

**OPERATORS ROUND TABLE
DU PAGE PUMPING STATION
January 19, 2019
9:00 AM**

Status of DuPage Water Commission

The Commission's sales for the month of December were a total of 1.93 billion gallons. This represents an average day demand of 62.4 million gallons per day (MGD), which is lower than the December 2017 average day demand of 65.4 MGD. The maximum day demand was 65.6 MGD recorded on December 5, 2018, which is lower than the December 2017 maximum day demand of 75.0 MGD. The minimum day flow was 58.0 MGD.

The Commission's recorded total precipitation for the month of December was 3.32 inches compared to 0.58 inches for December 2017. The level of Lake Michigan for December 2018 is 580.2 (Feet IGLD 1985) compared to 580.0 (Feet IGLD 1985) for December of 2017.

Water Conservation

Ongoing: Staff worked with the Villages of Clarendon Hills and Westmont on the design of the Richmond Education Gardens & Apiary underground cistern system that the Commission helped sponsor. The cistern was installed, and the final grading and underground work has been pushed out due to weather. The concrete curbs, foundation posts, pavers, hand pump and landscaping installation are planned for spring 2019.

New: Staff has earned both their Earth and Water Quality Flags. Both flags will be presented by SCARCE during tonight's board meeting; which will include a presentation on the Commission's environmental accomplishments.

Bartlett Water Service

Benchmark Construction has completed the installation of all pipe, valves and pipe casings and successfully pressure tested 20,365 feet of pipe for the feeder main. Benchmark is working on punch-list items and restoration however the remaining restoration work will be delayed until Spring 2019. Water main construction is well underway for the additional work on the Village of Bartlett distribution system.

Construction of Bartlett Meter Station 30A by the contractor, J.J. Henderson and Sons, Inc., is approximately 30% complete and should be under roof by the end of February. The Contract Completion Date is April 19, 2019.

Pipeline Maintenance

John Neri Construction Co. Inc., completed the temporary pavement restoration and leak repair work on a 20" diameter prestressed concrete pressure pipe located at the intersection of Kuhn Road and North Avenue in the Village of Carol Stream, has been completed. Permanent pavement restoration will take place in the spring.

Staff continues collecting cathodic protection test point data.

Staff continues inspection and repair work on distribution system blow off valves.

Instrumentation / Remote Facilities Overview**Storage systems**

Utility Service Co., Inc. has replaced the PAX Mixer motor at Standpipe 4 East. Staff is also working with Utility Service Co., Inc. in efforts to develop terms of a maintenance contract for all the Standpipe mixers.

Meter Stations

McWilliams is working on QRE-8.007 WAO and is expected to be completed by mid-February.

IWS, Inc. has completed the contract for Masonry and Concrete Joint Rehabilitation at the 73 Sites in DuPage County. Some additional construction joint failures were uncovered during the progression of the work and have been corrected.

The Commission will be sending out RFP for some addition work at the Standpipes and Meter Station locations, so you may see some Engineers and Contractor personal at these sites.

Facility Operations

The project to install high efficiency LED lighting fixtures for the DuPage Pumping Station and Administration facilities has been completed. This project is expected to provide an economical saving to the Commission in electrical costs as well labor and maintenance costs.

Volt Electric, Inc. performed Infrared Scanning and necessary repairs of electrical equipment at the DuPage Pumping Station.

The Commission has sent one of or 30 MGD pumps out for inspection and service to Xylem Water Solutions U.S.A., Inc.

Security

The Commission is continuing to update its Emergency Response Plan (ERP) and its Vulnerability Assessment as our system grows.

It is imperative that all Commission's padlocks at the metering stations are not locked out of the loops. The Water Purchase Agreement requires the Commission to have access to all metering stations at any time.

The Commission will be installing new electronic padlocks and door locks at all the Commission remote facilities.

Winter Operations

With the Spring around the corner, we are starting to experience changing weather patterns, and we need to start thinking about bouts of freezing and thawing temperatures. We need to make sure all catch basins and storm drain are open to help prevent localized flooding

Make sure to keep the water moving in your elevated tanks to prevent any water quality problems.

Make sure the overflow drains and vents are clean and drain properly to prevent any freezing problems.

You cannot exceed the 1.7 times allocation.

You must take water at a constant rate.

Manhole lids are in place

Catch basins are clean

Meter Testing

Annual Customer Meter Calibration Program

The Becon customer portal is completed and will be rolled out sometime in March

The process of final calibration of all the old meters has begun and is approximately 15% complete. Meter Technician Rick Nolan and should be contacted with any questions or concerns.

The Commission is available to test the large customer meters. We can test 6" 8" and 10" turbine meters. Please contact John Schori at (630) 834-0100 if you have any questions concerning this service.

Regulations

The proposed changes to the minimum chlorine residual are under review and there is no time limit as of now.

Increase Free Chlorine residual from 0.2 mg/l to 0.5 mg/l

Increase Combined Chlorine residual from 0.5 mg/l to 1.0 mg/l

Renewal Training

2/3 of renewal training must be comprised of technical training

Water Quality

The Commission is not feeding chlorine at this and we expect to start up sometime in May when the water temperature increases or if the regulations change. Current water temperature at the crib is 33 degrees.

Water Rates

Water rate for 2018 \$4.94/1000 gallons

A proposed water rate for 2019 will be discussed at our February Board meeting.

Other

The Commission invites you to view all Committee and Commission Agendas which can be found on our website at www.dpwc.org.

Please contact the Commission with any changes in water department personnel, phone and/or pager numbers. This is an important part of our ERP for system emergency purposes.

Please provide the Commission with a valid e-mail address. All meeting minutes will be distributed via e-mail.

The next Operators Round Table will be April 19, 2019 at 9:00 A.M. or before if events warrant.

