

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 filed today with the Illinois Pollution Control Board ILLINOIS EPA'S RESPONSES TO PRE-FILED QUESTIONS a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: /s/Rex L. Gradeless
Rex L. Gradeless
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Date: October 12, 2017

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THIS FILING IS SUBMITTED ELECTRONICALLY AND SERVED ON RECYCLED PAPER

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ILLINOIS EPA’S RESPONSES TO PRE-FILED QUESTIONS

NOW COMES the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, (“Illinois EPA” or “Agency”) by and through its counsel, and for its Responses to Pre-, states as follows.

- 1) On October 2, 2017, the hearing officer entered an order directing the Agency to respond to questions posed by the Illinois Pollution Control Board (“Board”) by October 17, 2017. The Agency’s responses to the Board’s questions are attached hereto as Exhibit A.
- 2) On October 2, 2017, the City of Springfield, Office of Public Utilities d/b/a City Water, Light and Power (“CWLP”) also posed questions to the Agency. The Agency’s responses to CWLP are attached hereto as Exhibit B.

Wherefore, the Illinois EPA respectfully submits its Responses to Pre-Filed Questions.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

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EXHIBIT A – ILLINOIS EPA’S RESPONSES TO BOARD’S PRE-FILED QUESTIONS

Section 601.101

- 1) **To clarify proposed subsection (a), would the following change be acceptable to IEPA?**

Owners and official custodians of a public water supply in the State of Illinois shall provide, pursuant to the Act, Board Rules, and the Safe Drinking Water Act (42 USC 300f et seq.), continuous operation and maintenance of public water supply facilities to assure so that the water is ~~shall be assuredly~~ safe in quality, clean, adequate in quantity, and of satisfactory mineral characteristics for ordinary domestic consumption.

Agency Response: The Agency has no objection to this proposal.

- 2) **Subsection (b)(2) proposes in part that “[n]o substance used in treatment *should remain* in the water at a concentration greater than that required by good practice,” and subsection (b)(3) proposes in part that listed concentrations of constituents “*should not be exceeded* in the finished water.” If a community water supply (CWS) fails to meet standards stated in the italicized terms, please comment on whether that failure would be a violation of the regulations.**

Agency Response: This subsection comes from existing Board regulations found at 35 Ill. Adm. Code 611.121(b)(2). If a community water supply (“CWS”) fails to meet these standards, that failure could violate regulations.

- 3) **In subsection (b)(2), please clarify IEPA’s intended meaning of the phrase “at a concentration greater than that required by good practice.”**

Agency Response: Because subsection (b)(2) comes from existing regulations found at 35 Ill. Adm. Code 611.121(b)(2), the Agency defers to the Board’s interpretation of this phrase.

Section 602.105

- 4) **In this section providing IEPA direction on issuing permits, subsections (a)(1), (a)(2), and (a)(4) direct that IEPA “shall not” issue a permit, while subsections (a)(3), (a)(5), and (b) direct IEPA “must not issue” a permit. For consistency and clarity, please comment on whether each of these should be amended to provide that IEPA “will not issue.”**

Agency Response: The Agency does not object to this proposal.

- 5) **The proposed addition to subsection (a)(3) provides that “[t]he Agency may require a pilot study.” Please comment on the factors or standards IEPA would apply in determining whether to require a pilot study.**

Agency Response: The proposed rules are structured to include various instances where pilot studies are required. *See* proposed 35 Ill. Adm. Code 604. In addition, a pilot study may be required when the documents listed in subsection (a)(2) do not provide design criteria for the proposed CWS facility. The applicant must submit adequate proof that the CWS facility conforms to other design criteria that will produce consistently satisfactory results. As a part of this proof, a study may be required, for example, when using new technologies (e.g. ultra violet, membranes, and ozone treatments), various operational characteristics, and to verify compliance.

Section 602.106

- 6) **To clarify the first sentence of subsection (a), would the following change be acceptable to IEPA?**

Restricted status ~~is shall~~ be defined as the Agency determination, pursuant to Section 39(a) of the Act and Section 602.105, that a community water supply facility, or portion thereof, may no longer be issued a construction permit without causing a violation of the Act or Board or Agency rules.

Agency Response: The Agency has no objection to this proposal.

Section 602.305

- 7) **In subsection (a), IEPA proposes that an application for an operating permit “must be on forms prescribed by the Agency. . . .” Has IEPA developed an application form for an operating permit? If so, please submit it into the record.**

Agency Response: The Agency submits an application form for an operating permit as Exhibit (A)(1).

Section 602.325

- 8) **Please comment on whether it would clarify subsection (a) to state that, “[b]y fulfilling all of the requirements of this section, a community water supply is considered to have met the requirements for obtaining an operating permit . . .”**

Agency Response: The Agency has no objection to this proposal.

- 9) **In subsection (d), IEPA proposes that it “*may* notify an eligible community water supply that it may not seek a permit-by-rule . . .” Please comment on the factors or standards IEPA would use in determining whether to provide this notification to a CWS.**

Agency Response: The standard used in determining whether to provide notification can be found in proposed Section 602.325(d). If the CWS has previously neglected to submit the information required by the Agency or Board in the last two years, the Agency may notify the CWS.

- 10) **If a CWS has received this notification but believes that it is otherwise eligible to obtain a permit-by-rule, does it have any recourse other than to wait for the two-year period to end?**

Agency Response: A CWS may avail itself to various permit appeals processes. For example, a CWS may seek appeal of a condition of a construction permit or a CWS may appeal the denial of an operating permit.

- 11) **Please comment on whether it would clarify subsection (d) to state that a community water supply “may not seek a permit-by-rule if the community water supply has failed neglected to submit the information required by Agency or Board rules in the last two years preceding the Agency’s notification.”**

Agency Response: The Agency has no objection to this proposal.

- 12) **In subsection (g), IEPA proposes that a CWS seeking to obtain an operating permit-by-rule “must submit a certification on forms prescribed by the Agency. . . .” Has IEPA developed a form certification to use in obtaining an operating permit-by-rule? If so, please submit it into the record.**

Agency Response: The certification form is currently being developed by the Agency.

Section 604.100

- 13) **Please clarify whether the proposed design, operational, and maintenance criteria in the proposed Part 604 apply to both existing and new CWSs. If the proposed criteria apply only to new facilities, please explain how IEPA will ensure proper design, operation and maintenance of existing CWSs.**

Agency Response: Part 604 applies to all CWSs. A CWS operating before the effective date of this Part will not be required to modify or replace components to meet the requirements of this Part under the conditions outlined in Section 604.145(a).

Section 604.105

- 14) **Please clarify whether the proposed minimum design capacity of “at least 20 percent greater than the maximum average daily demand” in subsection (a) is based on the Recommended Standards for Water Works (Recommended Standards) or other industry standard. If not, explain the basis for choosing the design capacity as at least 20 percent greater than the maximum demand.**

Agency Response: The Agency based the proposed minimum design capacity of “at least 20 percent greater than the maximum average daily demand” to be consistent with the criteria found in Section 602.107 for placement on the critical review list.

