

Sabrina Cantrell [KDHE]

From: Tony Stahl [KDHE]
Sent: Thursday, May 31, 2018 3:05 PM
To: Allison Herring [KDHE]
Cc: Sabrina Cantrell [KDHE]; Patricia Haines-Lieber [KDHE]; Erich Glave [KDHE]; Nolita LaVoie [KDHE]; Trevor Flynn [KDHE]; Layne Knight [KDHE]; Britini Bauer [KDHE]
Subject: HAB - Fishkill Info.

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: HAB/FishKills

Hi Allison. In an attempt to pass along some HAB information (due to proxy server problems experienced), the following water bodies were evaluated for HABs this week:

LM0758AA North Point Lake

Total cell count: 41,454 cells/mL; 95% Chlorophytes (greens), 5% Euglenophytes; no toxins
Comments: mainly small colonial greens – no indication of stress

Lake Status Determination (blue-green cell count and toxin exposure levels)
None – Lake clear

Submitted biological specimens (recently expired) collected (5/18/2018@5:12 pm) by S. Cantrell

Identified as:

- 4) *Uniomerus tetralasmus* (pondhorn)
- 2) *Oronectes virilis* (northern crayfish)

~~LM0175AA Colwich City Lake~~

~~Total cell count: 153,594 cells/mL; 0.3% Chlorophytes (greens), 98.9% Cyanophytes (blue-greens), 0.8% Diatoms/Chrysophytes; 0.6 toxins
Of the Cyanophytes:
56,700 *Microcystis*
26,460 *Aphanizomenon*
68,670 *Anabaena*~~

~~Lake Status Determination (blue-green cell count and toxin exposure levels)
Lake placed on a Public Health WATCH status~~

Please call if you have questions or need additional information.

Tony

P.S. Patti please work with Nolita to update HAB system tomorrow when system (hopefully) is functional and operational.

Anthony (Tony) Stahl • Environmental Program Administrator

Kansas

Environmental Chain of Custody Form

Department of Health and Environment
1646 S. West Environmental Laboratories

Alison Herron

Wildlife Office

Main PWS Client: _____ Location Name: _____ Notes: _____
 Profile: _____ Collector: _____
 Location Code: _____ Event Desc: _____

Additional Report Recipients	
To	To
Address	Address
BOW	

#	Sample ID, Description	Matrix	Collection		Sample Comments and/or GPS Coordinates	Analyses		Total number of containers	Sample Depth	Field Filtered	Field Test Results			
			Date	Time							DO	Temp	pH	Conductivity
1	<i>North Pond Lake</i>		<i>5/10/10</i>	<i>18:13</i>		<i>2-4D</i>	<i>X</i>	<i>1</i>	<i>8-10"</i>	<i>No</i>	<i>7</i>	<i>27C</i>	<i>76-8.2</i>	<i>X</i>
2														
3														
4														
5														
6														

Transfers	Released By	Date/Time	Received By	Date/Time	Sample Condition		Receipt Temperature:
					Received on Ice	Samples Intact	
1	<i>Steve E. Brown</i>	<i>5/21/10 1558</i>	<i>Alison Herron</i>	<i>5/21/10 1558</i>	<i>Y</i>	<i>N</i>	
2					<i>Y</i>	<i>N</i>	
3					<i>Y</i>	<i>N</i>	

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Pace Analytical Services, Inc.
Cooler/Sample Receipt Form (C/S RF)

Pace Order No.:

Client Name: KDHE

Pace File No.: 8514

State of Origin (for samples): KS: Other: _____ DW Matrix? Yes No

Sample ID's in cooler: See Col

Cooler ___ / ___ of ___ / ___ for this Pace Order No.

Cooler Identification: Pace Cooler #: _____ Client's Cooler / Box / Letter / Hand-delivered
Other: _____

Date/Time Cooler Received: 5, 21, 18 15:58

Delivered By: UPS / FedX / AB Express / Field Svcs / Mail / Walk-In / Other: _____

Custody Seal: Present: Intact / Broken Absent: Seal No.: _____
Seal Name: _____ Seal Date: _____

Seal matches Chain of Custody: Yes / No / N/A

Type of Packing Material: Blue Ice / Ice / Melted Ice / Bubble / Foam / Paper / Peanuts / Vermiculite / None / Other: _____

Cooler Temperature (°C): Original Reading (°C) 5.8 Corrected Reading (°C) 5.8

Temperature. By: Temperature Blank Surface Temperature
Thermo. ID No.: 554 Thermo. Correction Factor (°C): 0.0

Evidence of Cooling and date received = date sampled

Sample Receipt Discrepancies: No Yes (See below for discrepancies.) T

Note: If discrepancies are present, Pace will proceed with analyses until/unless directed otherwise by the client.