AWWA

WaterCon 2019
Will be held
March 18 - 21st, 2019

Seminars

Tuesday, January 29, 2019

01/29/19 -Groundwater, Wells & Pumping Equipment (Batavia) IEPA#113627

1/29/2019

Location: Batavia, Illinois Time: Registration at 7:30 AM

Thursday, January 31, 2019

01/31/19 - Water/Sewer Plans 101 (Crystal Lake) IEPA#13520

1/31/2019

Location: Crystal Lake, Illinois Time: Registration at 7:30 AM

Tuesday, February 5, 2019

02/05/19- 02/26/19 Pumps & Pumping Wrkshp: 4-wk (Lake Bluff) IEPA#13663

2/5/2019

Location: Lake Bluff, Illinois Time: Registration begins at 7:30 am

Wednesday, February 6, 2019

02/06/19-Cybersecurity Awareness for Utilities (St. Charles) IEPA#13641

2/6/2019

Location: St. Charles, Illinois Time: Registration at 7:30 AM

Tuesday, February 12, 2019

02/12/19 - Water Storage Tanks & Reservoirs - O&M (Park Forest) IEPA#13449

2/12/2019

Location: Park Forest, Illinois Time: Registration at 7:30 AM

Tuesday, March 5, 2019

03/05/19 - Science of Sewer Jetting (McHenry) IEPA#13392

3/5/2019

Location: McHenry, Illinois Time: Registration at 7:30 AM

Wednesday, March 6, 2019

03/06/19 - Lead Service Line Forum (NorrIDGE) IEPA#13658

3/6/2019

Location: Norridge, Illinois Time: Registration at 7:30 AM

Thursday, March 7, 2019

03/07/19 - Lead & Copper - Water Treatment & Corrosion Control (Rockford) IEPA#13482

3/7/2019

Location: Rockford, Illinois Time: Registration at 7:30 AM

03/07/19 - Water Storage Tanks & Reservoirs - O&M (St Charles) IEPA#13450

3/7/2019

Location: St Charles, Illinois Time: Registration at 7:30 AM

Tuesday, March 12, 2019

03/12/19 - Utility Math Refresher - 6 Hour (Batavia) IEPA#13633

3/12/2019

Location: Batavia, Illinois Time: Registration at 7:30 AM

Wednesday, March 27, 2019

03/27/19-06/5/19 Water Distribution Sys O&M for Class C/D 10-week Night Class (Elmhurst) IEPA13586

3/27/2019 » 6/5/2019

Location: Elmhurst, Illinois Time: Registration at 5:30 pm; Class from 6:00-9:00 pm

Questions & Answers

If you have any comments concerning these issues or would like to have a topic discussed at the next Round Table Meeting, please feel free to email me at mcghee@dpwc.org.

Handouts:

1. DuPage Laboratory Bench Sheet for October, November 2018, and December 2018.
2. Avoid Falls This Winter
3. Safety Tips for Outside Activities in the Winter
4. Chicago Comprehensive Chemical Analysis for 2018

OPERATORS ROUND TABLE

Village of Addison	Village of Itasca
Jim Russo	
Argonne Labs	Village of Lisle
Tad Jesionowski	
Alan Moler	
Village of Bartlett	Village of Lombard
Tom Ruzicka	
Dan Dinges	
Village of Bensenville	City of Naperville
	Pat O'Malley
Village of Bloomingdale	Village of Oak Brook
Elias Vega	
Village of Carol Stream	City of Oak Brook Terrace
Brian Evans	
Village of Clarendon Hills	Village of Roselle
Joe Ferrel	Mike Schulz
	Karen Young
City of Darien	Village of Schaumburg
	Brian Wagner
City of Darien	Village of Villa Park
	Tom Venchus
Village of Downers Grove	Village of Westmont
	Brian Beusse
DuPage County	City of Wheaton
Jim Joers	Al McMillan
City of Elmhurst	Village of Willow brook
	Joe Coons
	Andrew Passero
Village of Glendale Heights	Village of Winfield
Roman Consini	
Village of Glen Ellyn	City of Wood Dale
John Hubsy	

Village of Hinsdale	Village of Woodridge
Illinois American	

DUPAGE WATER COMMISSION LABORATORY BENCH SHEET
MONTHLY REPORT FOR OCTOBER 2018

LEXINGTON SUPPLY

DUPAGE DISCHARGE

DAY	FREE CL ₂	TURBIDITY	PO ₄	FREE CL ₂	TURBIDITY	TEMP	pH	Fluoride	PO ₄	P.A.C.	ANALYST
	mg/l	NTU	mg/l	mg/l	NTU				°F	mg/l	
1	0.98	0.08	0.53	0.91	0.09	69	7.8	0.8	0.56	0	RC
2	0.95	0.08	0.52	0.94	0.08	68	7.7	0.8	0.52	0	RC
3	0.98	0.07	0.59	0.97	0.08	68	7.8	0.8	0.54	0	AM
4	0.95	0.08	0.59	0.90	0.08	68	7.8	0.8	0.54	0	AM
5	0.99	0.08	0.57	0.92	0.09	68	7.8	0.8	0.51	0	AM
6	0.99	0.08	0.59	0.94	0.09	68	7.8	0.8	0.52	0	KD
7	0.98	0.08	0.53	0.84	0.09	68	7.8	0.8	0.53	0	KD
8	0.99	0.08	0.54	0.92	0.08	68	7.8	0.8	0.54	0	KD
9	0.92	0.08	0.55	1.00	0.08	67	7.7	0.8	0.57	0	KD
10	0.95	0.08	0.55	0.98	0.08	67	7.7	0.8	0.56	0	KD
11	0.94	0.07	0.53	0.86	0.10	67	7.8	0.8	0.53	0	KD
12	1.00	0.07	0.54	0.98	0.07	66	7.7	0.8	0.57	0	KD
13	0.93	0.08	0.54	0.92	0.08	66	7.8	0.9	0.54	0	AM
14	0.90	0.07	0.59	0.94	0.08	66	7.8	0.9	0.54	0	AM
15	1.10	0.07	0.57	0.92	0.09	65	7.7	0.9	0.59	0	AM
16	0.97	0.08	0.56	0.95	0.08	64	7.7	0.8	0.53	0	AM
17	1.00	0.08	0.56	0.93	0.08	64	7.7	0.9	0.57	0	AM
18	0.94	0.07	0.55	0.90	0.08	64	7.7	0.8	0.57	0	AM
19	0.92	0.08	0.54	0.90	0.08	63	7.7	0.8	0.59	0	AM
20	1.00	0.08	0.53	0.90	0.09	63	7.7	0.9	0.53	0	KD
21	0.97	0.07	0.57	0.88	0.09	64	7.7	0.8	0.52	0	KD
22	0.99	0.08	0.57	0.90	0.09	64	7.7	0.8	0.52	0	KD
23	0.93	0.09	0.54	0.80	0.10	64	7.7	0.8	0.51	0	KD
24	0.95	0.09	0.52	0.83	0.10	64	7.7	0.8	0.54	0	KD
25	0.97	0.07	0.58	0.79	0.10	63	7.8	0.8	0.54	0	KD
26	0.91	0.07	0.54	0.83	0.10	64	7.7	0.8	0.55	0	KD
27	1.00	0.07	0.54	0.85	0.08	63	7.8	0.9	0.58	0	CT
28	0.94	0.07	0.59	0.87	0.09	61	7.7	0.9	0.58	0	CT
29	0.99	0.06	0.58	0.84	0.08	62	7.8	0.8	0.57	0	CT
30	0.98	0.07	0.56	0.86	0.09	62	7.7	0.8	0.53	0	CT
31	0.99	0.06	0.58	0.82	0.08	62	7.8	0.9	0.52	0	CT
AVG	0.97	0.08	0.56	0.90	0.09	65	7.7	0.8	0.55	0	
MAX	1.10	0.09	0.59	1.00	0.10	69	7.8	0.9	0.59	0	
MIN	0.90	0.06	0.52	0.79	0.07	61	7.7	0.8	0.51	0	