- 15) **Subsection (b) proposes that “[t]he basic criteria for design of community water supply facilities must be the standards under this Part or other criteria which the**

applicant demonstrates will produce a finished water which meets requirements of 35 Ill. Adm. Code 611 under all operating conditions.”

Please explain the “basic criteria” for design of a CWS. Are there criteria in proposed Part 604 that are optional for the design of CWS facilities? If so, please identify such criteria.

Agency Response: The Agency proposes eliminating the word “basic”. The term “other criteria” is meant to include treatment methods not provided in Part 604, such as ultra violet, membranes, and ozone. After “other criteria” the Agency proposes adding “pursuant to 35 Ill. Adm. Code 602.”

- 16) Regarding “other criteria” under subsection (b), please clarify whether IEPA plans to implement a process of application and demonstration for applicants seeking to demonstrate compliance with the requirements of Part 611. If so, please comment on whether IEPA’s determination on use of “other criteria” would be appealable to the Board.**

Agency Response: All changes to CWSs must be made through a construction permit issued pursuant to Part 602. The determination of other criteria would be appealable to the Board through the regular permitting process.

- 17) In addition to Part 611, should the applicant be required to demonstrate that “other criteria” also comply with the requirements of 35 Ill. Adm. Code 601.101 in order to be consistent with proposed Section 604.145(b)(1)?**

Agency Response: Section 604.145(b)(1) is a limited exception process for design criteria otherwise specified in Part 604. These exceptions may be granted by the Agency only when specifically provided in Part 604. *See e.g.* Section 604.605(g)(1).

Section 604.110

- 18) As proposed, this Section applies to selection of construction sites by “[a]ll community water supplies.” Please clarify the applicability of this section to existing CWS facilities and how existing CWS facilities would comply with the proposed location standards.**

Agency Response: This section applies to all CWSs. Existing CWS facilities already must be located at sites not subject to significant risk from earthquakes, land subsidence, floods, fires or other disasters which could result in breakdown of any part of the system, except as described in 35 Ill. Adm. Code 653.101(c).

- 19) Subsection (b) requires CWS facilities to be at least 2 feet above the higher of the 100 year flood or flood of record.**

Please clarify whether subsection (b) should refer to “2 feet above the 100 year flood elevation or maximum flood of record” to be consistent with proposed subsection (c).

Agency Response: Subsection (b) is intentionally more stringent than subsection (c) as the 100 year flood could be lower than the flood of record and vice versa. The Agency believes the proposed changes convey the intended meaning as drafted.

Section 604.115

- 20) IEPA proposes that, when water pumpage records are not available or a new supply is proposed, average daily usage must be based on at least 75 gallons per person per day. IEPA rules now base average daily usage in those circumstances on “at least 50 gallons per person per day.” 35 Ill. Adm. Code 653.104(a).**

Please explain the basis for proposing this increase in subsection (a). Does IEPA’s proposed usage rate reflect both indoor and outdoor water usage?

Agency Response: The United States Geological Survey indicates the average water use is between 80 – 100 gallons per capita per day, <https://water.usgs.gov/edu/qa-home-percapita.html>. Additionally, US EPA’s water supply guidelines indicate that the per capita residential water needs range from 50 to 75 gallons per day. (U.S. EPA, 1975. Manual of Individual Water Supply Systems). Due to increased use of water-saving plumbing fixtures, the Agency believes 75 gallons per person was appropriate for design. The Agency does not differentiate as to where water is consumed or used.

- 21) For subsections (c) and (d), please explain the basis for the proposed multiplication factors of 1.5 and 6 used to calculate maximum demand and peak hourly flow. Also, please explain why subsection (d) expresses “peak hourly flow” in “gallons per minute.”**

Agency Response: In the Agency’s existing regulations, Section 653.105 explains how to estimate peak hourly flow absent any data. Average use is multiplied by 2 and converted into an average rate, since most water is in a 12-hour period instead of 24. The average rate is multiplied by 1.5 for a maximum rate. The maximum rate is multiplied by 2 for peak hourly flow. It was decided to eliminate the intermediate steps and just require a peaking factor of 6 (2 X 1.5 X 2), since the intermediate steps are not used for any design criteria.

Section 604.120

- 22) In subsection (a), please clarify whether “consistent standard” refers to the piping color scheme in subsection (b). If so, comment on whether the following changes would be acceptable to IEPA:**

- a) **Piping in a community water supply treatment facility ~~shall~~ must be identified clearly by legends and color coding that are consistent. ~~A consistent standard shall be used~~ throughout the system.**
- b) **The following color scheme or a similar consistent scheme must be used to identify ~~To facilitate identification of piping in plants and pumping stations it is recommended that the following color scheme be utilized:~~**

Agency Response: The Agency has no objections to these proposals.

Section 604.125

- 23) **Please explain the terms “protected aeration” and “enclosed retention” in subsection (b).**

Agency Response: These examples are included in existing Agency regulations at 35 Ill. Adm. Code 653.112. Protected aeration and enclosed retention guard against contamination through such measures as screens, roofs, or other enclosures.

Section 604.130

- 24) **Please clarify whether this section pertains only to monitoring equipment and does not address performing monitoring. If so, comment on whether the following changes would be acceptable to IEPA:**

- a) **Monitoring Equipment. Community water supplies must have ~~provide~~ equipment to monitor the water as follows:**

* * *

- 3) **Ion exchange plants for nitrate removal must have the capability to continuously monitor and record the finished water nitrate level.**

Agency Response: The Illinois EPA agrees to the proposed change in a). However, the second proposed change in 3) does not convey the intended meaning. The second proposed change only requires plants to have the capability. The water system must continuously monitor for this acute contaminant.

Section 604.135

- 25) **In subsection (c)(1)(A), please clarify whether the term “public water supply” should be changed to “community water supply.”**

Agency Response: The Agency agrees with this proposed change.

- 26) **Please comment on whether the boil order notification under subsection (c)(1)(A) is subject to notification requirements under subsection (c)(2). If so, should subsection(c)(1) include a cross-reference to subsection (c)(2)?**

Agency Response: Yes, the boil order notification under subsection (c)(1)(A) is subject to notification requirements under subsection (c)(2). The Agency believes the notification requirement is covered as proposed. However, the Agency has no objection to adding a cross reference.

- 27) **To clarify subsection (c)(1)(B), would the following change be acceptable to IEPA?**

This boil order will ~~shall~~ remain in effect until appropriate corrective action approved by the Agency is taken and microbiological samples demonstrate that the water is safe for domestic use.

Agency Response: The Agency has no objection to this proposal.

