

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF:	)	
	)	
PUBLIC WATER SUPPLIES:	)	R18-17
PROPOSED NEW 35 ILL. ADM	)	
CODE 604 AND AMENDMENTS.	)	(Rulemaking- Water)
TO 35 ILL. ADM CODE PARTS 601,	)	
602, 607 AND 611	)	

**NOTICE OF FILING**

PLEASE TAKE NOTICE that I have electronically filed today with the Illinois Pollution Control Board Illinois EPA's PRE-FILED TESTIMONY OF STEPHEN JOHNSON for the above captioned rulemaking, a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By: /s/Joanne M. Olson  
Joanne M. Olson  
Assistant Counsel  
Division of Legal Counsel

DATED: August 31, 2017

Joanne M. Olson #6293500  
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THIS FILING IS SUBMITTED ON RECYCLED PAPER

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PUBLIC WATER SUPPLIES: ) R18-17  
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602, 607 AND 611 )

**PRE-FILED TESTIMONY OF STEPHEN JOHNSON**

My name is Stephen Johnson. Prior to my December 31, 2016, retirement from the Illinois Environmental Protection Agency (Illinois EPA or Agency) I was the Regional Manager for the Division of Public Water Supplies Champaign Regional Office. The Champaign office was responsible for conducting engineering evaluations, providing technical assistance, and responding to citizen complaints at more than 250 community water supplies in 19 counties. We also provided information and assistance to the Permit, Compliance Assurance, Groundwater Sections of the Division of Public Water Supplies to ensure the safety of the Illinois' drinking water supplies. Since my retirement I have continued to work as a contract employee on the updating of the Public Water Supply regulations project started in 2012.

I began my career with the Illinois EPA in January 1980 after graduating from the University of Missouri Rolla with a Bachelor of Science Degree in Civil Engineering. I worked my entire career in the Champaign Regional Office as an Engineer before becoming Regional Manager in May 2012. My curriculum vita is attached.

I would now like to focus my testimony on certain areas of the regulatory proposal. Specifically, my testimony will focus on Part 604 Subpart D, H, J, L and M.

The purpose of Subpart D is to provide design requirements for the use of aeration equipment. Depending on the water plant design aeration equipment can be used to oxidize iron and manganese so they can be removed by filtration, remove carbon dioxide prior to the water being treated by the lime softening process (resulting in chemical cost savings), remove dissolved gases, or remove volatile organic chemicals including those that are known to be carcinogenic. According to proposed Section 604.400 (a), all aerators except those indicated must be properly screened to prevent contamination from entering the water being treated. This Subpart was based on the 2012 Recommended Standards for Water Works. Proposed Section 604.420 provides the requirements for the use of Packed Tower Aeration for removal of Volatile Organic Chemicals(VOC). Depending on the VOC(s) present in the water a pilot study may be necessary to verify the effectiveness of the treatment prior to a full-scale installation.

Subpart H contains the design requirements for the two treatment processes used to soften water at community water supplies that choose to do so. This Subpart was based on the 2012 Recommended Standards for Water Works. Softening water removes hardness (calcium and magnesium) and provides two primary benefits, the first is reducing accumulation of scale in water fixtures and the second is reducing soap consumption in laundry and bathing. Proposed Section 604.800 contains the design requirement for lime softening and Proposed Section 604.810 contain the design requirements for cation exchange softening.

Subpart J contains the design requirements for several water treatment processes that provide water treatments benefits where used but are not common enough to warrant being included in individual Subparts. This Subpart was based requirements of Part 653 and the 2012 Recommended Standards for Water Works. These treatment processes include presedimentation for surface waters that routinely contain a high amount of particulate matter that requires removal

through settling prior to the water receiving other treatment, anion exchange (primarily for nitrate or nitrite removal below the Maximum Contaminant Level), iron and manganese control (removal by aeration/settling/filtration or by greensand type filter material using permanganate as an oxidizing chemical) or control using a sequestering chemical when iron and or manganese is present in a limited amount), taste and odor control (make the water that originates from a surface water source more aesthetically acceptable to customer), and powered activated carbon, which is one process for taste and odor control.

Subpart L contains the design requirement for raw and finished water pump stations, booster pumps stations, automatic and remote controlled stations, and appurtenances that are common to all pump stations. This Subpart was based requirements of Part 653 and the 2012 Recommended Standards for Water Works. All pumping facilities must be designed to maintain the sanitary quality of the water. To promote the safety of operational personnel, Proposed Section 604.1205 contains provisions that pumping stations must be constructed to avoid creating a confined space and include adequate ventilation. To insure reliability of service at least two pumps must be provided in all pumping facilities.

This part also contains the design requirements for booster pump stations. Pumps in these stations pump water directly from water mains to another area of a distribution system. A booster station provides increased water supply and water pressure to customers downstream of the booster pump station. Provisions must be made to insure at the least the minimum required water pressure is provided should the booster pump station be out of service.

