

June 06, 2018

Carolyn Green  
Dunlap Lake Property Owners Association  
P.O. Box 5  
Edwardsville, IL 62025  
TEL: (618) 791-1398  
FAX:



**RE:** Lake Water

**WorkOrder:** 18051979

Dear Carolyn Green:

TEKLAB, INC received 3 samples on 5/31/2018 11:35:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Marvin L. Darling  
Project Manager  
(618)344-1004 ex 41  
[mdarling@teklabinc.com](mailto:mdarling@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

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**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

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**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
- DNI Did not ignite
- DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample is a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

- |   |  |
|---|--|
| # - Unknown hydrocarbon                               | B - Analyte detected in associated Method Blank              |
| C - RL shown is a Client Requested Quantitation Limit | E - Value above quantitation range                           |
| H - Holding times exceeded                            | I - Associated internal standard was outside method criteria |
| J - Analyte detected below quantitation limits        | M - Manual Integration used to determine area response       |
| ND - Not Detected at the Reporting Limit              | R - RPD outside accepted recovery limits                     |
| S - Spike Recovery outside recovery limits            | T - TIC(Tentatively identified compound)                     |
| X - Value exceeds Maximum Contaminant Level           |  |



## Case Narrative

<http://www.teklabinc.com/>

**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

**Cooler Receipt Temp:** 15.82 °C

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### Locations

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#### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** jhriley@teklabinc.com

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#### Collinsville Air

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** EHurley@teklabinc.com

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#### Springfield

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415  
**Phone** (217) 698-1004  
**Fax** (217) 698-1005  
**Email** KKlostermann@teklabinc.com

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#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

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#### Kansas City

**Address** 8421 Nieman Road  
Lenexa, KS 66214  
**Phone** (913) 541-1998  
**Fax** (913) 541-1998  
**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2019	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2019	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

**Lab ID:** 18051979-001

**Client Sample ID:** Sample 1

**Matrix:** AQUEOUS

**Collection Date:** 05/31/2018 11:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 21ST ED. 9222D, 9221F EC-MUG</b>								
E Coli	*	0		Present	P/A	1	05/31/2018 13:56	R247848
<b>STANDARD METHODS 22ND ED. 9222 D MEMBRANE FILTER</b>								
Fecal Coliform	*	10		10	CFU/100ml	10	05/31/2018 13:56	R247848
<b>EPA 600 351.2</b>								
Total Kjeldahl Nitrogen (as N)	NELAP	1.0		1.3	mg/L	1	06/04/2018 11:11	142477
<b>EPA 600 351.2 R2.0, 353.2 R2.0</b>								
Nitrogen, Total	*	1.05		1.33	mg/L	1	06/05/2018 0:00	R247963
<b>EPA 600 353.2 R2.0 (TOTAL)</b>								
Nitrogen, Nitrate (as N)	NELAP	0.050	J	0.034	mg/L	1	06/01/2018 10:12	R247940
<b>EPA 600 365.4 (TOTAL)</b>								
Phosphorus, Total (as P)	NELAP	0.100		0.120	mg/L	1	06/01/2018 12:39	142442
<b>STANDARD METHODS 4500-NO2 B (TOTAL) 2000</b>								
Nitrogen, Nitrite (as N)	NELAP	0.05		< 0.05	mg/L	1	05/31/2018 15:31	R247815
<b>EPA 600 245.1 R3.0 (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	06/01/2018 9:19	142433
<b>EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	06/01/2018 16:47	142432
Copper	NELAP	0.0050		< 0.0050	mg/L	1	06/01/2018 16:47	142432
Lead	NELAP	0.0150		< 0.0150	mg/L	1	06/01/2018 16:47	142432
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	06/01/2018 16:47	142432



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

**Lab ID:** 18051979-002

**Client Sample ID:** Sample 2

**Matrix:** AQUEOUS

**Collection Date:** 05/31/2018 9:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 21ST ED. 9222D, 9221F EC-MUG</b>								
E Coli	*	0		Absent	P/A	1	05/31/2018 13:56	R247848
<b>STANDARD METHODS 22ND ED. 9222 D MEMBRANE FILTER</b>								
Fecal Coliform	*	10		< 10	CFU/100ml	10	05/31/2018 13:56	R247848
<b>EPA 600 351.2</b>								
Total Kjeldahl Nitrogen (as N)	NELAP	1.0		2.1	mg/L	1	06/01/2018 12:49	142441
<b>EPA 600 351.2 R2.0, 353.2 R2.0</b>								
Nitrogen, Total	*	1.05		2.12	mg/L	1	06/05/2018 0:00	R247963
<b>EPA 600 353.2 R2.0 (TOTAL)</b>								
Nitrogen, Nitrate (as N)	NELAP	0.050	J	0.025	mg/L	1	06/01/2018 10:15	R247940
<b>EPA 600 365.4 (TOTAL)</b>								
Phosphorus, Total (as P)	NELAP	0.100		0.104	mg/L	1	06/01/2018 12:49	142442
<b>STANDARD METHODS 4500-NO2 B (TOTAL) 2000</b>								
Nitrogen, Nitrite (as N)	NELAP	0.05		< 0.05	mg/L	1	05/31/2018 15:31	R247815
<b>EPA 600 245.1 R3.0 (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	06/01/2018 9:21	142433
<b>EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	06/01/2018 16:51	142432
Copper	NELAP	0.0050		< 0.0050	mg/L	1	06/01/2018 16:51	142432
Lead	NELAP	0.0150		< 0.0150	mg/L	1	06/01/2018 16:51	142432
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	06/01/2018 16:51	142432



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Dunlap Lake Property Owners Association