Terrance McGhee
Manager of Water Operations

DUPAGE WATER COMMISSION LABORATORY BENCH SHEET
MONTHLY REPORT FOR NOVEMBER 2018

LEXINGTON SUPPLY

DUPAGE DISCHARGE

DAY	FREE CL ₂	TURBIDITY	PO ₄	FREE CL ₂	TURBIDITY	TEMP	pH	Fluoride	PO ₄	P.A.C.	ANALYST
	mg/l	NTU	mg/l	mg/l	NTU	°F			mg/l	LBS/MG	INT
1	0.98	0.06	0.54	0.92	0.07	61	7.8	0.9	0.53	0	CT
2	1.00	0.06	0.57	0.94	0.08	61	7.7	0.9	0.57	0	CT
3	1.03	0.06	0.56	0.91	0.07	62	7.7	0.9	0.53	0	RC
4	0.99	0.06	0.54	0.91	0.08	62	7.8	0.9	0.52	0	RC
5	0.98	0.06	0.58	0.95	0.08	61	7.8	0.9	0.58	0	RC
6	1.00	0.06	0.57	0.90	0.09	61	7.8	0.9	0.58	0	KD
7	0.92	0.07	0.56	0.98	0.08	60	7.8	0.9	0.60	0	RC
8	1.08	0.06	0.51	0.96	0.09	61	7.8	0.9	0.54	0	RC
9	0.97	0.08	0.52	0.94	0.08	62	7.8	0.9	0.60	0	RC
10	1.10	0.06	0.52	0.91	0.08	61	7.8	0.9	0.57	0	CT
11	0.97	0.06	0.56	0.96	0.07	62	7.7	0.9	0.58	0	CT
12	1.06	0.07	0.54	0.92	0.08	60	7.8	0.9	0.52	0	RC
13	0.96	0.06	0.57	0.93	0.09	60	7.8	0.9	0.57	0	RC
14	0.97	0.08	0.51	0.97	0.09	60	7.7	0.9	0.58	0	CT
15	1.10	0.07	0.59	0.93	0.07	60	7.7	0.8	0.57	0	CT
16	1.00	0.07	0.52	0.94	0.09	59	7.7	0.9	0.56	0	CT
17	0.99	0.06	0.56	0.91	0.08	58	7.8	0.9	0.55	0	RC
18	0.99	0.07	0.52	0.92	0.08	59	7.7	0.9	0.53	0	RC
19	1.00	0.06	0.51	0.94	0.08	56	7.7	0.9	0.51	0	CT
20	1.00	0.07	0.52	0.89	0.08	57	7.7	0.9	0.53	0	CT
21	1.06	0.08	0.51	0.91	0.08	58	7.7	0.9	0.57	0	RC
22	0.95	0.06	0.52	0.94	0.08	57	7.8	0.9	0.52	0	RC
23	1.02	0.06	0.54	0.90	0.09	58	7.8	0.9	0.51	0	RC
24	1.00	0.07	0.50	0.91	0.08	57	7.7	1.0	0.53	0	AM
25	1.00	0.08	0.53	0.92	0.09	57	7.7	1.0	0.55	0	AM
26	1.00	0.06	0.53	0.93	0.07	56	7.8	0.9	0.55	0	RC
27	0.91	0.07	0.57	0.93	0.08	57	7.8	0.9	0.56	0	RC
28	0.98	0.08	0.55	0.93	0.08	57	7.8	0.9	0.57	0	AM
29	1.10	0.07	0.51	0.95	0.09	56	7.7	0.9	0.52	0	AM
30	1.10	0.07	0.56	0.97	0.08	54	7.7	1.0	0.57	0	AM
31										0	
AVG	1.01	0.07	0.54	0.93	0.08	59	7.8	0.9	0.55	0	
MAX	1.10	0.08	0.59	0.98	0.09	62	7.8	1.0	0.60	0	
MIN	0.91	0.06	0.50	0.89	0.07	54	7.7	0.8	0.51	0	