Subpart M contains the design requirements that apply to water storage at community water supplies. This Subpart was based on existing Part 653 and the 2012 Recommended Standards for Water Works and applies to treatment plant storage, elevated storage, hydropneumatic storage,

and combination pressure and ground storage. Subpart M defines the information to be considered when sizing a new elevated storage to insure an adequate supply of water is available without oversizing the tank which could negatively impact water quality. This subpart contains the requirements for use of hydropneumatic storage and combination pressure/ground storage at very small water supplies.

Finally, The Illinois EPA will provide additional witnesses to discuss areas of the regulations to provide a record of the outlined rationale. I thank the Board for allowing me to file testimony in this matter. I will supplement the testimony as needed during the hearing, and I am happy to address any questions.

Respectfully submitted,

By: /s/ Stephen C. Johnson  
Stephen C. Johnson, P.E.

DATED: August 31, 2017

1021 N. Grand Ave. East  
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Date: 08/11/2017

**CURRICULUM VITAE OF STEPHEN C. JOHNSON, P.E.**

**I. Education and Professional Registration**

- 2003 to Present Illinois Licensed Professional Engineer (License No. 062056683)
- 2003 to Present Continuing Education: Miscellaneous state and federal short courses and seminars: including supervisory level training in Department of Homeland Security National Incident Management System and CMS Interview Training. Attended and participated in numerous seminars, conferences, and webinars to provide 30 hours of continuing education required each two years for Professional Engineer License renewal.
- 1975 to 1979 Bachelor of Science in Civil Engineering-University of Missouri Rolla

**II. Summary of Experience**

Thirty-seven years of experience working as a professional engineer in the Champaign Regional Office at the Illinois Environmental Protection Agency with increasing level of responsibility. Manager of the Champaign Region between May 2012 and my retirement on December 31, 2016.

**III. Chronological Experience**

- 5/12 to 12/16 **MANAGER, CHAMPAIGN REGION DIVISION OF PUBLICWATER SUPPLIES**  
Managed staff of environmental engineers and clerical staff in the Champaign Region to provide oversight of more than 250 community water supplies in 19 counties. Provided technical assistance to water supply operators and officials, responded to consumer complaints, provided information to other Sections in the Division of Public Water Supplies. I also performed many administrative duties in the Champaign Region.
- 6/92 to 5/12 **ENVIRONMENTAL PROTECTION SPECIALIST IV**  
Continued to conducted engineering evaluations of community water supplies, provided technical assistance to water supply operators and officials, responded to consumer complaints, provided information to other Sections in the Division of Public Water Supplies. Beginning in January 2003 was lead worker in absence of Regional Manager and was responsible for review of other staff members work. Prior to that date I performed some additional duties in absence of Regional Manager. I also participated in every four year federal NEEDs surveys.

1/83 to 5/92

**ENVIROMNMENTAL PROTECTION ENGINEER III**

Continued to conduct engineering evaluations of community water supplies, provided technical assistance to water supply operators and officials, responded to consumer complaints, provided information to other Sections in the Division of Public Water Supplies.

7/81 to 1/83

**ENVIROMNMENTAL PROTECTION ENGINEER II**

Continue to conduct engineering evaluations of community water supplies, provided technical assistance to water supply operators and officials, responded to consumer complaints, provided information to other Sections in the Division of Public Water Supplies.

1/80 to 7/81

**ENVIROMNMENTAL PROTECTION ENGINEER 1**

Conducted engineering evaluations of community water supplies of increasing complexity, provided technical assistance to water supply operators and officials, responded to consumer complaints, provided information to other Sections in the Division of Public Water Supplies.

**CERTIFICATE OF SERVICE**

Joanne M. Olson, Assistant Counsel for the Illinois EPA, herein certifies that she has served a copy of the foregoing NOTICE OF FILING, and PRE-FILED TESTIMONY OF STEPHEN JOHNSON, upon persons listed on the Service List, by placing a true copy in an envelope duly addressed bearing proper first class postage in the United States mail at Springfield, Illinois on August 31, 2017, or by sending an email from my email account (joanne.olson@illinois.gov) to the email addresses designated below with the following attached as a 9 page PDF document in an e-mail transmission on or before 5:00 pm on August 31, 2017.

By: /s/Joanne M. Olson

THIS FILING IS SUBMITTED ELECTRONICALLY AND SERVED ON RECYCLED PAPER

**SERVICE LIST**

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<p>Illinois Pollution Control Board 100 W. Randolph St. Suite 11-500 Chicago, IL 60601 <a href="mailto:Tim.Fox@Illinois.gov">Tim.Fox@Illinois.gov</a> daniel.robertson@illinois.gov</p>	<p>Justin DeWitt, P.E. Chief of Gen. Engineering Illinois Department of Public Health 535 West Jefferson Springfield, IL 62761 justin.dewitt@illinois.gov</p>