CORRESPONDENCE
JUN 19, 2017
DOCUMENT NO. 05388-17

Sandra Soto

From: Office of Commissioner Brown
Sent: Monday, June 19, 2017 9:44 AM
To: Commissioner Correspondence
Subject: FW: Docket No. 150269-WS & 160101-WS - Trihalomethane Water Concerns in Cross Creek
Attachments: LTR - UIF-CHOA, Patrick Flynn, 6-17-17.docx; water test 874411, Don Barnes.pdf; What are trihalomethanes.pdf

Please place the attached in Docket Correspondence, Consumers and their Representatives, in Docket No. 160101-WS. Thank you.

From: Ann Marie Ryan [mailto:amr328@hotmail.com]
Sent: Saturday, June 17, 2017 9:08 AM
To: Patrick Flynn Utilities, Inc.; John Hoy
Cc: Yeargan, Mary; Erik Sayler - OPC; brian@brianarmstronglaw.com; PC Commissioner Jack Mariano; Flip Mellinger; Donald Barnes; Ken Jennings - CCHOA Pres.; Jared Ochs; Rachel Perrin Rogers; Office of Commissioner Brown; Office Of Commissioner Graham; Office of Commissioner Brisé; Office of Commissioner Patronis; Office of Commissioner Polmann
Subject: Docket No. 150269-WS & 160101-WS - Trihalomethane Water Concerns in Cross Creek

Patrick,

I am contacting you on behalf of the Cross Creek community at Summertree to let you know about a serious concern that has come to our attention as a result of independent water testing contracted by a Cross Creek resident, Don Barnes at 11438 Sinatra Court in Summertree.

Mr. Barnes gave me permission to share the attached test results from a water sample from his kitchen water faucet sent to National Testing Laboratories, Ltd., 6571 Wilson Mills Rd, Cleveland, Ohio 44143, Sample Number: 874411, date collected May 30, 2017, date received June 01, 2017, date completed June 14, 2017. The test results indicate the level of Trihalomethanes (TTHMs) is 0.142 and the National Standards are 0.080. The TTHMs levels were nearly 82 percent higher than the standards. The Haloacetic Acids (HAAs) level is 0.056 and National Standards are 0.60; these HAAs levels are barely borderline.

We are concerned that the prolonged chlorine burn has created yet another health concern for our entire community. To date, no one has been notified if UIF has completed the chlorine burn. We want to know what test or criteria is used to determine a successful chlorine burn.

Attached is our letter, copy of the test results and the information from Don Barnes's research regarding trihalomethanes. Our residents are fearful and outraged with these test results. We need answers. How can we trust our water supply? Please contact me as soon as possible at (727) 267-7162 so we can setup a phone conference with Don Barnes and Ken Jennings.

Regards, Ann Marie Ryan, Leader

Summertree Water Alliance

Summertree Water Alliance
11436 Windstar Ct, New Port Richey, Florida 34654
amr328@hotmail.com (727) 267-7162

June 17, 2017

Patrick Flynn, Vice President of Operations
Utilities, Inc. of Florida
200 Weathersfield Avenue
Altamonte Springs, FL 32714-4027

Patrick:

I am contacting you on behalf of the Cross Creek community at Summertree to let you know about a serious concern that has come to our attention as a result of independent water testing contracted by a Cross Creek resident, Don Barnes at 11438 Sinatra Court in Summertree.

Mr. Barnes gave me permission to share the attached test results from a water sample from his kitchen water faucet sent to National Testing Laboratories, Ltd., 6571 Wilson Mills Rd, Cleveland, Ohio 44143, Sample Number: 874411, date collected May 30, 2017, date received June 01, 2017, date completed June 14, 2017. The test results indicate the level of Trihalomethanes (TTHMs) is 0.142 and the National Standards are 0.080. The TTHMs levels were nearly 82 percent higher than the standards. The Haloacetic Acids (HAAs) level is 0.056 and National Standards are 0.60; these HAAs levels are barely borderline.

We would appreciate a copy of your water quality report for primary and secondary drinking water quality results for our water system before and during the chlorine-burn process. Please advise what steps UIF will be taking to address these inflated TTHMs and HAAs levels. We are concerned that the prolonged chlorine burn has created yet another health concern for our entire community.

To date, no one has been notified if UIF has completed the chlorine burn. We want to know what test or criteria is used to determine a successful chlorine burn. Our residents are fearful and outraged with these test results. We need answers. How can we trust our water supply? Please contact me as soon as possible at (727) 267-7162 so we can setup a phone conference with Don Barnes and Ken Jennings.