- 28) **Subsection (c)(1)(C) proposes that, “[i]f the owner or official custodian of the supply fails to take such action, the Agency *may* issue a boil order directly to the consumers affected.” Please comment on the factors and standards IEPA will consider when determining whether to issue a boil order if the owner or official custodian of a community water supply fails to take appropriate corrective action.**

Agency Response: Existing regulations at 35 Ill. Adm. Code 607.103(c) provide for this notification. *May* was used instead of *shall* to allow Agency discretion in instances where, for example, mitigation efforts occur faster than notification.

- 29) **To clarify subsection (c)(2)(C), would the following change be acceptable to IEPA?**

The Agency will ~~shall~~ require the community water supply to notify all consumers of appropriate actions to protect themselves if the water supply has become contaminated or the consumers’ safety may be endangered.

Agency Response: The Agency has no objection to this proposal.

- 30) **Please comment on whether the issuance of a boil order under subsection (c)(3) is subject to notification requirements under subsection (c)(2). If so, should subsection (c)(3) include a cross-reference to subsection (c)(2)?**

Agency Response: Yes, the boil order notification under subsection (c)(3) is subject to notification requirements under subsection (c)(2). The Agency believes the notification requirement is covered as proposed. However, the Agency has no objection to adding a cross reference.

- 31) **In subsection (c)(3)(A), please clarify what would be an “adequate” level of chlorine residual. Do the Board’s public water supplies regulations under Subtitle F specify minimum levels of residual chlorine for finished water? If so, please comment on whether subsection (c)(3)(A) should include a cross-reference to those regulations.**

Agency Response: A minimum free chlorine residual of 0.5 mg/l or a minimum combined residual of 1.0 mg/l shall be maintained in all active parts of the distribution system at all times under proposed Section 604.725(a). A cross reference could be added.

- 32) In subsection (c)(3)(C), please clarify what would be considered a “significant” increase in turbidity or decrease in residual chlorine.**

Agency Response: This proposed language comes from existing Board regulations at 35 Ill. Adm. Code 607.103(b)(3). A significant increase in turbidity, or decrease in residual chlorine, are test results outside the historical record.

Section 604.145

- 33) In its Statement of Reasons (SR), IEPA states that “[t]he exception in Section 604.145(a) allows community water supplies flexibility until future renovations or construction projects are necessary at which time, all the standards in Part 604 must be met.” SR at 18. Please comment on whether the regulations should explicitly state this intent.**

Agency Response: The Agency believes this matter to be adequately covered by Section 604.145(a) as proposed.

- 34) Please clarify whether IEPA’s determination under subsection (b)(3) is appealable to the Board.**

Agency Response: Yes, IEPA’s determination under subsection (b)(3) is appealable to the Board through the permit appeals process.

Section 604.160

- 35) Subsection (a) requires CWSs that use chemical treatment to have and maintain a chemical safety plan. Please explain the types of information and procedures that a CWS must include in the plan. Should the regulations specify minimum requirements for chemical safety plans?**

Agency Response: The Illinois EPA with this proposed Section acknowledges the need for workplace safety with a general provision while recognizing that the Illinois EPA does not have the expertise in worker safety.

- 36) For subsection (b), please comment on where CWS personnel involved with the use and maintenance of chemicals can obtain chemical safety training.**

Agency Response: Examples of places where personnel may obtain chemical safety training include the CWS and/or third party vendors.

Section 604.165

- 37) **Subsection (a) requires CWSs to prepare an operating report on a form approved by IEPA as specified in a construction, operating or special exception permit. Has IEPA approved a form for this report? If so, would IEPA submit a copy into the record. If not, please explain the types of information that a CWS should include in the operating report. Should the regulations specify informational requirements for the operating report?**

Agency Response: The Agency submits sample operating reports as Exhibit (A)(2), additionally provides hyperlinks to the sample operating reports below, and notes, however, that these reports are typically modified on a case by case basis.

<http://www.epa.state.il.us/water/field-ops/forms/distribution-system.xls>

<http://www.epa.state.il.us/water/field-ops/forms/membrane-filtration.xls>

<http://www.epa.state.il.us/water/field-ops/forms/coagulation-lime-softening.xls>

<http://www.epa.state.il.us/water/field-ops/forms/iron-removal.xls>

<http://www.epa.state.il.us/water/field-ops/forms/chemical-feeding.xls>

- 38) **Based on the submission schedule in subsection (c), would it be acceptable to IEPA to change the Section heading to “Monthly Operating Report.”**

Agency Response: The Agency has no objection to this proposal.

Section 604.200

- 39) **In subsection (c), please clarify the meaning and significance of the phrase “above the point of water supply intake.”**

Agency Response: “Above the point of water supply intake” means upstream of the expected withdrawal point.

- 40) **Would it be acceptable to IEPA to revise subsection (e) for clarification as follows:**

- e) **The Agency will approve surface water, groundwater under the direct influence of surface water, or groundwater ~~must be approved~~ as a community water supply source only if treatment produces water which meets the primary drinking water standards of 35 Ill. Adm. Code 611 and the following conditions are met is provided:**

Agency Response: The Agency has no objection to this proposal.

- 41) **Please clarify whether subsection (e)(2) requiring submission of “representative samples” to IEPA requires a CWS to provide actual water samples to IEPA for analysis. Also, comment on whether subsection (e)(3) requiring “more frequent sampling” to determine raw water quality requires submission of additional**

samples to IEPA. If not, please propose revisions to this subsection to reflect IEPA's proposed intent.

Agency Response: The intent in this section is for the Agency to receive sample results. The Agency proposes the following revision:

2) Sampling shall be performed to determine treatment requirements. ~~Representative samples shall be submitted to the Agency to determine raw water quality.~~ The Agency may require samples be taken for at least once a month over a 12 consecutive month period. Representative samples shall be submitted to the Agency to determine raw water quality.

Yes, subsection (e)(3) may require submission of additional samples to the Agency.

Section 604.205

- 42) **In subsection (a), define the terms “drought,” “one in fifty-year drought,” and “extreme drought of record.” Please clarify whether the Illinois State Water Survey determines one in fifty year droughts on a regional basis for Illinois. If not, how does a CWS obtain drought information to comply with this requirement.**

Agency Response: The Water Dictionary defines the term drought. *See* incorporations by reference in Part 601.

In addition, the Illinois State Water Survey (ISWS) indicates that: Drought is a complex physical and social phenomenon of widespread significance, and despite all the problems droughts have caused, drought has been difficult to define (See http://www.isws.illinois.edu/atmos/statecli/Drought/drought_def.htm).

Instead, ISWS indicates that the most straightforward way to identify a drought is by looking at the impacts such as crop losses, low water levels in lakes and streams, and water shortages, rather than specific definitions of shortfalls in precipitation.

The ISWS maps the departure in precipitation as a percent from normal on a statewide basis but also relates them to return periods or recurrence intervals of a) 25 years, b) 50 years, c) 100 years, and d) 200 years. The worst case 50-year return period map is for a 60-month duration. These maps are available on the ISWS website at: <http://www.isws.illinois.edu/atmos/statecli/Drought/60month.htm>.

