

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 WILLIAM DAVID (DAVE) MCMILLAN 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
1021 N. Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
(217) 782-5544

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PRE-FILED TESTIMONY OF WILLIAM DAVID (DAVE) MCMILLAN

My name is Dave McMillan. I began my current role as Illinois' Drinking Water Administrator at the Illinois Environmental Protection Agency (Illinois EPA or Agency) in December of 2010. In this position, I have led a collaborative program consisting of four sections staffed by environmental engineers, geologists and specialists. The Permit, Compliance Assurance, Groundwater and Field Operations Sections ensure the safety of the Illinois' drinking water supplies. Together the staff of the Division of Public Water Supplies oversees allocation of resources to conduct inspections, evaluate source water protection programs, issue permits and ensure the safety and compliance of community water systems.

My advancement to Manager of the Division of Public Water Supplies began in 1985 when I graduated from Bradley University with a Bachelor of Science Degree in Geology. I began my career in a Field Office of the Illinois EPA in the newly formed Groundwater Section. In 1992, I advanced to a Unit Manager role at the Central Office in Springfield. In 2004, I became the interim Manager of the Field Operations Section of the Division of Public Water Supplies, a position that later became permanent. In 2010, I was promoted to my current position. My curriculum vita is attached as Exhibit 1.

Today I would like to address the need to update Illinois' regulations for community public water supplies. It is my belief that updating the design, maintenance and operation regulations

culminates the second phase of an approach that the Illinois EPA embarked on approximately six years ago. The goal of this phased approach was to create a more concise and understandable framework for ensuring the protection of Illinois water consumers. (Phase one was initiated in 2015 with revisions to the permitting rules in Part 602 and the ownership and responsible personnel rules in Part 603.) As with the first phase of the regulatory update process, phase two of the rulemaking process is based as much on common sense as sound engineering and operational practices.

Once again, the Illinois EPA must recognize the ongoing lack of funding available to Illinois water supplies. For this reason, we believe making the proposed revisions to the regulations is more necessary than ever in advancing health protection through increasing regulatory discernment without cost to Illinois tax payers. Specifically, updating the provisions in Parts 601, 602, 607, 611 and creating a new Part 604 serve to provide a more concise, user-friendly set of regulations to govern the actions of community water supplies in their ongoing efforts to protect public health. The basis of the design, maintenance and operations regulation put forth in the new Part 604 are found in the existing Part 653, Part 654 and the 2012 Recommended Standards for Water Works (Recommended Standards), currently incorporated by reference. Additionally, the proposed modifications to Part 601, 602, and 611 will achieve constancy within Subtitle F. Finally, following adoption of these regulatory changes, the Agency will repeal Part 607, Part 653, Part 654, Part 651 and Section 602.115. The Illinois EPA believes that these actions will reduce confusion and increase understanding with a result of enhanced health protection.

I believe it is important to note the general construction of the proposed Part 604. Following Agency review of existing constructs of the current regulations and the Recommended Standards, the approach taken in the development of this regulatory proposal was to organize the

regulation based upon the course of treating water from source through distribution. Therefore, Subpart A reflects general requirement that can apply to any phase of the treatment of drinking water production. Subpart B and C contain rules on source development and source water protection planning, respectively. Subpart D contains requirements for aeration. Subpart E and F contain requirements for clarification and filtration, respectively. Subpart G contains requirements for disinfection. Subpart H contains softening requirements and Subpart I contains stabilization requirements. Subpart J contains other treatment requirements not already addressed and Subpart K explains chemical addition. The focus of Subparts L, M and N are on the course of treated water following the treatment works. The primary focus of Subpart L is pumping facilities. Subpart M's focus is on storage and N's focus is on the distribution system. The final subpart of the proposal is Subpart O which contains prohibitions from cross-connections to the water system.

I would now like to focus my testimony on certain areas of the regulatory proposal. Specifically, my testimony will focus on Part 604 Subpart A, N, O and Section 604.725. Additionally, I will speak to the Special Exception Permit regulation the Illinois EPA proposes moving to Part 602 and a new "Operating Permit by Rule" provision proposal that will also be included in Part 602.

The purpose of Subpart A of the proposed regulation is to provide the requirements that always apply to community water supplies regardless of the type of treatment or the stage of water production. These regulations include water system capacity, treatment and chemical usage and are largely based upon the Illinois EPA's existing Technical Policy Statements contained in Part 653 and the Recommended Standards. In certain cases, the Illinois EPA is also providing updates in the proposal to what was originally required in Part 653 based upon current industry practices.

I would like to draw attention to a new proposed requirement Subpart A. In Section 604.140, the Illinois EPA is asking the Board to require a nitrification action plan at community water supplies that are vulnerable to nitrification in their distribution systems. These water supplies are generally those that chloraminate as opposed to those that use a free chlorine disinfection residual. The Illinois EPA believes that this new requirement is necessary to protect public health. When not properly monitored, water systems that use chloramines can be vulnerable to diminishing residual concentrations. These can be season concerns resulting from increasing water age or temperature or can result from of inadequate treatment control. Possibly of most significant concern that nitrification action plans can address is improperly balancing ammonia levels during chloramination process. Without controlling this process, formation of nitrite/nitrate in the water supply distribution system can occur and the opportunity for bacteria to propagate in the system's water mains and storage tanks can prevail.