Sincerely,

Ann Marie Ryan, Leader
Summertree Water Alliance Taskforce

cc: Mary Yeargan, PG, DEP District Director
John Hoy, President of Utilities, Inc. of Florida
Erik Sayler, Office of Public Counsel
Attorney Brian Armstrong
Pasco County Commission Jack Mariano
Flip Mellinger, Asst. Pasco County Adm, Utility Director
Ken Jennings, Cross Creek HOA Board President
Don Barnes, Cross Creek HOA Board Director and Homeowner
Summertree Water Alliance

Email excerpt from Don Barnes…

Don B <surveyor1947@hotmail.com>

Reply

Friday, June 16, 2017

For the record, I took the water test was outlined in the National Testing Laboratories, Ltd instructions. The test was from my kitchen sink, which is treated by my whole house water system. My system was designed and installed by:

Stephen Sills, Tampa Bay Water Engineering Inc.
11176 Eskimo Curlew Rd, Brooksville, FL 34614
Email: stephen_slls@yahoo.com
Phone: 727-861-7803; Service: 727-505-2255

The firm's information may be found at the following sites: stephen_slls@yahoo.com
http://theworldofdrinkingwater.biz/

Donald Barnes

Attached: water test 874411.pdf & what are trihalomethanes.pdf from Don Barnes

Informational Water Quality Report

Citycheck Standard

National Testing Laboratories, Ltd.
Quality Water Analysis

6571 Wilson Mills Rd
Cleveland, Ohio 44143
1-800-458-3330

Client:

Ordered By:
Barnes, Don 11438 Sinatra Ct New Port Richey, FL 34654 ATTN: Don Barnes

Sample Number: 874411

Location:	Kitchen Sink
Type of Water:	City Water
Collection Date and Time:	05/30/2017 09:45
Received Date and Time:	06/01/2017 11:00
Date Completed:	6/14/2017

Definition and Legend

This informational water quality report compares the actual test result to national standards as defined in the EPA's Primary and Secondary Drinking Water Regulations.

Primary Standards: Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water. MCLs are enforceable standards.

Secondary standards: Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor,or color) in drinking water. Individual states may choose to adopt them as enforceable standards.

Action levels: Are defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.

mg/L (ppm): Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.

Minimum Detection Level (MDL): The lowest level that the laboratory can detect a contaminant.

ND: The contaminant was not detected above the minimum detection level.

NA: The contaminant was not analyzed.

✓ The contaminant was not detected in the sample above the minimum detection level.

● The contaminant was detected at or above the minimum detection level, but not above the referenced standard.

▲ The contaminant was detected above the standard, which is not an EPA enforceable MCL.

✚ The contaminant was detected above the EPA enforceable MCL.

✖ These results may be invalid.

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
			Inorganic Analytes - Metals			
✓	Aluminum	ND	mg/L	0.2	EPA Secondary	0.1
✓	Arsenic	ND	mg/L	0.010	EPA Primary	0.005
✓	Barium	ND	mg/L	2	EPA Primary	0.30
✓	Cadmium	ND	mg/L	0.005	EPA Primary	0.002
✓	Calcium	ND	mg/L	--		2.0
✓	Chromium	ND	mg/L	0.1	EPA Primary	0.010
●	Copper	0.007	mg/L	1.3	EPA Action Level	0.004
✓	Iron	ND	mg/L	0.3	EPA Secondary	0.020
✓	Lead	ND	mg/L	0.015	EPA Action Level	0.002
✓	Lithium	ND	mg/L	--		0.001
✓	Magnesium	ND	mg/L	--		0.10
✓	Manganese	ND	mg/L	0.05	EPA Secondary	0.004
✓	Mercury	ND	mg/L	0.002	EPA Primary	0.001
✓	Nickel	ND	mg/L	--		0.020
✓	Selenium	ND	mg/L	0.05	EPA Primary	0.020
✓	Silver	ND	mg/L	0.100	EPA Secondary	0.002
●	Sodium	126	mg/L	--		1
✓	Strontium	ND	mg/L	--		0.001
✓	Uranium	ND	mg/L	0.030	EPA Primary	0.001
●	Zinc	0.024	mg/L	5	EPA Secondary	0.004
			Physical Factors			
●	Alkalinity (Total as CaCO3)	170	mg/L	--		20
✓	Hardness	ND	mg/L	100	NTL Internal	10
✓	pH	7.6	pH Units	6.5 to 8.5	EPA Secondary	
●	Total Dissolved Solids	310	mg/L	500	EPA Secondary	20
			Inorganic Analytes - Other			
✓	Bromate	ND	mg/L	0.010	EPA Primary	0.005