- Chain of Custody not present - information taken from:
 - Cover Letter Container
 - PO Pace Proj. Mgr.
- Container label absent
- Chain of Custody incomplete [see detail below]
- Chain of Custody missing date/time sampled (excl. TB or Dup.)
- Date or Time sampled obtained from container label
- Chain of Custody missing sampler's name
- Chain of Custody missing matrix (sample type)
- Missing relinquished information: signature date time
- Sample excluded from Chain of Custody
- Sample listed on Chain of Custody, not received
- Sample identification on container and Chain of Custody do not agree
- Air bubbles in Aqueous VOA vials larger than pea-size [approx. 6 mm]
- Cooler temperature exceeded 0.1 - 6.0 °C requirement [Do not mark if samples do not require cooling to 0:1 - 6.0 °C.]
- Broken or leaking containers (detail actions below)
- Sample container type or labeled chemical preservation inappropriate
- Other discrepancies: _____

Detail to discrepancies/comments:

Completed by: KSB Date Completed: 5.21.18



Environmental Chain of Custody Form



STATES

Field and Environmental Laboratories

Client: South Central District Location Name: North Point Lake Notes:

Profile: _____ Collector: _____

Location Code: _____ Event Desc: _____

Additional Report Recipients

To	To
Address	Address

Known Hazards

Flammable	Poison
Radiological	Other

#	Sample ID, Description	Matrix	Collection		Sample Comments	Analyses						Total number of containers	Field Test Results							
			Actual Collection			Amions	pH, cond.	ammonia nitrogen	phosphorus	metals	pesticides		coliform	Sample Depth	Field Filtered	DO	Temp	pH	Conductivity	
			Date	Time																
1	# 1		5/15	18:13	AC															
2	# 2			18:19																
3	# 3			18:18																
4	# 4			18:19																
5	# 5			18:20																
6																				

Transfers	Released/By	Date/Time	Received By	Date/Time	Sample Condition			Receipt Temperature:	
					Received on Ice	Samples Intact			
1		5/14/2018 4:25 pm			Y	N	Y	N	
2					Y	N	Y	N	
3					Y	N	Y	N	

Algae Sample Submission Form (Reproduce as needed for each sample)

Send this form with samples to:

Bureau of Water
~~c/o Mike Butler~~ Tony Stahl
 Kansas Department of Health and Environment
 1000 SW Jackson Ave., Suite 440 (Curtis State Office Building)
 Topeka, Kansas 66620

NOTE: Use cubetainers with no preservatives for algae (leave some airspace in cubetainer).
 If multiple sites are sampled for algae, submit more than one cubetainer.
 If submitting aquatic plants, use a ziplock bag with only a tiny amount of water in the bag.
 Ship them ASAP using only a small amount of ice (too cold can damage some species).

Check which type of problem is being investigated:

<input type="checkbox"/>	Taste/Odor Incident
<input checked="" type="checkbox"/>	Fishkill
<input type="checkbox"/>	Aesthetic Complaint
<input type="checkbox"/>	Livestock/Pet Kill
<input checked="" type="checkbox"/>	Other (briefly describe in space to left)

blue green sample request

Check type of waterbody samples collected from:

<input checked="" type="checkbox"/>	Lake/Pond
<input type="checkbox"/>	Stream/River
<input checked="" type="checkbox"/>	Other (briefly describe in space to left)

Large Pond North Point
Udell Kansas

If this is a taste/odor incident, please provide any additional data related to the treatment plant, weather, etc., including date and time of collection.

Date and Time Fri May 18th
Approx. 5:45 PM.