As discussed previously, the purpose of Subpart N of Part 604 of the proposed rule is to provide the requirements for community water supply distribution systems. These systems consist of water mains, hydrants and valves. The distribution system does not include water service lines to privately held properties. This portion of the regulatory proposal includes materials that may be used in water main construction and the separation of water mains from high risk activities, particularly common source of sanitary contamination. This Subpart is essential in maintaining the sanitary and chemical quality of water supplied to consumers and is largely based upon the Recommended Standards.

Subpart O of the regulatory proposal contains prohibitions from certain types of cross connections and enumerates the requirements for cross connection control devices. Further, the Subpart requires water systems to have an active cross connection control program and ensure that

devices are inspected annually by an approved cross connection control device inspector. Of note, the Illinois EPA has recognized the burden that the existing biennial cross connection control survey places on community water supplies. Therefore, this proposal asks the Board to consider changing the frequency to a three-year survey. Additionally, this Subpart attempts to clearly separate the regulatory authority for devices used within the community water system and those associated with the plumbing at private, commercial or industrial properties. This Subpart largely combines the existing sections of Part 607 and Part 653 that relate to cross connection control.

Next, I wish to discuss the basis for a proposed change to the existing regulation for residual chlorine levels. In proposed Section 604.725, the Illinois EPA suggests increasing the minimum free chlorine residual to 0.5 mg/l and the minimum combined residual to 1.0 mg/l. (The current residual chlorine requirement is found in Section 653.604. This section requires a minimum free chlorine residual of 0.2 mg/l or a minimum combined residual of 0.5 mg/l be maintained in the distribution system.) The Illinois EPA believes that this increase is necessary for the protection of public health. It is the belief of the Illinois EPA that stronger disinfectant residuals are more effective in the control of bacteria in water supply distribution systems. Additionally, from a programmatic standpoint, a reported free chlorine residual of 0.2 mg/l is right at the detection limit of the colorimeters commonly used by many water supply operational staff. The Illinois EPA is concerned quantification of 0.2 mg/l may erroneously indicate a disinfectant residual in some instances. Further, the Illinois EPA believes that the impact of this increase in disinfectant residual reflects the best practices already in place in most Illinois' water supplies.

Another suggested change to the organization of the proposed regulations relates to Special Exception Permits (SEPs) issued by the Illinois EPA. Because the Agency proposes expanding SEPs beyond Part 611, the SEP requirements should be moved to the general permitting rules in

Part 602. In so doing, SEP requirements will only require a single section, Section 602.600, but may be referenced in Part 604 as well as Part 611. The contents of the proposed Section 602.600 would be identical to those found in the existing Section 611.110(a)-(d).

Finally, I would like to discuss one additional provision in the Illinois EPA's proposal to the Board. The intent of this new section, Section 602.325, is to streamline the operating permit process for water main extensions and construction project that do not require disinfection prior to being placed into service. The Illinois EPA estimates that the projects eligible for the operating permit by rule provision constitute about 80 percent of the existing construction plans reviewed. Making this procedural change will result in cost savings from paperwork reduction and postage. However, more importantly, community water supplies should be able to place projects into service much more rapidly (as soon as they mail the certification form to the Illinois EPA) and minimize water supply disruptions.

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/ W David McMillan
W. David McMillan, P.G.
Manager, Division of Public
Water Supplies

DATED: August 31, 2017

1021 N. Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
(217) 782-5544

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Date: 08/11/2017

CURRICULUM VITAE OF WILLIAM D. MCMILLAN, P.G.

I. Education and Professional Registration

- 1998 to Present Illinois Professional Geologist Licensure (License No. 196-000255)
- 1986 to Present Continuing Education: Illinois Central College-Water Plant Operations & Environmental Law course work. 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.
- 1981 to 1985 Bachelor of Science in Geological Sciences-Bradley University
- 1984 Field Mapping course completed with Texas Tech University

II. Summary of Experience

Approximately thirty-two years of experience working as a professional geologist in hydrogeology/environmental geology at the Illinois Environmental Protection Agency. Interdisciplinary experience with progressive responsibility as manager of the Division of Public Water Supplies (DPWS), the Field Operations Section-DPWS and the Planning and Assessment Unit of the Groundwater Section- DPWS.