Terrance McGhee
Manager of Water Operations

DUPAGE WATER COMMISSION LABORATORY BENCH SHEET
MONTHLY REPORT FOR DECEMBER 2018

LEXINGTON SUPPLY

DUPAGE DISCHARGE

DAY	FREE CL ₂ mg/l	TURBIDITY NTU	PO ₄ mg/l	FREE CL ₂ mg/l	TURBIDITY NTU	TEMP °F	pH	Fluoride	PO ₄ mg/l	P.A.C. LBS/MG	ANALYST INT
1	1.10	0.07	0.56	0.99	0.08	54	7.7	0.9	0.57	0	KD
2	1.00	0.06	0.56	0.99	0.08	53	7.7	0.9	0.61	0	KD
3	1.00	0.07	0.57	0.96	0.08	52	7.7	1.0	0.57	0	AM
4	0.95	0.07	0.50	0.93	0.08	52	7.7	1.0	0.54	0	AM
5	0.98	0.08	0.53	0.93	0.09	52	7.7	1.0	0.54	0	KD
6	0.99	0.06	0.54	0.90	0.08	51	7.8	0.9	0.60	0	KD
7	0.95	0.05	0.57	0.90	0.09	52	7.7	0.9	0.61	0	KD
8	1.00	0.06	0.59	0.95	0.08	52	7.6	1.0	0.59	0	AM
9	1.00	0.07	0.58	0.92	0.08	52	7.6	1.0	0.61	0	AM
10	0.94	0.06	0.58	0.83	0.09	51	7.7	1.0	0.57	0	KD
11	0.98	0.09	0.59	0.85	0.15	50	7.7	1.0	0.63	0	KD
12	1.00	0.07	0.57	0.86	0.12	51	7.7	1.0	0.61	0	KD
13	1.00	0.08	0.58	0.90	0.09	51	7.7	1.0	0.59	0	AM
14	1.00	0.07	0.54	0.89	0.08	50	7.6	1.0	0.51	0	AM
15	1.00	0.06	0.53	0.82	0.09	51	7.7	1.0	0.57	0	KD
16	1.00	0.06	0.53	0.86	0.09	51	7.7	1.0	0.58	0	KD
17	1.00	0.07	0.54	0.90	0.08	51	7.6	1.0	0.55	0	AM
18	0.97	0.07	0.56	0.90	0.09	52	7.6	1.0	0.53	0	AM
19	1.00	0.08	0.55	0.86	0.09	52	7.7	1.0	0.58	0	KD
20	1.00	0.08	0.55	0.87	0.09	52	7.7	1.0	0.57	0	KD
21	1.00	0.06	0.55	0.86	0.10	52	7.8	1.0	0.63	0	KD
22	0.93	0.06	0.55	0.87	0.09	53	7.7	1.0	0.55	0	CT
23	0.92	0.08	0.53	0.87	0.09	53	7.7	1.0	0.53	0	CT
24	0.97	0.06	0.52	0.87	0.09	52	7.7	0.9	0.55	0	CT
25	1.00	0.08	0.54	0.89	0.08	51	7.6	1.0	0.57	0	AM
26	0.91	0.06	0.54	0.83	0.09	53	7.6	0.9	0.62	0	CT
27	0.93	0.06	0.55	0.86	0.09	52	7.7	0.9	0.51	0	CT
28	1.00	0.06	0.58	0.79	0.08	53	7.7	0.9	0.57	0	CT
29	0.98	0.06	0.57	0.94	0.09	52	7.6	0.9	0.61	0	CT
30	0.88	0.07	0.58	0.86	0.08	51	7.6	1.0	0.54	0	AM
31	0.90	0.06	0.57	0.81	0.10	54	7.6	0.9	0.56	0	CT
AVG	0.98	0.07	0.55	0.89	0.09	52	7.7	1.0	0.57	0	
MAX	1.10	0.09	0.59	0.99	0.15	54	7.8	1.0	0.63	0	
MIN	0.88	0.05	0.50	0.79	0.08	50	7.6	0.9	0.51	0	



Terrance McGhee
Manager of Water Operations

AVOID FALLS THIS WINTER

As we approach winter and the inevitability of snow and ice, we urge you to give attention to the number one cause of employee injuries, SLIP-and-FALL. For the last three years these incidents have been the leading source of injuries for IPRF members from November through March. Over the last three winters, 899 incidents were reported. This is due partially to having to walk and work on ice and snow. The direct financial cost for these injuries, within the IPRF membership, has exceeded \$11 million. Indirect costs such as overtime hours, lost productivity, and accident investigation are immeasurable. While we cannot prevent the occurrence of ice and snow in Illinois, we can do something to reduce accidents and minimize injuries.

Please keep the following in mind this winter:

PROPER CLOTHING INCLUDING FOOTWEAR – It all begins with what you wear.

- Wearing a heavy, bulky coat will keep you warm and cushion you if you fall.
- A bright scarf and gloves makes it easier for motorists to see you. Don't let your clothing block your vision.
- Wear gloves or mittens so you do not have to put your hands in your pockets. This aids balance and allows you to put your hands out if you do fall.
- Avoid shoes/boots with smooth soles. Rubber and neoprene soles with grooves provide better traction.
- A product such as YakTrax that goes on over your shoes/boots gives you added traction similar to putting chains on tires. There are a variety of such products available.



WHERE TO WALK – When possible, avoid ice-coated surfaces. Snow is less of a hazard. Cleared surfaces are obviously preferable. Walk on designated walk areas as much as possible. When walking on sloped areas, it may be better to walk on the grassy edge than on the slippery slope. If walking in or near motor vehicle traffic, keep an eye on moving vehicles. Walk against traffic so you can see vehicles approaching.

HOW TO WALK – *Walk Like a Penguin!*

- Keep your feet pointed out slightly to increase your center of gravity. Extend your arms to your sides for better balance. This means your hands cannot be in your pockets for warmth. That's why gloves or mittens are important.
- Walk flat-footed with knees 'loose'.
- Go slow. Sure it's cold and you want to get inside as quickly as you can, but you are more likely to slip and fall while walking too fast. Try to allow yourself more time to get to your destination so you don't have to hurry.
- It's best not to carry a heavy load in your hands, as that will affect your balance. Use a backpack or briefcase with a shoulder strap.
- Use extra care when entering or exiting vehicles. With only one foot on the ground, you have only half the traction.
- Give your full attention to where you walk. No smart phone use while walking please.



If you fall, try to relax your muscles.



HOW TO FALL – Despite all care and precautions, you may still fall. In the event you find yourself falling, try to avoid landing on your knees, wrists or spine. Relax your muscles. You are likely to injure yourself less if you are relaxed when you hit the ground. If you fall backwards, tuck your chin down to avoid hitting your head with full force on the ground.

INDOOR SAFETY – Just because you made it safely to your destination, don't think you are 'home free.' If you wore traction devices, take them off before you walk on indoor surfaces. Remove ice and snow from your shoes/boots. Melting snow can lead to wet, slippery floors. Watch for wet floors, especially at entrances and exits.

MAINTENANCE EFFORTS – Whether the removal of snow and ice is the responsibility of an outside contractor or your employees, please remember the walks should be cleared and treated before work begins, during the period of precipitation and towards the end of the work day in order to minimize employees' exposure to hazardous walkways. Chemicals, such as calcium chloride, may be used to melt ice and snow. Sand may be used to increase traction.