- 43) **Please clarify whether the 20% surplus in subsection (b) requires a surplus over the amount of the maximum projected water demand of the service area. If so, please revise subsection (b) to reflect the proposed intent.**

Agency Response: Proposed Section 604.205(b) requires a 20% surplus above the anticipated water usage to avoid the critical review list.

Section 604.210

- 44) To clarify subsections (a) and (b), would the following changes be acceptable to IEPA?
- (a) For all surface water, community water supplies must provide conventional filtration treatment or ~~other~~ filtration treatment using technologies approved by the Agency under ~~pursuant to~~ 35 Ill. Adm. Code 611.250(d) and disinfection.
 - (b) For all groundwater under the direct influence of surface water, community water supplies must provide filtration treatment using technologies approved by the Agency under ~~pursuant to~~ 35 Ill. Adm. Code 611.250 and disinfection.

Agency Response: The Agency has no objection to this proposal.

- 45) Under subsection (c), please clarify whether a CWS must perform a source water assessment for both surface water and groundwater under the influence of surface water. If so, please revise subsection (c) to reflect the proposed intent.

Agency Response: A CWS must perform a source water assessment for both surface water and groundwater under the influence of surface water. The Illinois EPA would propose the following revision:

- c) A source water assessment pursuant to Section 604.315 must be completed considering factors, both natural and manmade, which may affect water quality in the water supply stream, river, lake, ~~or~~ reservoir or groundwater under the direct influence of surface water.

Section 604.215

- 46) In subsection (a)(5), please clarify the frequency of “occasional cleaning of the inlet line.”

Agency Response: The Agency proposes deleting the word “occasional”.

- 47) In subsection (a)(6), please clarify how a community water supply would provide “adequate” protection from rupture.

Agency Response: The Agency proposes deleting the word “adequate”.

Section 604.230

- 48) To clarify subsection (a), would the following change be acceptable to IEPA?

A community water supply must determine groundwater ~~Groundwater~~ source adequacy shall be determined by the amount of water produced by each well pumping within its calculated safe yield.

Agency Response: The Agency has no objection to this proposal.

- 49) **Under subsection (b), please comment on why single well systems are not required to meet the same delivery requirement that multiple-well systems must meet. Also, please comment on whether a groundwater source should be required to meet the maximum projected water demand, including a 20% surplus, and compensate for losses as surface water sources must do under Section 604.205. If so, please propose revisions to this section to reflect the proposed intent.**

Agency Response: Proposed Section 604.105(a) provides a general requirement for both single-well and multiple-well systems. A cross reference could be added for clarity. Groundwater sources do not need to have 20% surplus because they are not subject to evaporation like surface water source systems.

- 50) **To clarify subsection (c), would the following changes be acceptable to IEPA?**

Single well systems: No community water supply, the construction or modification of which commences after the effective date of this Part shall rely only on a single well for its water source. A community water supply, the construction of which commenced before and not modified after the effective date of this Part, may rely on a single well for its water source . . .

Agency Response: The Agency believes 'section' to be correct in this case because other sections of this Part could be amended in the future causing unintended changes to the intent and meaning of the effective date proposed Section 604.230(c).

- 51) **In subsection (c), please explain the consequences of placing a single well CWS on the critical review list. After a CWS is placed on that list, are there any circumstances in which it may be removed from the list? IF so, please describe those circumstances.**

Agency Response: Placing single well water systems on critical review will make them more conscious that expansion without redundancy can leave consumers vulnerable to water outages. Once the water system installs a back-up well, it can be removed from critical review.

Section 604.235

- 52) **In subsection (c), please clarify whether microbiological analysis involves testing for total coliform bacteria. If so, should this subsection be revised to be consistent with subsection (a)? Also, clarify whether a sample result is "satisfactory" based on the presence or absence of coliform bacteria.**

Agency Response: The Agency believes subsection (c) could be changed to ‘total coliform bacteria’ as in subsection (a). A sample result would be satisfactory if it did not show the presence of e-coli or total coliform bacteria.

53) **Please comment on whether it would be acceptable to revise subsection (d) as follows to be consistent with the proposed language in Section 604.210(c):**

d) **A source water assessment under pursuant to Section 604.315 must be completed considering ~~made of~~ the factors, both natural and manmade, which may affect water quality in the groundwater.**

Agency Response: The Agency has no objection to this proposal.

Section 604.240

54) **In subsection (k), please clarify whether “flood of record” should be “maximum flood of record”. Also, please clarify whether the 15-foot horizontal distance in subsection (k)(1) should be measured from the top of the well casing or from the edge of the well house. If not, please explain the application of the proposed 15-foot setback.**

Agency Response: The Agency believes “flood of record” should not be “maximum flood of record” and that the proposed draft accurately conveys the intended meaning. The 15-foot horizontal distance in subsection (k)(1) should be measured from the well casing and not from the edge of the well house.

Section 604.245

55) **To clarify subsection (a), would the following change be acceptable to IEPA?**

The specific capacity of the production well must be determined by a drawdown test before the well is placed in service

Agency Response: The Agency has no objection to this proposal.

Section 604.315

56) **To clarify subsection (b), would the following change be acceptable to IEPA?**

Upon request, the Agency will ~~shall~~ provide technical assistance to a community water supply in conducting the source water assessment.

Agency Response: The Agency has no objection to this proposal.

Section 604.335

- 57) **To clarify the first sentence, would the following change be acceptable to IEPA?**

The Agency, not later than 45 days following the receipt of the source water protection plan, will ~~shall~~ either approve or disapprove the plan.

Agency Response: The Agency has no objection to this proposal.

- 58) **If IEPA disapproves a source water protection plan, please clarify whether IEPA's disapproval is appealable to the Board.**

Agency Response: The Board has the authority to conduct proceedings on petitions for review of final determinations of the Agency which are made pursuant to the Act or Board rules and which involve a subject which the Board is authorized to regulate. 415 ILCS 5/5(d); 35 Ill. Adm. Code 101.106; 35 Ill. Adm. Code Part 105.

Section 604.400

- 59) **Please explain "stability of the water after aeration" in subsection (c) and how stability is evaluated after aeration.**

Agency Response: The stability of water following aeration must meet the stabilization requirements of Subpart I, Section 604.900 (i.e. aeration affects the pH of water treated by aeration). Stability is evaluated, considering the enumerated the water quality parameters of Section 604.900, to ensure that water chemistry of the treated water minimizes corrosion throughout the distribution system of the CWS.

Sections 604.420

- 60) **Please explain why packed tower aeration requires a construction permit and pilot study but other types of aeration (forced, spray and pressure) do not.**

Agency Response: All CWS changes require a construction permit. Packed tower aeration may require a pilot study because it is normally used for removal of organic contaminants that are regulated under Part 611. Other types of aerators are normally used to improve aesthetic properties of the source water.

- 61) **Please comment on whether it would clarify subsection (a) to provide that packed tower aeration "may be used for removing compounds."**

Agency Response: The Agency has no objection to this proposal.

