |  | <input type="checkbox"/> Silver       |
|  |  | <input type="checkbox"/> Sodium       |
|  |  | <input type="checkbox"/> Zinc         |

Database category

- Dry Weather Screening  
 Stormwater  
 MSGP Airport, PCWRP & Service Center  
 IDDE  
 Construction sites  
 HCWPP Monitoring  
 Lentic Sites

Special Instructions/Description of Samples Collected: \_\_\_\_\_  
 Comments: Temp. 27.1°C / 26.7°C

No. of Cont.	Type*	Volume	Preservative
<u>1</u>	<u>P</u>	<u>250ml</u>	<u>None</u>

Laboratory Official: [Signature]

Date Reported: 8/25/25

\*= G(glass), P(plastic), VOC(vials)  
 revised: 03/21/2021  
 ZJP