Attention must be given to keeping the floors dry inside. This can be done by mopping, using fans or spreading rugs near doorways. Each has advantages and disadvantages. Mopping requires a lot of attention and manpower. Blowing warm air may not remove moisture fast enough. Rugs can get wet and need to be changed out when they do.

Gutters and drains should not empty onto walking surfaces, as water will re-freeze on cold pavement. This will create rather than remove a hazard. Have them deposit melted ice/snow onto non-walking areas such as grass, rocks or soil.

While Slip-and-Fall is the most frequent cause of injury, we have seen the number of incidents steadily decrease over the last three years. By continuing to give attention to this risk we hope to see this trend of decreasing injuries continue this winter. Please do your part to keep yourself and your co-workers safe this winter.

This article was written by Bill Bloch, IPRF Loss Control Consultant. If you have any questions or would like more information, please contact Bill at bbloch@iprf.com or call (217) 444-1220.

When the Weather Outside Is Frightful: Safety Tips for Outside Activities in the Winter

Winter is upon us. And with winter come winter activities. Make sure you and your family are safe when spending time outside this winter.

Sandy Smith | Jan 03, 2014

I laughed the first time I heard that the Weather Channel had started naming winter storms. I stopped laughing when a snowmageddon named Hercules sucker punched the Midwest and East Coast. I completely stopped laughing when the air temperature plummeted to -13F, with windchills dropping it to -35F.

Nearly two feet of snow have dropped on my hometown of Cleveland, Ohio. I worked from home yesterday and today, but a trip to a local store yesterday – a five-minute drive from my house – was a white-knuckled nightmare of a driving experience. I shoveled our walks and driveway twice yesterday, only to wake up this morning to three-foot drifts across the driveway this morning. More shoveling is in my future.

Shoveling snow is a major winter activity in many parts of the United States. Many of us consider shoveling a form of exercise, and in fact, only 15 minutes of shoveling counts as moderate physical activity. Keep this in mind, or you can increase your risk of an injury.

Take it from someone who knows; a few precautions while you are shoveling can help prevent unnecessary pain and suffering.

- If you have a history of heart problems or are inactive, talk to your doctor before shoveling. There is an increase in the number of fatal heart attacks among shovelers.

- Warm up and stretch before you get started.
- Drink plenty of water to keep yourself hydrated.
- Shovel only fresh snow. Freshly fallen, powdery snow is easier to shovel than the wet, packed-down variety.
- Push, don't lift, the snow. It's easier on your back and uses less energy than lifting.
- Pick the right shovel for you. Don't pick up too much at once. Use a small shovel, or fill only one-fourth or one-half of a large one.
- Lift with your legs bent, not your back. Keep your back straight. By bending and "sitting" into the movement, you'll keep your spine upright and less stressed. Your shoulders, torso and thighs can do the work for you.
- Dress the part. Dress in layers; if you work up a sweat, you'll be able to remove some of those layers. Wear a hat and gloves to protect your extremities, wrap on a scarf and wear wool socks and waterproof boots to protect your body from the cold temperature.
- If your body is telling you to stop, listen to it. Stop if you feel pain or start seeing heart attack warning signs: chest pain; shoulder, neck or arm pain; dizziness, fainting, sweating or nausea; and/ or shortness of breath. Get medical help immediately.

Kids and Winter

When it snows, most children have fun by engaging in snowball fights, sledding, building snowmen and making snow angels. However, it is important for parents to prepare their children for the cold weather. Outside activities are wonderful as long as appropriate safety precautions are taken.

Nathan Timm, M.D., an emergency medicine physician at Cincinnati Children's Hospital Medical Center, says it's important for children to stay

active during the winter. Timm offers these tips for parents to keep their child safe, healthy and happy while playing outside this winter:

Preparation

Children should be dressed warmly. Mittens, gloves, hats and multiple thin layers will help keep them dry and warm. Children (and adults) still can get sunburned in the winter, especially if sun is reflecting off snow. Sun screen should be applied liberally to sun-exposed skin to help prevent sunburn.

Set appropriate time limits. Depending on the temperature, parents should allow their child to play outside for 30-60 minutes, and then come back inside to get warmed up (and parents should follow that advice for themselves).

Frostbite and Frostnip

- Regularly check to make sure the child's clothes are not wet. Children get much colder when wet. Make sure that the child is not having any signs of frostnip and or frostbite:
- Frostnip occurs when cold temperatures damage the skin and blood vessels. Frostnip usually affects the face, feet or fingertips and causes numbness and may turn skin white or blue-white.
- Frostbite literally is the freezing of the skin. The skin can feel waxy, frozen and numb, and can cause blisters.

Sledding

When sledding, younger children should be kept in separate areas from older children and the following precautions should be taken:

- A child should sit or lie down feet first rather than head first to help reduce likelihood of head injury.
- Avoid sledding hills with trees or other obstructions.
- Sled only on hills covered in snow, not ice.
- A child should wear a helmet while sledding to prevent head injuries.

Source URL: <https://www.ehstoday.com/health/when-weather-outside-frightful-safety-tips-outside-activities-winter>

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

1st Quarter

Sample Date	3/14/2018	3/14/2018	3/14/2018	3/13/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018
LAB ID Nos.	18C1490	18C1491	18C1492	18C1453-58	18C1493	18C1494	18C1495	18C1459-63	18C1464-68