- 62) **Please comment on whether it would clarify subsection (c)(1) and more closely follow Section 4.7.5.2.a of the Recommended Standard to identify materials that are appropriate for construction of the tower.**

Agency Response: The Agency has no objection to the proposal of using the materials listed in Recommended Standards.

Section 604.500

63) Under subsection (c), please clarify whether the requirement that a CWS that treats groundwater must have two clarification units applies only if the CWS provides clarification. If so, would it be acceptable to IEPA to revise subsection (c) as follows:

c) Community water supplies designed to treat groundwater will be required to should have a minimum of two clarification units if clarification is provided.

Agency Response: The Agency has no objection to this proposal.

Section 604.505

64) Please clarify whether coagulation requirements apply to all CWSs, including those that treat groundwater. If so, propose revisions to subsections (b) and (c) to reflect the proposed intent.

Agency Response: Coagulation requirements do not necessarily apply to CWSs that treat groundwater.

Section 604.510

65) In subsection (c), please clarify whether the minimum detention time should be specified as a minimum requirement rather than a recommendation as proposed.

Agency Response: Minimum detention time was intended to be a requirement.

66) Subsection (f) proposes that “[a] superstructure over the flocculation basins may be required.” Please comment on the factors and standards IEPA would consider in determining whether to require construction of a superstructure over flocculation basins.

Agency Response: Most flocculation basins are outdoors unless the climate dictates otherwise. The Agency would not require a superstructure unless climate, or other airborne environmental factors, dictate otherwise.

Section 604.515

67) To clarify subsection (c), should it state that “[t]he velocity through a sedimentation basin must should not exceed 0.5 feet per minute?”

Agency Response: The Agency has no objection to this proposal.

- 68) Subsection (d) recommends the use of submerged orifices to provide volume above the orifices for storage when there are fluctuations in flow. Please comment on whether the following revision making the recommendation a conditional requirement is acceptable to IEPA:

- d) Outlet devices – Outlet weirs or submerged orifices must maintain velocities suitable for settling in the basin and minimize short-circuiting. ~~The use of s~~Submerged orifices must be used if necessary ~~is recommended to provide a volume above the orifices for storage when there are fluctuations in flow...~~

Agency Response: The Agency has no objection to this proposal.

Section 604.520

- 69) Please explain how solids contact units differ from conventional sedimentation units. Would it be appropriate include a brief description or definition such as those provided in Section 604.505(a) for coagulation and Section 604.510(a) for flocculation? If so, please propose such language.

Agency Response: Solids contact units contain both flocculation and coagulation where water flows up through a solids blanket as opposed to water flowing downward in a basin by way of gravity in sedimentation units. The Agency believes a definition is not necessary.

- 70) For subsection (c), please clarify the circumstance under which IEPA would require a rapid mix device or chamber ahead of the solids contact units. Also, comment on whether construction requirements at subsections (c)(1) and (c)(2) apply only to a rapid mix device or chamber required by IEPA ahead of a solids contact unit. If so, would it be acceptable to IEPA to revise subsection (c) as follows:

- c) The Agency may require a rapid mix device or chamber ahead of solids contact units to assure proper mixing of the chemicals applied. If required by the Agency, the mixing devices employed shall~~must~~ be constructed to:

Agency Response: If necessary to provide good mixing, the Agency would require a rapid mix device or chamber ahead of the solids contact units. The Agency has no objection to this proposal.

- 71) Please comment on whether it would clarify subsection (d)(3) to provide that flocculation equipment “must ~~should~~ provide a ~~that~~ the flocculation and mixing period of at least ~~to be not less than~~ 30 minutes.”

Agency Response: This proposed change would not result in the Agency’s intended meaning. The Agency intends for subsection (d)(3) to be a recommendation and not a requirement.

- 72) Please comment on whether the following changes would clarify subsection (e):

Sludge removal design must

- 1) **Require sludge pipes ~~must~~ not less than three inches in diameter and ~~so~~ arranged as to facilitate cleaning;**
- 2) **Prevent clogging at the entrance to sludge withdrawal piping ~~must prevent clogging~~;**
- 3) **Locate valves ~~must be located~~ outside the tank for accessibility; and**
- 4) **Allow the operator to ~~may~~ observe and sample sludge being withdrawn from the unit.**

Agency Response: The Agency has no objection to this proposal.

- 73) **In subsections (g)(1) and (g)(2), please clarify whether “upflow clarifiers” are solids contact units. If so, would it be acceptable to IEPA to refer to them as “upflow solids contact clarifiers” in the regulations?**

Agency Response: Upflow clarifiers are solids contact units. The Agency has no objection to this proposal; however, this deviates from commonly-used terminology.

- 74) **In subsection (i)(2)(A), please explain the basis for the proposed weir loading rate limits for cone shaped, helical upflow solid contact units.**

Agency Response: This proposal is based on manufacturer recommendations and operational experience from efficacy of existing units permitted by the Agency.

Section 604.605

- 75) **Subsection (a) requires pretreatment for the use of rapid rate gravity filters. Please explain what constitutes pretreatment. Also, comment on whether it would be appropriate to specify the applicable pretreatment processes and any cross references to those processes.**

Agency Response: The requirement for pretreatment when using rapid rate gravity filters derives from Section 4.3.1 of the Recommended Standards. The pretreatment requirements are found in proposed Section 604.210 and existing Section 611.250. The Agency believes providing a cross reference here may create confusion due to differences in source water and applicable pretreatment processes.

- 76) **In subsection (g)(4)(D)(i), please clarify whether the cross reference to the basic specifications for filter media should be subsections (g)(1) through (g)(3) instead of subsections (f)(1) through (f)(3).**

Agency Response: Yes, the basic specifications for filter media should be subsections (g)(1) through (g)(3) instead of subsections (f)(1) through (f)(3).

- 77) **In subsection (g)(4)(E), does IEPA intend that “[o]ther media types or characteristics must be approved by the Agency” under 35 Ill. Adm. Code 604.145(b)?**

Agency Response: No, for subsection (g)(4)(E) the Agency did not intend for Section 604.145(b) to apply. The basis “approved by the Agency” in this case does not rely on economic or technical feasibility factors. For example, other media type has included proprietary media.

- 78) **In subsection (h)(1), please clarify whether water quality should be reviewed prior to use of “porous plate bottoms” and not “porous plate caps” as proposed.**

Agency Response: The Agency proposes using “porous plate bottoms”.

- 79) **In subsection (j)(2)(B), please comment on whether it should require rather than recommend “a rate sufficient to provide for a 50 percent expansion of the filter bed.”**

Agency Response: The Agency has no objection to using required over recommended.

- 80) **To clarify subsection (l), would the following change be acceptable to IEPA?**

Air scouring can be used in place of surface wash. ~~The~~ if the air scouring meets must meet the following requirements:-

Agency Response: The Agency has no objection to this proposal.