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Bromide	ND	mg/L	--		0.5
✓	Chloramine as Cl2	ND	mg/L	--		0.1
●	Chloride	28.0	mg/L	250	EPA Secondary	5.0
✓	Chlorine-Free	ND	mg/L	--		0.05
✓	Chlorine-Total	ND	mg/L	--		0.1
✓	Chlorite	ND	mg/L	1.0	EPA Primary	0.005
✓	Fluoride	ND	mg/L	4.0	EPA Primary	0.5
●	Nitrate as N	0.7	mg/L	10	EPA Primary	0.5
✓	Nitrite as N	ND	mg/L	1	EPA Primary	0.5
✓	Ortho Phosphate	ND	mg/L	--		2.0
●	Sulfate	56.0	mg/L	250	EPA Secondary	5.0
	Organic Analytes - Trihalomethanes					
●	Bromodichloromethane	0.023	mg/L	--		0.002
✓	Bromoform	ND	mg/L	--		0.004
●	Chloroform	0.110	mg/L	--		0.002
●	Dibromochloromethane	0.009	mg/L	--		0.004
✚	Total THMs	0.142	mg/L	0.080	EPA Primary	0.002
	Organic Analytes - Haloacetic Acids					
●	Dibromoacetic Acid	0.003	mg/L	--		0.001
●	Dichloroacetic Acid	0.038	mg/L	--		0.001
✓	Monobromoacetic Acid	ND	mg/L	--		0.001
✓	Monochloroacetic Acid	ND	mg/L	--		0.001
●	Trichloroacetic Acid	0.015	mg/L	--		0.001
●	Total HAAs	0.056	mg/L	0.060	EPA Primary	0.001
	Organic Analytes - Volatiles					
✓	1,1,1,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,1-Trichloroethane	ND	mg/L	0.2	EPA Primary	0.001
✓	1,1,2,2-Tetrachloroethane	ND	mg/L	--		0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	1,1,2-Trichloroethane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,1-Dichloroethane	ND	mg/L	--		0.002
✓	1,1-Dichloroethene	ND	mg/L	0.007	EPA Primary	0.001
✓	1,1-Dichloropropene	ND	mg/L	--		0.002
✓	1,2,3-Trichlorobenzene	ND	mg/L	--		0.002
✓	1,2,3-Trichloropropane	ND	mg/L	--		0.002
✓	1,2,4-Trichlorobenzene	ND	mg/L	0.07	EPA Primary	0.002
✓	1,2-Dichlorobenzene	ND	mg/L	0.6	EPA Primary	0.001
✓	1,2-Dichloroethane	ND	mg/L	0.005	EPA Primary	0.001
✓	1,2-Dichloropropane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,3-Dichlorobenzene	ND	mg/L	--		0.001
✓	1,3-Dichloropropane	ND	mg/L	--		0.002
✓	1,4-Dichlorobenzene	ND	mg/L	0.075	EPA Primary	0.001
✓	2,2-Dichloropropane	ND	mg/L	--		0.002
✓	2-Chlorotoluene	ND	mg/L	--		0.001
✓	4-Chlorotoluene	ND	mg/L	--		0.001
✓	Acetone	ND	mg/L	--		0.01
✓	Benzene	ND	mg/L	0.005	EPA Primary	0.001
✓	Bromobenzene	ND	mg/L	--		0.002
✓	Bromomethane	ND	mg/L	--		0.002
✓	Carbon Tetrachloride	ND	mg/L	0.005	EPA Primary	0.001
✓	Chlorobenzene	ND	mg/L	0.1	EPA Primary	0.001
✓	Chloroethane	ND	mg/L	--		0.002
✓	Chloromethane	ND	mg/L	--		0.002
✓	cis-1,2-Dichloroethene	ND	mg/L	0.07	EPA Primary	0.002
✓	cis-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	DBCP	ND	mg/L	--		0.001
✓	Dibromomethane	ND	mg/L	--		0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Dichlorodifluoromethane	ND	mg/L	--		0.002
✓	Dichloromethane	ND	mg/L	0.005	EPA Primary	0.002
✓	EDB	ND	mg/L	--		0.001
✓	Ethylbenzene	ND	mg/L	0.7	EPA Primary	0.001
✓	Methyl Tert Butyl Ether	ND	mg/L	--		0.004
✓	Methyl-Ethyl Ketone	ND	mg/L	--		0.01
✓	Styrene	ND	mg/L	0.1	EPA Primary	0.001
✓	Tetrachloroethene	ND	mg/L	0.005	EPA Primary	0.002
✓	Tetrahydrofuran	ND	mg/L	--		0.01
✓	Toluene	ND	mg/L	1	EPA Primary	0.001
✓	trans-1,2-Dichloroethene	ND	mg/L	0.1	EPA Primary	0.002
✓	trans-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	Trichloroethene	ND	mg/L	0.005	EPA Primary	0.001
✓	Trichlorofluoromethane	ND	mg/L	--		0.002
✓	Vinyl Chloride	ND	mg/L	0.002	EPA Primary	0.001
✓	Xylenes (Total)	ND	mg/L	10	EPA Primary	0.001