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street	SOUTH		North	Central	Central	North
TEMPERATURE		°C	00010	8	8	7	8	6	7	7	7	9
TURBIDITY	TT	N.T.U.	82079	5.0	0.10	0.10	0.20	2.00	0.10	0.10	0.20	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 Cc	1 Cc	2 Cc	1 Cc	2 Cc	1 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	1 M	1 M	1 Mm	1 Mm	1 M	1 M	1 M	1 M
COLOR	*15	Pt.-Co. CU	00080	42	5	0	1	19	0	1	1	1
pH	*6.5-8.5	STD. Units	00040	8.2	7.8	7.8	7.9	8.2	7.9	7.9	7.9	7.9
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.22	1.30	0.91	ND	1.14	1.12	0.99	0.98
SATURATION INDEX, LANGELIER		UNITS +/-		0.06	-0.45	-0.46	-0.34	ND	-0.36	-0.36	-0.28	-0.28
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	112	102	102	104	111	103	105	106	105
CONDUCTIVITY		uS/cm		312	310	308	313	311	309	309	315	315
BROMIDE		Br, mg/L	71870	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
CHLORIDE	*250	Cl, mg/L	00940	14.4	15.1	15.8	15.2	14.4	14.9	14.9	15.7	15.5
FLUORIDE	4	F, mg/L	00951	0.18	0.75	0.81	0.81	0.14	0.69	0.70	0.72	0.71
SULFATE	*250	SO ₄ , mg/L	00945	23.1	27.6	27.3	27.9	23.1	26.0	25.1	26.6	26.8
HARDNESS		CaCO ₃ , mg/L	00900	140	140	141	141	141	140	141	140	140
CALCIUM		Ca, mg/L	00916	37.4	36.6	36.6	37.1	37.4	36.4	36.4	37.2	37.1
MAGNESIUM		Mg, mg/L	00927	12.8	12.3	12.3	12.5	12.8	12.3	12.3	12.5	12.5
POTASSIUM		K, mg/L	00937	1.34	1.21	1.24	1.27	1.36	1.23	1.20	1.24	1.25
SODIUM		Na, mg/L	00006	8.64	8.45	8.51	8.77	8.82	8.62	8.62	8.97	8.97
SOLIDS, TOTAL DISSOLVED (H)	*500	TDS, mg/L	00150	173	145	143	146	166	143	152	154	164
SOLIDS, TOTAL (H)		Tot. Sol., mg/L	00500	176	161	159	162	177	166	155	166	175
TOTAL ORGANIC CARBON		TOC, mg/L	00680	1.73	1.50	1.46	1.49	1.78	1.66	1.64	1.56	1.52
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	2.04	1.50	2.41	2.81	4.48	4.97	3.69	2.55	3.66
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITROGEN, NITRATE	10	N, mg/L	00620	0.389	0.382	0.373	0.382	0.422	0.369	0.372	0.387	0.376
NITROGEN, NITRITE	1	N, mg/L	00615	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	0.027	0.423	0.483	0.498	0.021	0.470	0.474	0.480	0.481
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.060	1.01	1.12	1.12	0.050	1.08	1.10	1.08	1.06
CYANIDE, TOTAL	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

H - Holding Time Exceeded

R - Data rejected

Cyanide - LFM Did not meet QC Criteria

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

1st Quarter

Sample Date	3/14/2018	3/14/2018	3/14/2018	3/13/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018	3/14/2018
LAB ID Nos.	18C1490	18C1491	18C1492	18C1453-58	18C1493	18C1494	18C1495	18C1459-63	18C1464-68

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			South	North	Central	Central
ALUMINUM	*50-200	Al, µg/L	01105	151	41.4	39.9	38.1	59.2	50.0	53.1	48.6	43.9
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	21.2	19.6	19.4	19.2	20.6	19.6	19.5	19.5	19.3
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	25.6	25.3	25.3	25.2	25.1	25.3	24.5	25.2	25.0
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.40	1.73	1.63	1.95	1.43	1.68	1.01	1.74	1.64
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	1.50	<1	<1	2.12	<1	<1	<1	<1	<1
IRON	*300	Fe, µg/L	00031	170	<1	<1	3.78	56.4	<1	<1	2.10	5.23
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	1.47	<1	<1	<1	<1	<1
LITHIUM ***		Li, µg/L	01132	3.58	3.14	3.14	3.20	3.34	3.17	3.12	3.18	3.18
MANGANESE	*50	Mn, µg/L	01055	4.34	<1	<1	<1	1.45	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM		Mo, µg/L	01062	1.01	<1	<1	1.03	<1	<1	<1	<1	1.01
NICKEL		Ni, µg/L	01067	1.73	1.32	1.22	1.66	1.56	1.16	1.16	1.65	1.80
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	1412	1236	1242	1265	1093	1120	1114	1154	1159
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	116	115	114	121	116	114	115	124	129
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	3.03	1.34	1.45	1.48	1.16	1.38	1.37	1.46	1.54
VANADIUM		V, µg/L	00985	3.06	<1	<1	<1	4.91	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	15.2	<1	<1	<1	13.8	13.4

* Federal Primary/Secondary MCLs ** Action Level TT - Treatment Technique ND - not detected Distribution samples results are averages

***Lithium - LFM did not meet QC Criteria

Rachel Dault
 CHIEF WATER CHEMIST

Heather Walsh
 DIRECTOR OF LABORATORIES

Andrew Poff
 MANAGER OF WATER QUALITY

[Signature]
 DEPUTY COMMISSIONER

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

2nd Quarter

Sample Date	5/25/2018	5/24/2018	5/24/2018	5/29/18- 5/31/18	5/24/2018	5/24/2018	5/24/2018	5/23/18- 5/29/18	5/23/2018
LAB ID Nos.	18C3172	18C3148	18C3149	18C3250 - 18C3255	18C3142	18C3143	18C3144	18C3109 - 3111, 18C3256-3257	18C3112 - 18C3116