- 81) **Please comment on whether the following revisions to subsection (l)(5) reflecting Section 4.3.1.9 of the Recommended Standards would be acceptable to IEPA:**

- 5) **If air scour distribution systems are placed at the media and supporting bed interface, the air scour nozzles must be designed to prevent media from clogging the nozzles or the air entering the air distribution system.**

Agency Response: The Agency has no objection to this proposal.

Section 604.610

- 82) **Subsection (c) specifies that minimum criteria for structural details, hydraulics, and filter media for rapid rate gravity filters also apply to pressure filters “where appropriate.” Please clarify whether Sections 604.605(e) and (g) are the appropriate criteria. If so, would it be acceptable to IEPA to have subsection (c) include a cross reference to those sections?**

Agency Response: Yes, these are the appropriate criteria. The Agency has no objection to this proposal provided the term “where appropriate” remains in Section 604.610(c).

Section 604.615

- 83) **Subsection (a) requires that, before a CWS uses a deep bed rapid rate gravity filter, “a pilot study must be completed and approved by the Agency”. Please clarify whether IEPA’s approval relates to results of the pilot study, the use of deep bed filter, or both. If necessary, please propose revisions to subsection (a).**

Agency Response: Approval relates to both the pilot study and the use of deep bed filter. The Agency believes the proposed language accurately conveys the intended meaning.

Section 604.620

- 84) **This proposed section states that biologically active filtration can have adverse impacts on turbidity, particle and microbial pathogen removal, disinfection practices, head loss development and filter run times and distribution system corrosion. However, the rule does not explicitly require any measure to minimize adverse impacts. Please comment on whether the pilot study required in subsection (a) is expected to address these potential impacts or whether subsection (a) should require the pilot study to address them.**

Agency Response: The pilot study objectives in Subsection (a) are case specific. Generally, applicants submit a pilot study protocol before conducting the study. The protocol would consider the potential adverse impacts.

- 85) **In subsection (a), please clarify whether IEPA’s approval relates to the results of the pilot study, the use of biologically active filters, or both. If necessary, please propose revisions.**

Agency Response: Approval relates to both the results of the pilot study and the use of biologically active filters. The Agency believes the proposed language accurately conveys the intended meaning.

Section 604.700

- 86) **Please explain the rationale for requiring disinfection in addition to continuous chlorination for sources of raw waters listed in subsection (a). Also, please clarify whether subsection (a) should apply to “all community water supplies” instead of “all sources,” as proposed.**

Agency Response: Disinfection is the process of destroying or inactivating pathogenic organisms. Continuous chlorination is necessary to 1) limit biological growth in the

distribution system, 2) reduce risk of waterborne disease in case pathogens penetrate the distribution system, and 3) provide an indicator of intrusion or other localized event.

The Agency believes the proposed language accurately conveys the intended meaning because a CWS may have more than one source.

87) Has IEPA considered whether to rely on coliform testing or other standards as the basis to determine whether to require disinfection in addition to chlorination?

Agency Response: This consideration would not be viable because coliform testing only provides a representation of water quality at the time of sample collection. Disinfection provides a protective barrier from contamination of the source water. Coliform testing does not provide any protection. Coliform testing does not provide any protection. It is an assurance that the barrier of disinfection is functioning as intended, as described in question 86 above.

88) Has IEPA considered whether water that has been disinfected in addition to being chlorinated may have any adverse effects on receiving waters when users discharge into them? If so, what conclusions did IEPA reach?

Agency Response: Yes, dechlorination equipment for discharges are required to comply with an NPDES permit. Compliance with NPDES permits would be evaluated under Subtitle C of the Board's regulations.

89) Subsection (d) requires notification to the public of a change in disinfection practices. Please clarify whether CWSs must also notify IEPA of any changes in disinfection practices.

Agency Response: Water systems notify the Agency of routine changes in chlorination practices to comply with reporting regulations under Part 611 (e.g., Revised Total Coliform Rule Reporting).

90) Please comment on whether other Board regulations specify public notification suitable to meet this proposed requirement. If so, provide citations to those regulations. If not, comment on whether additional notification requirements must be specified in subsection (d) and propose any necessary revisions.

Agency Response: The Board's regulations do not specify public notification requirements. Additional notification requirements do not need to be specified in subsection (d).

Section 604.705

91) Subsection (b)(2) requires chlorination equipment to be capable of feeding chlorine to the water being treated at a dosage rate of at least 5.0 mg/L except when the water has a high chlorine demand. Please comment on what IEPA considers to be

“high chlorine demand” for the purposes of this provision. Also, please comment on whether the rule should specify a level of chlorine demand at which the dosage rate of 5.0 mg/L no longer applies?

Agency Response: The Agency considers high chlorine demand waters to be those where a 5.0 mg/L metering pump does not sufficiently supply a chlorine residual at the regulatory limits. Waters with a high chlorine demand require a higher minimum pump capacity. *See* existing Agency rule at 35 Ill. Adm. Code 653.601(b)(3). The Agency believes the proposed language accurately conveys the intended meaning.

- 92) Please clarify whether duplicate chlorination equipment “provided” under subsection (b)(3) could satisfy the requirement that duplicate equipment be “installed and operational” under subsection (b)(4).**

Agency Response: Subsection (b)(3) applies to all chlorine feed applications unless subsection (b)(4) applies to surface and groundwater systems under the direct influence of surface water.

Section 604.715

- 93) Please comment whether it would clarify subsection (a) to require that “a minimum chlorine contact time of 60 minutes must be provided at all plants treating surface water, groundwater under the direct influence of surface water, groundwater with basins open to the atmosphere, and groundwater obtained from unconfined, fractured bedrock.”**

Agency Response: The Agency has no objection to this proposal.

Section 604.735

- 94) Under subsection (b)(2), please clarify whether the Chlorine Institute has specific recommendations for chlorine solution piping and fittings. If so, please incorporate the recommendation by reference in 35 Ill. Adm. Code 601.115 and add a citation to the recommendation in subsection (b)(2).**

Agency Response: The Chlorine Institute in Pamphlet 6 has specific recommendations for chlorine solution piping and fittings. *See* Piping Systems for Dry Chlorine, incorporated by reference in 35 Ill. Adm. 601.115.

Section 604.805

- 95) Under subsection (o), please clarify what constitutes as “suitable disposal” of brine waste. Please comment on whether the regulations should include a cross reference to the Board’s waste disposal regulations under Subtitle G for disposal of brine waste.**

Agency Response: Suitable disposal means allowable under the Board's regulations, and Illinois and federal law. A cross reference would not be appropriate as brine could be disposed of in several ways. (e.g. consistent with Subtitle C or Subtitle G)

Section 604.1000

- 96) **Subsection (a) requires presedimentation basins to have the capability for dewatering, which may include hopper bottoms or a continuous mechanical sludge removal apparatus. However, Section 4.2.1.a of the Recommended Standard provides that:**

Basin design - presedimentation basins should have hopper bottoms or be equipped with continuous mechanical sludge removal apparatus, and provide arrangements for dewatering.