Also check the boxes appropriate to the qualities of the "taste" and "odor" of the finished or raw water. ("raw" or "finished" can be put in the appropriate field)

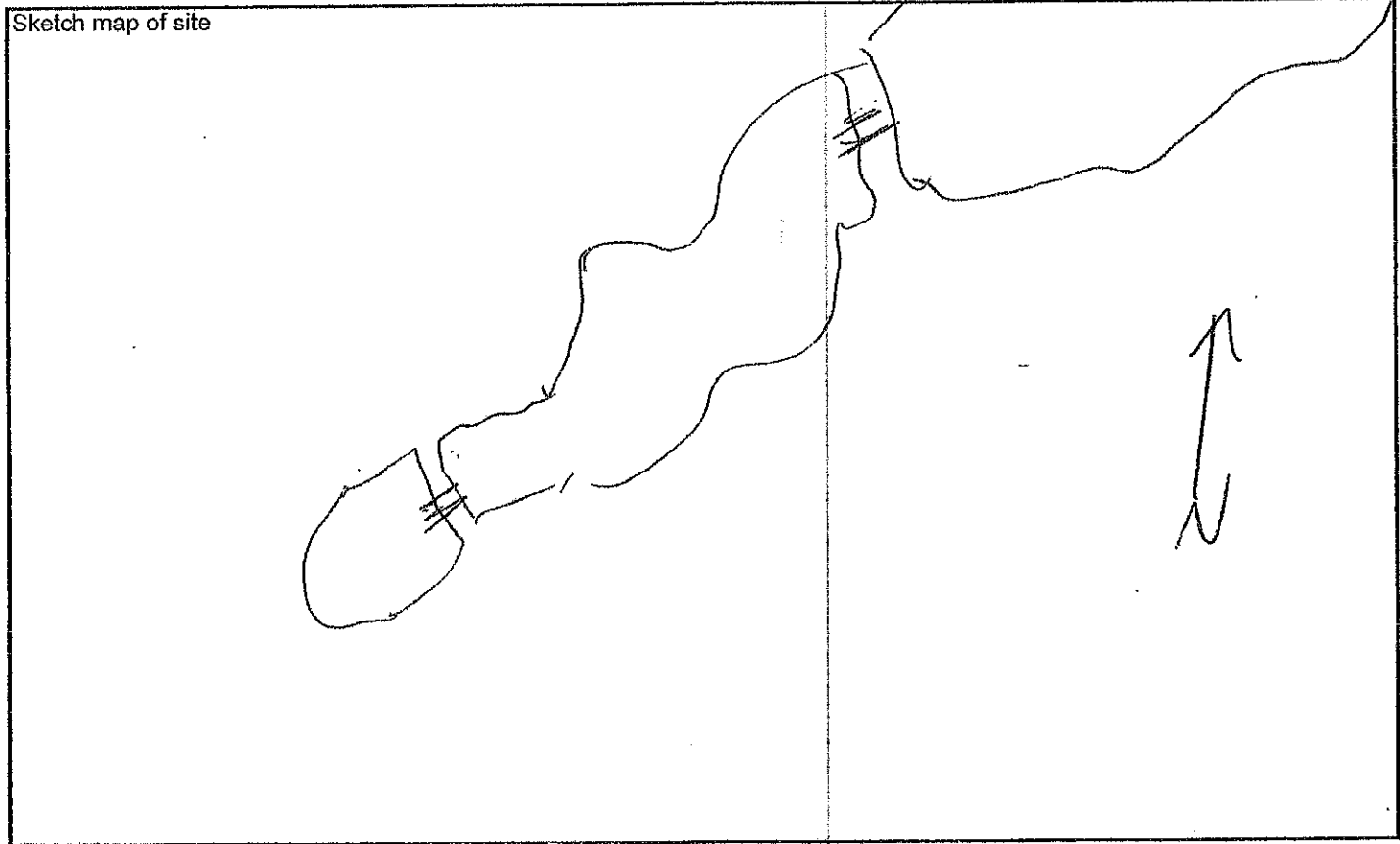
Odor: <input type="checkbox"/> Earthy/Musty <input type="checkbox"/> Chlorinous <input type="checkbox"/> Grassy/Woody <input type="checkbox"/> Marshy/Septic <input type="checkbox"/> Fragrant/Flowery <input type="checkbox"/> Fishy/Aquarium <input type="checkbox"/> Medicinal <input type="checkbox"/> Hydrocarbon/Chemical	Taste: <input type="checkbox"/> Sour/Acidic <input type="checkbox"/> Salty <input type="checkbox"/> Bitter <input type="checkbox"/> Sweet <input type="checkbox"/> Mouthfeel _____ "Mouthfeel" covers a number of characteristics of sensation, such as "powdery," "metallic," "burning," etc. Please indicate the type of mouthfeel to the right.
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If this is not a taste/odor incident (fishkill, etc.), please indicate any other data or information related to the incident (including field conditions, other chemical data, preceding weather, etc.). If chemical data are sent to KHEL, please copy Edward Carney, BEFS, on these.