We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency or variations of these EPA methods.

These test results are intended to be used for informational purposes only and may not be used for regulatory compliance.

National Testing Laboratories, Ltd.

NATIONAL TESTING LABORATORIES, LTD

Reader Suggestion

What are trihalomethanes?

by Babu Srinivas Madabhushi
NDWC Technical Assistance Specialist

The use of chlorine to disinfect water produces various disinfection byproducts, which have been classified mainly as halogenated and non-halogenated byproducts. These primary byproducts are trihalomethanes (THMs) and haloacetic acids. THMs are the byproducts of chlorination of water that contains natural organic matter. A U.S. Environmental Protection Agency (EPA) survey shows that THMs are present in most chlorinated water supplies. Even though they pose a less acute health risk than do waterborne diseases, THMs are still among the important water quality issues.

The most common THM compounds are dibromochloromethane ($CHClBr_2$), bromoform ($CHBr_3$), chloroform ($CHCl_3$), and dichlorobromomethane ($CHCl_2Br$). The sum of these four compounds is referred to as Total Trihalomethanes (TTHMs).

Why and how are THMs formed?

When chlorine is added to water with organic material, such as algae, river weeds, and decaying leaves, THMs are formed. Residual chlorine molecules react with this harmless organic material to form a group of chlorinated chemical compounds, THMs. They are tasteless and odorless, but harmful and potentially toxic.

The quantity of byproducts formed is determined by several factors, such as the amount and type of organic material present in water, temperature, pH, chlorine dosage, contact time available for chlorine, and bromide concentration in the water.

The organic matter in water mainly consists of a) humic substance, which is the organic portion of soil that remains after prolonged microbial decomposition formed by the decay of leaves, wood, and other vegetable matter; and b) fulvic acid, which is a water soluble substance of low molecular weight that is derived from humus.

At what levels are THMs present in water?

The byproduct concentration is mainly determined by the amount of organic material in the source water. Water facilities that draw water from surface water (lakes, rivers, and reservoirs) produce water with higher levels of THMs than facilities with groundwater (wells and springs) as their source of water. TTHM concentrations range from 0.030 to 0.150 milligrams per liter (mg/l) in surface water and 0.001 to 0.010 mg/l in groundwater. The distribution of these four compounds varies with bromide concentration in water.

EPA is currently regulating TTHMs for small communities as part of the Microbial/Disinfection and Disinfection Byproducts (M/DBP) Rules. Under these rules the allowable TTHM concentrations are 0.080 mg/l of TTHMs, and there are plans to reduce these limits to 0.040 mg/l by the year 2002.

What are the health effects of THMs?

According to a University of Florida report, exposure to THMs may pose an increased risk of cancer. According to Rebekah Grossman, two THMs, chloroform and dibromochloromethane, are carcinogens; and another THM, bromodichloromethane, has been identified as a mutagen, which alters DNA. Mutagens are considered to affect the genetics of future generations in addition to being carcinogenic. A California study indicates that THMs may be responsible for reproductive problems and miscarriage. The study found a miscarriage rate of 15.7 percent for women who drank five or more glasses of cold water containing more than 0.075 mg/l TTHM, compared to a miscarriage rate of 9.5 percent for women with low TTHM exposure. In addition to these risks, TTHMs are linked to bladder cancer, heart, lungs, kidney, liver, and central nervous system damage.

Then why were THMs not regulated for small communities earlier?