Please clarify whether "arrangements for dewatering" refers to the dewatering of sludge removed from presedimentation. If so, please comment on any revision to subsection (a) that would reflect the Recommended Standards.

Agency Response: The Agency recommends the following revision:

- a) Basin design: presedimentation basins shall have the capability for dewatering. ~~These basins which~~ may include hopper bottoms or a continuous mechanical sludge removal apparatus

Section 604.1005

- 97) **Requirements for sampling taps under subsection (b)(6) and for brine and salt storage under subsection (b)(7) are the same as those under Section 604.805. Please comment on whether it would be acceptable to IEPA to replace subsections (b)(6) and (b)(7) with cross-references to Sections 604.805(l) and (m), respectively?**

Agency Response: The Agency believes the proposed language accurately conveys the intended meaning and does not recommend the proposed change.

- 98) **In subsection (d), please clarify whether the term "maximum day water demand" refers to the maximum average daily demand. If not, please explain how those two terms differ.**

Agency Response: Yes, therefore Agency proposes amending "maximum day water demand" in subsection (d) to "maximum average daily demand".

- 99) **Please comment whether it would clarify subsection (f)(2) to require that "the backwash flow rate ~~must shall be~~ between approximately 4.0 and to 6.0 gallons per minute per square foot of bed area."**

Agency Response: The Agency has no objection to this proposal.

Section 604.1010

- 100) **In subsection (b)(1), please clarify whether chemical oxidation must be approved by IEPA under Section 604.145(b). If so, please propose revisions to reflect this approval.**

Agency Response: No, proposed 604.145(b) only applies when expressly cited in Part 604.

- 101) **Similarly, in subsection (e), please clarify whether the use of sequestration of iron and /or manganese by sodium silicates must be approved by IEPA under Section 604.145(b). If so, please propose revisions to reflect this approval.**

Agency Response: No, proposed 604.145(b) only applies when expressly cited in Part 604.

Section 604.1020

- 102) **Please comment whether it would clarify subsection (a) and align it with the Recommended Standards to require that “[p]owdered activated carbon must be added as early as possible in the treatment process to provide maximum contact time to allow the effective and economical use of the chemical.”**

Agency Response: The Agency has no objection to this proposal.

Section 604.1105

- 103) **In subsection (c)(5)(A), please comment on what IEPA intends by “reasonable” precision for weighing scales.**

Agency Response: Reasonable is an objective standard provided by the Recommended Standards to measure the desired gas, liquid, or solid.

Section 604.1200

- 104) **Please clarify whether the term “sanitary quality of pumped water” means the quality of either raw water or finished water. If so, would it be acceptable to IEPA to amend this section as shown below? If not, please provide a definition of “sanitary quality”, since this term is used in provisions including Section 604.1210(d)(3)(A) and Section 604.1225(d)(1) and (d)(2).**

Pumping facilities must be designed to maintain the sanitary quality of pumped water.

Agency Response: The Agency has no objection to this proposal.

Section 604.1205

- 105) Under subsections (d) and (e), please comment on how IEPA intends to determine that “adequate heating” and “adequate ventilation” are provided.**

Agency Response: Adequate heating and ventilation refers to the prevention of condensation in the water treatment plant and freezing of treatment plant fixtures.

Section 604.1210

- 106) Under subsection (b), when a pump is out of service, please clarify whether the remaining pump or pumps must be capable of meeting the “maximum daily demand” rather than “maximum demand.”**

Agency Response: Section 601.105(a)(1) provides that the correct terms to be either “maximum average daily demand” or “maximum demand” and the Agency proposes using either term in subsection (b).

- 107) Also, please comment on whether a similar change should be made in Section 604.1215(a).**

Agency Response: The Agency proposes the following change:

a) Each booster pumping station must contain not less than two pumps with capacities such that maximum demand can be satisfied with the largest pump out of service.

Section 604.1225

- 108) In subsection (e)(1), please clarify what operational level above the rated capacity would be considered as “dangerous overload.” Would it be possible to include such a level in the regulations?**

Agency Response: The Agency proposes the following change:

5) Pumps, their prime movers and accessories, must be controlled in such a manner that they will operate at rated capacity without ~~dangerous~~ overload.

Section 604.1310

- 109) Both subsection (b) and Section 7.0.8 of the Recommended Standards provide for manholes above the water lines at each compartment “where space permits.” Please comment on how often IEPA expects space not to permit these manholes. Where space does not permit these manholes, please comment on how the storage structure provides access.**

Agency Response: The Agency mirrored the Recommended Standards language when access is restricted. We would expect this to be the exception not the rule.

Section 604.1315

- 110) **Subsection (b)(5)(B) requires vents on elevated tanks and standpipes to be “fitted with four mesh non-corrodible screen, or with finer mesh non-corrodible screen in combination with an automatically resetting pressure-vacuum relief in combination with mechanism, as required by the Agency.” Please clarify the phrase “resetting pressure-vacuum relief in combination with mechanism.” Also, clarify whether it is the use of mesh finer than 4 mesh to cover vents or some other venting equipment that requires Agency approval.**

Agency Response: The Agency mirrored the Recommended Standards at 7.0.9. “Resetting pressure-vacuum relief in combination with mechanism” refers to a device that lets air into or out of the tank in case the vent is clogged for some reason. It is supposed to go back to the closed position when water is not going in or out the tank or the clog is removed.

Section 604.1350

- 111) **Please comment on whether it would clarify subsection (c) to require that “[c]onsideration must ~~should~~ be given to sizing the generator to provide power for at least one well.”**

Agency Response: The Agency has no objection to this proposal.

Section 604.1445

- 112) **Subsection (a) proposes that raw water mains from groundwater sources must have the same sanitary separation as finished water mains under Section 604.1440. Please clarify whether this requires separation from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains.**

Agency Response: Yes, this requires separation from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains. *See* proposed Section 604.1440(a)(1).

- 113) **Subsection (b) proposes that raw water mains from surface water sources must have the same sanitary separation from sanitary sewers and combined sewers as finished water mains under Section 604.1440. In its Statement of Reasons, IEPA states that it did “not include storm water sewers when the raw water main is from surface water because the surface water contains storm water runoff.” SR at 57. Please comment on whether this separation should also include “house sewer service connections and drains.”**

Agency Response: The Agency has no objection to this proposal.

Section 604.1505

- 114) **Section 653.801(a) of IEPA's rules requires a cross connection control survey of the distribution system at least every two years. 35 Ill. Adm. Code 653.801(a). Proposed subsection (b)(2) requires all CWSs to conduct a cross connection control survey of the distribution system at least every three years. Please explain the change in survey frequency to 3 years.**

Agency Response: Water systems have indicated that a reduced frequency would be a cost savings from several perspectives including, but not limited to, postage, clerical support, and operations evaluation. The Agency believes that an increase of one year would not be deleterious to protection provided to water system distribution systems by the cross-connection control program.