**Work Order:** 18051979

**Client Project:** Lake Water

**Report Date:** 06-Jun-18

**Lab ID:** 18051979-003

**Client Sample ID:** Sample 3

**Matrix:** AQUEOUS

**Collection Date:** 05/31/2018 9:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 21ST ED. 9222D, 9221F EC-MUG</b>								
E Coli	*	0		Present	P/A	1	05/31/2018 13:56	R247848
<b>STANDARD METHODS 22ND ED. 9222 D MEMBRANE FILTER</b>								
Fecal Coliform	*	10		70	CFU/100ml	10	05/31/2018 13:56	R247848
<b>EPA 600 351.2</b>								
Total Kjeldahl Nitrogen (as N)	NELAP	1.0		1.3	mg/L	1	06/01/2018 12:52	142441
<b>EPA 600 351.2 R2.0, 353.2 R2.0</b>								
Nitrogen, Total	*	1.05		1.38	mg/L	1	06/05/2018 0:00	R247963
<b>EPA 600 353.2 R2.0 (TOTAL)</b>								
Nitrogen, Nitrate (as N)	NELAP	0.050		0.082	mg/L	1	06/01/2018 10:19	R247940
<b>EPA 600 365.4 (TOTAL)</b>								
Phosphorus, Total (as P)	NELAP	0.100		0.203	mg/L	1	06/01/2018 12:51	142442
<b>STANDARD METHODS 4500-NO2 B (TOTAL) 2000</b>								
Nitrogen, Nitrite (as N)	NELAP	0.05	J	0.02	mg/L	1	05/31/2018 15:31	R247815
<b>EPA 600 245.1 R3.0 (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	06/01/2018 9:23	142433
<b>EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	06/01/2018 16:54	142432
Copper	NELAP	0.0050		< 0.0050	mg/L	1	06/01/2018 16:54	142432
Lead	NELAP	0.0150		< 0.0150	mg/L	1	06/01/2018 16:54	142432
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	06/01/2018 16:54	142432





# Receiving Check List

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 18051979

Client Project: Lake Water

Report Date: 06-Jun-18

Carrier: Carolyn Green

Received By: LAL

Completed by:

*Amber Dilallo*

Reviewed by:

*Marvin L. Darling II*

On:

On:

31-May-18

Amber M. Dilallo

31-May-18

Marvin L. Darling

Pages to follow:

Chain of custody

Extra pages included

- |   |   |                              |  |         |                          |
|---|---|------------------------------|--|---------|--------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  | Not Present <input type="checkbox"/>         | Temp °C | 15.82                    |
| Type of thermal preservation?                           | None <input type="checkbox"/>           | Ice <input type="checkbox"/> | Blue Ice <input checked="" type="checkbox"/> | Dry Ice | <input type="checkbox"/> |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |
| Reported field parameters measured:                     | Field <input type="checkbox"/>          | Lab <input type="checkbox"/> | NA <input checked="" type="checkbox"/>       |         |                          |
| Container/Temp Blank temperature in compliance?         | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |  |         |                          |

*When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.*

- |   |                              |  |   |
|---|------------------------------|--|---|
| Water – at least one vial per sample has zero headspace?  | Yes <input type="checkbox"/> | No <input type="checkbox"/>            | No VOA vials <input checked="" type="checkbox"/>      |
| Water - TOX containers have zero headspace?               | Yes <input type="checkbox"/> | No <input type="checkbox"/>            | No TOX containers <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt?                       | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/>                           |
| NPDES/CWA TCN interferences checked/treated in the field? | Yes <input type="checkbox"/> | No <input type="checkbox"/>            | NA <input checked="" type="checkbox"/>                |

**Any No responses must be detailed below or on the COC.**

Additional Nitric Acid was needed upon arrival at the laboratory for Sample 1. - llangdon - 5/31/2018 1:01:19 PM

# CHAIN OF CUSTODY

pg. 1 of 18051979 Work order # 18051979

**Client:** Dunlap Lake Property Owners Association  
**Address:** P.O. Box 5  
 Edwardsville, IL 62025  
**City / State / Zip**  
**Contact:** Carolyn Green (618) 791-1398  
 carolyn@dunlaplake.org  
**E-Mail:**  
**Phone:**  
**Fax:**

**Samples on:**  ICE  BLUE ICE  NO ICE 15.82 °C  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** HNO3 added to sample 1. *Postbullet*

Are these samples known to be involved in litigation? If yes, a surcharge will apply  Yes  No  
 Are these samples known to be hazardous?  Yes  No  
 Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section.  Yes  No

**Client Comments:** Metals  
~~Zinc~~ sample taken by boat ramp where  
 five testing found elevated Zinc  
 All surface level. Boat ramp samples paddles-deep  
 E-Coli confirmed

**Project Name/Number**  
**Sample Collector's Name**  
*Carolyn Green / DayCarney*

**MATRIX**

Lab Use Only	Sample Identification	Date/Time Sampled	Billing Instructions			# and Type of Containers
			Standard	1-2 Day (100% Surcharge)	3 Day (50% Surcharge)	
18051979-001	Sample 1	5/31 7:30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 1 1
002	Sample 2	5/31 9:40	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 1 1
003	Sample 3	5/31 9:50	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 1 1
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

INDICATE ANALYSIS REQUESTED	
Aqueous	X
As Cu Pb Zn	X
Fecal Coliform	X
Mercury	X
Nitrate	X
Nitrite	X
Phosphorus	X
TKN	X
Total Nitrogen	X

**Relinquished By**  
*Carolyn Green*  
**Date/Time**  
 5-31-18 11:35

**Received By**  
*J. Fargo*  
**Date/Time**  
 5/31/18 11:35