84° Fair Temp, SE breeze, sunny
2" rain in ~~Wed~~ Mon 14th. 1st coll of fish Wed 16th.
water temp 27°C ph 7-8 DO 7.0

On the back of this form, please include a sketch map of the site.

<u>North Pt Lake</u>	Location	
<u>Udell Fishkell</u>	GPS coordinates	
<u>E Bauer</u>	Sampler	



Chain of Custody:

Date	<u>11/21/18</u>	Relinquished By	<u>Sam Litt</u>	Received By	_____
Date	_____	Relinquished By	_____	Received By	_____
Date	_____	Relinquished By	_____	Received By	_____
Date	_____	Relinquished By	_____	Received By	_____

Additional Reports Routed To:

Name	<u>Allison Herring</u>	Address	<u>300 W. Douglas Suite 700, Wichita, KS 67202</u>
Name	<u>Sabrina Cantrell</u>	Address	<u>300 W. Douglas Suite 700, Wichita, KS 67202</u>
Name	_____	Address	_____

Sabrina Cantrell [KDHE]

From: Tony Stahl [KDHE]
Sent: Tuesday, July 03, 2018 11:39 AM
To: Sabrina Cantrell [KDHE]
Cc: Allison Herring [KDHE]; Erich Glave [KDHE]; Patricia Haines-Lieber [KDHE]; Trevor Flynn [KDHE]; Tom Stiles [KDHE]
Subject: RE: Udall Fishkill
Attachments: Maneb - Extension Toxicology Network.docx

Correction: a factor of two (River Ave) and ten (lake ave)

Hi, Sabrina. Because the rock and soil in the North Point Lake's watershed will influence some water characteristics, I've compared North Point Lake's detected metals and metalloids to that of the Walnut River (monitoring station just north of Winfield) and Winfield City Lake; whereas both water bodies are near North Point Lake located in Cowley County. This comparison attempted to identify water quality problems in North Point Lake that may have originated from land uses or other activities near or in the lake. Table 1 summarizes the detected metals and metalloids in North Point Lake and compares values to that of the Walnut River (near Winfield) and Winfield City Lake.

Table 1. Detected metals and metalloids compared to nearby located waterbodies.

Parameter	North		Walnut River			Winfield City Lake		
	Sample 4	Sample 5	Avg	Min	Max	Avg	Min	Max
Calcium (mg/L)	23	23	100	48	150	44	37	52
Iron (mg/L)	0.48	0.48	2.02	0.112	15.1	0.19	0.16	0.21
Magnesium (mg/L)	11	11	22	8	35	6	5	6
Potassium (mg/L)	6.4	6.4	5.2	3.7	7.1	2.7	2.6	2.9
Silica (mg/L)	7.1	7.1	18.9	1.5	82.3	4.1	3.1	5.1
Sodium (mg/L)	20	20	48	11	76	8	6	10
Aluminum ($\mu\text{g/L}$)	52	55	2340	71	4490	224	150	294
Arsenic ($\mu\text{g/L}$)	16	16	3.9	2.4	11.1	2.7	1.8	3.6
Barium ($\mu\text{g/L}$)	120	130	169	120	317	92	88	96
Manganese ($\mu\text{g/L}$)	320	310	173	61	596	39	31	49

Two concentrations jump out as suspect, arsenic and manganese (albeit, iron also appears to be elevated as well). Please keep in mind, both elevated metal concentration could have resulted from over land flow (runoff) and geological processes (weathering of arsenic and manganese containing rock); thus, accounting for the iron level. However, the measured arsenic concentration is above our safe drinking water quality standard (10 $\mu\text{g/L}$) and the local water bodies typically have concentrations below 4 $\mu\text{g/L}$ - with a max concentration of 11 in the river (during an extreme runoff event). Moreover, manganese concentrations tend to go up in runoff (again, component of weathering); however, the concentration measured in North Point appears to be elevated by a factor of two. Thus, and this only speculation, the elevated arsenic observed could have originated from the use of an arsenic-containing pesticide in the lake's watershed; whereas, the manganese from the use of a fungicide (e.g., Maneb); both of which KDHE could not or did not specifically test for. As an example of toxicity to aquatic life, see attached Maneb chemical pesticide information provided by Cornell University.

Anthony (Tony) Stahl - Environmental Program Administrator
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Bureau of Water, Watershed Planning, Monitoring and Assessment
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