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
TEMPERATURE		°C	00010	13	13	13	14	12	12	12	13	15
TURBIDITY	TT	N.T.U.	82079	0.60	0.20	0.05	0.45	0.70	0.05	0.05	0.10	0.08
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 M	1 Cc	1 E	1 E	1 M	1 Cc	1 E	1 Cc	1 E
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	1 M	1 E	1 M	1 M	1 M	1 E	1 M	1 E
COLOR	*15	Pt.-Co. CU	00080	<15	<15	<15	<15	<15	<15	<15	<15	<15
pH	*6.5-8.5	STD. Units	00040	8.2	7.8	7.8	7.9	8.2	7.9	7.9	7.9	7.9
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.39	1.34	0.89	ND	1.39	1.37	0.99	0.88
SATURATION INDEX, LANGELIER		UNITS +/-		0.13	-0.31	-0.31	-0.20	0.11	-0.26	-0.27	-0.21	-0.16
ALKALINITY, PHENOLPHTHALEIN		0	00415	0	0	0	0	0	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	106	100	100	100	106	100	100	101	101
CONDUCTIVITY		uS/cm		289	298	298	297	298	305	304	301	307
BROMIDE (Sampled 6-25-18)		Br, mg/L	71870	<0.1	<0.1	<0.1	H	<0.1	<0.1	<0.1	H	H
CHLORIDE (Sampled 6-25-18)	*250	Cl, mg/L	00940	14.5	17.3	17.2	H	13.9	16.5	16.9	H	H
FLUORIDE	4	F, mg/L	00951	0.14	0.83	0.79	0.80	0.14	0.73	0.73	0.74	0.73
SULFATE (Sampled 6-25-18)	*250	SO ₄ , mg/L	00945	21.4	25.8	25.4	H	22.3	26.1	25.8	H	H
HARDNESS		CaCO ₃ , mg/L	00900	140	140	141	140	140	140	140	140	140
CALCIUM		Ca, mg/L	00916	35.7	34.9	35.0	35.1	35.8	35.0	35.1	35.0	35.0
MAGNESIUM		Mg, mg/L	00927	12.4	12.1	12.2	12.2	12.4	12.2	12.2	12.1	12.1
POTASSIUM		K, mg/L	00937	1.17	1.28	1.27	1.29	1.21	1.29	1.32	1.29	1.29
SODIUM		Na, mg/L	00006	8.69	8.85	8.81	8.68	9.42	9.59	9.60	9.13	9.33
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	157	155	153	161	155	158	156	157	159
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	167	157	154	168	167	179	161	162	167
TOTAL ORGANIC CARBON (H)		TOC, mg/L	00680	1.90	1.64	1.67	1.58	1.88	1.56	1.60	1.63	1.65
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	7.11	6.43	6.32	6.55	6.44	4.95	5.61	6.69	5.64
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITROGEN, NITRATE (Sampled 6-25-18)	10	N, mg/L	00620	0.536	0.517	0.503	H	0.426	0.582	0.579	H	H
NITROGEN, NITRITE (Sampled 6-25-18)	1	N, mg/L	00615	<0.1	<0.1	<0.1	H	<0.1	<0.1	<0.1	H	H
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.01	0.525	0.446	0.515	0.011	0.518	0.521	0.532	0.534
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	0.038	1.21	1.02	1.17	0.076	1.18	1.19	1.18	1.22
CYANIDE, TOTAL	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

H - Holding Time Exceeded

R - Data rejected

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

2nd Quarter

Sample Date	5/25/2018	5/24/2018	5/24/2018	5/29/18- 5/31/18	5/24/2018	5/24/2018	5/24/2018	5/23/18- 5/29/18	5/23/2018
LAB ID Nos.	18C3172	18C3148	18C3149	18C3250 - 18C3255	18C3142	18C3143	18C3144	18C3109 - 3111, 18C3256-3257	18C3112 - 18C3116

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	15.1	82.6	81.9	101	17.7	77.0	79.2	74.9	69.5
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	2000	Ba, µg/L	01007	21.3	20.2	20.0	20.1	21.2	20.3	20.3	20.0	20.0
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	24.0	25.5	24.9	24.9	24.0	25.1	25.4	24.9	24.9
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	1.60	1.48	1.53	1.29	1.88	1.53	1.11	1.19	1.07
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	<1	<1	<1	<1	1.00	0.80
IRON	*300	Fe, µg/L	00031	16.0	<1	<1	6.69	19.4	<1	<1	3.41	5.90
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	<1	<1	<1	<1	<1	1.37
LITHIUM ***		Li, µg/L	01132	2.89	2.76	2.75	2.80	2.80	2.83	4.90	2.79	2.79
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	<1
MERCURY	2	Hg, µg/L	71900	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM		Mo, µg/L	01062	<1	<1	<1	1.08	<1	1.00	<1	<1	<1
NICKEL		Ni, µg/L	01067	1.79	1.77	1.77	1.76	1.80	1.74	1.74	1.77	1.77
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	808	956	940	931	818	930	932	917	934
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	124	124	121	126	124	123	124	124	124
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<1	1.48	1.27	1.39	<1	1.42	1.42	1.43	1.42
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	8.24	1.35	<1	1.84	14.9	47.6

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

***Lithium - LFM did not meet QC Criteria

Roshale Ball
CHIEF WATER CHEMIST

Hassan Selal
DIRECTOR OF LABORATORIES

Andrew Roth
MANAGER OF WATER QUALITY

~~DEPUTY COMMISSIONER~~

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

3rd Quarter

Sample Date	8/21/2018	8/21/2018	8/21/2018	8/22/2018	8/21/2018	8/21/2018	8/21/2018	8/22/2018	8/22/2018
LAB ID Nos.	18C5503	18C5504	18C5505	18C5562-18C5567	18C5500	18C5501	18C5502	18C5581-5583, 18C5568-69	18C5576-18C5580