III. Chronological Experience

- 12/10 to Present **MANAGER, DIVISION OF PUBLICWATER SUPPLIES**
Manage four sections staffed by environmental engineers, geologists and specialists who ensure the safety of the Illinois' drinking water supplies. Oversee allocation of resources to conduct inspections, evaluate source water protection programs, issue permits and ensure safety and compliance of community water systems.
- 9/05 to 12/10 **MANAGER, FIELD OPERATIONS SECTION**
Manage six field offices staffed by environmental engineers and specialists who ensure the safety of the Illinois' drinking water supplies. Oversee allocation of resources to conduct operational visits, engineering evaluations, response to emergencies, investigation of consumer complaints, provision of technical assistance to water supply officials, inspection of State Revolving Fund loan projects, and other special investigations.
- Specifically, establish the frequency and content of evaluations of community water supply facilities to ensure that safety and adequacy of Illinois' drinking water. Coordinate with the Illinois Emergency Management Agency and Illinois EPA Office of Chemical Safety during community water supply service interruptions resulting emergencies/disasters. Coordinate with the Illinois EPA Division of Legal Council and Office of the Attorney General to ensure community

water supply compliance with state law and Illinois Pollution Control Board regulations. Coordinate with other Illinois EPA managerial staff regarding multi-jurisdictional issues and resolutions.

2/04 to 9/05

ACTING MANAGER, FIELD OPERATIONS SECTION

Temporarily Manage the Division of Public Water Supplies' Field Operations Section. This interim position provided oversight to six field offices as previously described.

10/98 to 2/04

MANAGER, PLANNING AND ASSESSMENT UNIT

Manage a diverse professional and technical staff. Coordinate and provide administrative support of scientific studies or projects pertaining to groundwater/source water protection. Gather and analyze data to effectively manage groundwater monitoring, inspections, assessment efforts and special technical studies. Address and confer with diverse groups within the regulated community and public to assist in the preparation of concise written and verbal reports and prioritize groundwater protection implementation efforts. Perform short and long term information management/planning in conjunction with knowledge of hydrogeology and watershed hydrology. Act on behalf of the Groundwater Section manager in his/her absence and assist in making policy decisions. Provide technical and administrative support to other Illinois EPA Units and Sections, as well as, U.S. Environmental Protection Agency staff which directly and indirectly relate to the implementation of groundwater protection programs.

9/92 to 10/98

SUPERVISOR, PLANNING AND ASSESSMENT UNIT

Supervise professional and technical staff engaged in groundwater monitoring, inspections, assessment efforts and special technical studies. Provide coordination and design of data management efforts. Consult with professional staff on complex groundwater assessment related activities. Coordinate inter and intra-Agency activities involving the assessment and planning related activities of the groundwater program. Oversee implementation of assessments under groundwater rules and regulations. Additionally, provide assistance and support to the Groundwater Section manager on specialized programmatic issues.

9/89 to 9/92

ENVIRONMENTAL PROTECTION SPECIALIST III.

Assisted in developing more complex functions and acted as a lead worker for graduate student interns and statewide field staff involved in routine and special monitoring; conducted legislative mandated well site surveys and reports; developed, reviewed and revised field procedures; assisted in conducting training seminars and workshops; assigned work - based on individual subordinate abilities and helped evaluate work performance. Assisted in coordination and acted as a local contact for the Central Illinois Groundwater Protection Planning Committee meetings.

11/87 to 9/89

ENVIRONMENTAL PROTECTION SPECIALIST II.

Assisted in monitoring program coordination, development and implementation by field staff. Act as lead worker for field staff and intern; related to staff new/revised responsibilities; evaluated field procedures, prepared reports; completed U.S. Environmental Protection Agency's National Pesticide Study. Assisted Section Manager in design and implementation of monitoring and surveying programs and conducted water quality monitoring in the Peoria Region.

11/86 to 11/87

ENVIRONMENTAL PROTECTION SPECIALIST I.

Conducted water quality monitoring of groundwater wells in the Peoria Region - including specialized field testing; maintained equipment, logs, field journals, QC records. Submitted accurate and timely monitoring/inspection forms, written records, and sampling records. Analyzed scientific data, conducted special intensive groundwater surveys. Attended and participated in meetings conferences, etc., performed all other duties as assigned.

11/85 TO 11/86

LIFE SCIENCE CAREER TRAINEE

Under direct supervision, learned to conduct field monitoring of wells, operated test equipment and transported samples to the laboratory; learned to independently conduct well monitoring, QC, etc., in a timely and effective manner; learned field office reporting procedures, logs, record keeping, requisitions and conduct necessary to accomplish goals; learned equipment calibration and maintenance; participated in design and operation of routine and special studies

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 WILLIAM DAVID (DAVE) MCMILLAN, 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 12 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

<p>Office of the Attorney General 69 West Washington, St. Suite 1800 Chicago, IL 62706 mdunn@atg.state.il.us enviro@atg.state.il.us</p>	<p>Office of General Counsel Illinois Department of Natural Resources One Natural Resources Way Springfield, IL 62702-1271 gabe.grosboll@illinois.gov</p>
<p>Illinois Pollution Control Board 100 W. Randolph St. Suite 11-500 Chicago, IL 60601 Tim.Fox@Illinois.gov 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>