The earlier THM regulations only applied to larger systems (those serving more than 10,000 people). EPA, keeping the following factors in mind, believed that exempting smaller systems would not negatively affect the health of small community people because:

a) The majority of smaller systems use groundwater as their source;
b) Small systems usually use less detention time and hence less contact time;
c) Lack of required professional expertise to control the THMs and the necessity of disinfection; and
d) Small systems often use less chlorine.

How can systems reduce THMs?

Drinking water systems can reduce THM formation in several ways.

Continued on next page

Newsletter Provides Biosolids Information

How to best treat and dispose of the residual waste materials that result from wastewater treatment processes (sewage sludge and domestic septage, for example) is a hot topic in many small communities. By managing these wastes as biosolids in accordance with federal, state, and local regulations, communities often can cost-effectively recycle and beneficially apply these wastes to improve soils or to rehabilitate land damaged by mining or other industries.

The Fall 1998 issue of *Pipeline* presents a brief overview of the options small communities have for managing biosolids and some of the requirements of the federal Part 503 regulations. It also includes information about the safety and benefits of biosolids recycling. *Pipeline*, a National Small Flows Clearinghouse (NSFC) publication, is written for the general public. Readers are invited to reproduce and distribute the information in *Pipeline* to help with public education efforts.

Subscriptions and copies of current Pipeline *issues are free plus shipping and handling. Back issues cost 20 cents each plus shipping and handling. To request a copy of the Fall 1998 biosolids issue, item #SFPLNL15, call the NSFC at (304) 293-4191 or (800) 624-8301, or e-mail* nsfc_orders@estd.wvu.edu, *or write to NSFC, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064.*

What are trihalomethanes?

Continued on next page

a) Reduce the organic material before chlorinating the water.
Treatment techniques, such as coagulation, sedimentation, and filtration can remove most of the organic materials. However, activated carbon can be used to remove greater amounts of organic material than can be removed by other techniques.

b) Optimize chlorine usage.

c) Change the point of chlorine addition in the treatment series.
If the point of chlorine addition is moved to a location after sedimentation or filtration, THM production can be reduced as these processes remove parts of the organic matter.

d) Use alternative disinfection methods.
Using a mixture of chlorine and ammonia (chloramine) reduces THM formation. Chloramine also disinfects, but doesn't form THMs. Ozone can be used along with chlorine and chloramine. Chlorine dioxide is another alternative. The combination of disinfectants not only reduces the formation of THMs, but also maintains the residual concentration in the distribution system. But changing the disinfectant may alter the whole treatment process and might affect the removal of other contaminants.

e) Other methods:
These include filtration, aeration, boiling, distillation, commercial home treatment systems or filters, nanofiltration, activated carbon filtering, or leaving tap water standing in a pitcher in the fridge overnight.

For more information about disinfectants, see Tech Brief: Disinfection, item #DWBLPE47.

For further information, comments or suggestions for future On Tap *Q&As, call Madabhushi at (800) 624-8301 or (304) 293-4191. You may also contact him via e-mail at* bmadabhu@wvu.edu.

References:

1. U.S. Environmental Protection Agency Office of Ground Water and Drinking Water. 1998. “Drinking Water Priority Rulemaking: Microbial and Disinfection Byproduct Rule.” EPA 815/F/98/0014.
2. University of Florida.1998. Institute of Food and Agricultural Sciences. “Trihalomethanes and Our Water Supply.”
3. *Ottawa Citizen*. November 1998. “Federal Panel Ties Tapwater to Cancer.”
4. Pontius, Frederic. 1998. “Small Systems to tackle Disinfection Byproducts.” *Journal of American Water Works Association.* Denver: American Water Works Association.
5. Chen, P.P.T. and G.B. Rest. 1996. “Disinfection Byproducts, the Techniques of Control,” *Journal of Public Works* (36-38).
6. Uza, M., R. LeCraw, L. Fortin, H. Broomer, and A. Edmonds. 1997. “Optimization of WTPs for the Control of Trihalomethanes.” Ontario Water and Wastewater Division Conference.
7. Grossman, Rebekah. February 2, 1999. “Tap Water: The Last Taboo.” *http://www.wholeliving.com/articles/tapwater.html*
8. “Tech Brief: Disinfection.” Summer 1996. *On Tap.* Morgantown: National Drinking Water Clearinghouse. Item #DWBLPE47.

Do you want to learn how the Year 2000 (Y2K) computer problem might affect your drinking water plant? The National Drinking Water Clearinghouse has collected Y2K Web sites at http://www.ndwc.wvu.edu.