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
TEMPERATURE		°C	00010	22	23	23	24	19	22	22	23	25
TURBIDITY	TT	N.T.U.	82079	0.25	0.10	0.10	0.10	0.35	0.10	0.10	0.10	0.15
THRESHOLD ODOR, STRAIGHT	*3	T.O.N	00086	1 M	1 Cc	1 Cc	1 Cc	1 M	2 Cc	1 Cc	1 Cc	1 Cc
THRESHOLD ODOR, DECHLORINATED	*3	T.O.N.		1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M
COLOR	*15	PL-Co. CU	00080	1	<1	<1	<1	12	<1	<1	<1	<1
pH	*6.5-8.5	STD. Units	00040	8.4	7.9	7.9	8.0	8.35	7.85	7.88	8.0	8.0
FREE CHLORINE RESIDUAL		CL ₂ , mg/L	50064	ND	1.13	1.23	0.73	ND	1.33	1.28	1.01	0.82
SATURATION INDEX, LANGELIER		UNITS +/-		0.22	-0.15	-0.52	-0.16	0.21	-0.51	-0.47	-0.11	-0.13
ALKALINITY, PHENOLPHTHALEIN		0	00415	2	0	0	0	2	0	0	0	0
ALKALINITY, TOTAL		CaCO ₃ , mg/L	00410	107	100	100	101	106	100	100	101	100
CONDUCTIVITY		uS/cm		296	300	299	301	294	300	300	301	300
BROMIDE (Sampled 6-25-18)		Br, mg/L	71870	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
CHLORIDE (Sampled 6-25-18)	*250	Cl, mg/L	00940	14.8	16.6	16.1	17.0	14.3	16.8	16.7	16.0	16.0
FLUORIDE	4	F, mg/L	00951	0.15	0.89	0.82	0.85	0.15	0.76	0.76	0.74	0.75
SULFATE (Sampled 6-25-18)	*250	SO ₄ , mg/L	00945	21.4	25.7	22.4	26.2	22.3	24.9	26.8	25.8	25.7
HARDNESS		CaCO ₃ , mg/L	00900	139	138	137	139	138	138	138	139	138
CALCIUM		Ca, mg/L	00916	35.2	34.8	34.6	35.0	35.0	34.9	34.9	35.1	34.9
MAGNESIUM		Mg, mg/L	00927	12.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
POTASSIUM		K, mg/L	00937	1.05	1.11	1.06	1.11	1.04	1.09	1.08	1.06	1.10
SODIUM		Na, mg/L	00006	8.13	8.66	8.63	8.65	7.91	8.48	8.50	8.48	8.53
SOLIDS, TOTAL DISSOLVED	*500	TDS, mg/L	00150	149	158	160	161	164	165	159	162	159
SOLIDS, TOTAL		Tot. Sol., mg/L	00500	173	184	185	185	176	192	186	183	185
TOTAL ORGANIC CARBON (H)		TOC, mg/L	00680	1.88	2.04	1.85	1.96	1.89	2.00	1.92	1.85	1.88
OXYGEN DEMAND, CHEMICAL		O, mg/L	00335	3.92	4.91	4.93	4.25	5.66	3.30	4.70	3.78	4.43
NITROGEN, AMMONIA		N, mg/L	00610	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
NITROGEN, NITRATE	10	N, mg/L	00620	0.188	0.160	0.173	0.166	0.216	0.170	0.193	0.156	0.149
NITROGEN, NITRITE	1	N, mg/L	00615	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
ORTHOPHOSPHATE		PO ₄ , mg/L	00660	<0.06	0.581	0.580	0.551	<0.06	0.498	0.476	0.591	0.599
PHOSPHATE, TOTAL		PO ₄ , mg/L	00650	<0.06	0.986	0.872	1.05	0.074	1.17	1.08	1.16	1.18
CYANIDE, TOTAL	200	CN, ug/L	00720	<12	<12	<12	<12	<12	<12	<12	<12	<12

* Federal Primary/Secondary MCLs

** Action Level
 H - Holding Time Exceeded

TT - Treatment Technique
 R - Data rejected

ND - not detected
 H - 18C5503 (TDS)

Distribution samples results are averages
 TOC- LFM & Duplicate did not meet QC Standards

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

3rd Quarter

Sample Date	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018	8/21/2018
LAB ID Nos.	18C5503	18C5504	18C5505	18C5562-18C5567	18C5500	18C5501	18C5502	18C5581-5583, 18C5568-69	18C5576-18C5580

PARAMETER	IEPA MCL	DETERMINED AS	STORET NUMBER	SOUTH WATER PURIFICATION PLANT				JARDINE WATER PURIFICATION PLANT				
				1	2A	2B	3	4	5A	5B	6	7
				RAW LAKE	OUTLETS		***DISTRIBUTION SOUTH	RAW LAKE	OUTLETS		***DISTRIBUTION	
					73rd Street	79th Street			North	Central	Central	North
ALUMINUM	*50-200	Al, µg/L	01105	11.2	215	219	187	17.6	190	200	139	141
ANTIMONY	6	Sb, µg/L	01268	<1	<1	<1	<1	<1	<1	<1	<1	<1
ARSENIC	10	As, µg/L	01002	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIIUM	2000	Ba, µg/L	01007	20.3	19.7	20.0	20.0	20.1	19.4	19.4	19.1	19.3
BERYLLIUM	4	Be, µg/L	01012	<1	<1	<1	<1	<1	<1	<1	<1	<1
BORON		B, µg/L	01022	24.1	25.0	25.0	25.7	24.3	24.5	24.7	24.8	25.2
CADMIUM	5	Cd, µg/L	01027	<1	<1	<1	<1	<1	<1	<1	<1	<1
CHROMIUM	100	Cr, µg/L	01034	<1	<1	<1	<1	<1	<1	<1	<1	<1
COBALT		Co, µg/L	01037	<1	<1	<1	<1	<1	<1	<1	<1	<1
COPPER	**1300	Cu, µg/L	01042	<1	<1	<1	1.01	<1	<1	<1	<1	<1
IRON	*300	Fe, µg/L	00031	5.85	<1	<1	3.72	13.1	1.49	<1	2.71	30.9
LEAD	**15.0	Pb, µg/L	01051	<1	<1	<1	1.18	<1	<1	<1	1.06	<1
LITHIUM		Li, µg/L	01132	2.55	2.66	2.67	2.69	2.59	2.62	2.63	2.58	2.61
MANGANESE	*50	Mn, µg/L	01055	<1	<1	<1	<1	<1	<1	<1	<1	1.17
MERCURY	2	Hg, µg/L	71900	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM		Mo, µg/L	01062	<1	1.45	3.95	2.53	1.09	1.07	1.05	2.66	3.00
NICKEL		Ni, µg/L	01067	1.60	1.55	1.54	1.62	1.65	1.54	1.56	1.62	1.63
SELENIUM	50	Se, µg/L	01147	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILICON		Si, µg/L	01142	792	907	885	905	853	910	911	924	917
SILVER	*100	Ag, µg/L	01077	<1	<1	<1	<1	<1	<1	<1	<1	<1
STRONTIUM		Sr, µg/L	01082	114	115	114	115	114	114	112	112	114
THALLIUM	2	Tl, µg/L	01059	<1	<1	<1	<1	<1	<1	<1	<1	<1
TITANIUM		Ti, µg/L	01152	<1	1.17	1.09	1.14	<1	1.22	1.30	1.27	1.32
VANADIUM		V, µg/L	00985	<1	<1	<1	<1	<1	<1	<1	<1	<1
ZINC	*5000	Zn, µg/L	01092	<1	<1	<1	10.1	1.61	<1	<1	16.2	10.6

* Federal Primary/Secondary MCLs

** Action Level

TT - Treatment Technique

ND - not detected

Distribution samples results are averages

Rashida Dault
CHIEF WATER CHEMIST

Haseem Sabih
DIRECTOR OF LABORATORIES

Shehnaaz
MANAGER OF WATER QUALITY

~~DEPUTY COMMISSIONER~~