- 115) **IEPA rules require that the survey "must consist of a pencil and paper collection of information, conducted by telephone, mail or personal visit to the manager or owner of a specific property." 35 Ill. Adm. Code 653.801(a)(1). Please comment on whether IEPA expect CWSs to continue conducting the required surveys in this manner.**

Agency Response: The Illinois EPA wishes to be flexible in survey submittal methods. (e.g. web surveys)

Section 604.1510

- 116) **Under subsection (b), please clarify whether IEPA charges a fee to review an application for approval as a cross-connection control device inspector (CCCDI) or a renewal application. Please explain the rationale for requiring renewal of CCCDI approval every year as opposed to every two or three years.**

Agency Response: The renewal of the cross-connection control device inspector coincides with plumber renewals under the Illinois Plumbing Act. The Illinois EPA has a memorandum of agreement with the SIU-E, Environmental Resources Training Center to administer training and testing of CCCDIs.

- 117) **Please comment on whether it would clarify subsection (b)(4) to combine (B) and (C) as follows.**

The Agency may initiate a suspension or /revocation procedure on the basis of any written complaint or on its own motion. The Agency's decision to initiate suspension or revocation proceedings will shall be based on the seriousness of the violation and its potential deleterious impact upon public health and safety.

Agency Response: The Agency has no objection to this proposal.

Section 611.121

- 118) Subsection (b) specifies that “[a]n MCL for a particular contaminant applies in lieu of any finished water quality narrative standard.” Please provide a citation to the narrative standard or standards to which this subsection refers.**

Agency Response: An MCL overrides a narrative standard. The narrative standard can be found at the proposed Section 601.101(b).

Section 611.231

- 119) Subsection (c) provides that “[u]se of recycled sewage treatment plant effluent by a CWS on a routine basis must not be permitted.” Please comment on whether this limitation applies if the effluent meets all applicable source water requirements under Part 604, Subpart B.**

Agency Response: This is from current Board regulations found at existing Section 611.231(d). The Agency’s understanding is that it would limit the use regardless of the source water quality meeting Part 604.

- 120) Also, please comment on whether this additional state limitation would be more appropriately codified in the source water general requirements in Section 604.200 than in Section 611.231, which specifies conditions IEPA must consider when determining whether to require filtration.**

Agency Response: To avoid confusion, the Agency believes the language must remain in Part 611 because most subsection 611.231 is derived from 40 CFR 141.71(a)(2003)

Electronic Filing: Received, Clerk's Office 10/12/2017
EXHIBIT (A)(1)- OPERATING PERMIT APPLICATION FORM



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19278 • Springfield • Illinois • 62794-9278 • (217) 782-3397

Division of Public Water Supplies, Permit Section Application for Operating Permit

This form may be completed online, a copy saved locally and printed before it is signed. You may also complete a printed copy manually. Submit the completed and signed form to the Illinois EPA, Division of Public Water Supplies, Permit Section at the address listed above.

Facility Name: _____ Facility ID: IL _____
Address 1: _____ Construction Permit No.: _____ -FY
Address 2: _____ Permit Type: _____ ▾
City: _____ State: _____ Zip Code: _____ Date Permit Issued: _____
County: _____ ▾
Project Title: _____
Firm Name: _____

Project Status: Final
 Partial
Partial A, B, C, etc. _____

Application Requirements (check when complete):

- Permit Number, Facility Number, and Facility Name identified on the Lab Report(s).
- Samples analyzed by the Membrane Filter technique.
- Sample results attached to the Application.
(If a new well was constructed, provide a copy of the sample results as required by Section II, Part g of the C-1 application).

If you select Partial, you must also submit the following items:

- Cover letter describing which sections were completed.
- General project layout plans.
- For water main projects, identify the length the Partial: _____ LF

Date of Project Completion: _____ (Provide the date construction was completed on the project or partial)

Certified Operator in Responsible Charge:
Name: _____ Classification: _____ Number: _____
Telephone: _____ Email (optional): _____

Owner of the Completed Project:
Name: _____ Title: _____ Telephone: _____
Address: _____ City: _____ State: _____ Zip Code: _____

The Owner hereby certifies that the project named and described has been constructed in accordance with plans and specifications approved by the Illinois EPA. See instructions for further information. For Verbal Approvals, please call 217-782-1724.

Owner/Authorized Personnel Signature Date

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

FOR IEPA USE ONLY		
This operating permit _____ -FY	Issued on _____	is valid until revoked.
This permit is valid only for the work completed under the Construction Permit of the same number.		
_____ David C. Cook, P.E. Acting Manager, Permit Section Division of Public Water Supplies		

Electronic Filing: Received, Clerk's Office 10/12/2017
EXHIBIT (A)(1)– OPERATING PERMIT APPLICATION FORM

Instructions for Operating Permit Application

The Operating Permit Application must be submitted for all Public Water Supply projects that required a construction permit. The Operating Permit must be obtained before the project is placed in service.

Fill out the top section using the corresponding Construction Permit for reference.

- **Facility Name** is the name of the village, city or entity distributing community water supplies.
- **Facility ID Number** can be found on the Construction Permit. This number is specific to your facility.
- **Address** is the same as the address on the Construction Permit.
- **Construction Permit Number** is the assigned permit number of the corresponding Construction Permit. The Operating Permit and the corresponding Construction Permit will have the same permit number.
- **Permit Type** identifies whether the project involved is a Water Main, a Plant Improvement or Both.
- **Date Permit Issued** is the date the Construction Permit was granted.
- **Date of Project Completion** is the date construction was completed for the section of project you are requesting the Operating Permit for. If you are requesting an Operating Permit for a Partial project, the Date of Project Completion is the date construction was completed on that partial section. The Date of Project Completion will never be a date in the future, and must be a date after the issue date of the Construction Permit.
- **Title of Project** is the same title of project listed on the corresponding Construction Permit. The Operating Permit and the Construction Permit will have the same Title of Project.
- **Firm Name** is the engineering entity that designed the project.

Project Status will either be Final or Partial.

- **Final:** If construction on the project is complete, you will select **Final**.
- **Partial:** If construction on the total project is only partially complete, but you want to operate the completed section, you will select **Partial**. If this is the first partial, you will identify it as "Partial A", if this is the second partial, you will identify it as "Partial B" and so forth. Once the last partial section has been completed, identify it as such and also select Final in the Project Status.

The **Certified Operator in Responsible Charge** and **Owner of the Completed Project** should fill out his/her respective section. Please print your name legibly and sign where appropriate. By signing the application, the owner hereby certifies that the project named and described has been constructed in accordance with plans and specifications approved by the Illinois EPA, including specifications for bacteriological samples, and that bacteriological samples (if required) were taken under the supervision of a representative from the Public Water Supply. The owner also certifies that the project will be operated in accordance with the provisions of the Illinois Environmental Protection Act and the Rules and Regulations adopted by the Illinois Pollution Control Board pursuant to provisions of the Act.

Requests for **Verbal Approval** and questions can be addressed at (217) 782-1724.

Disinfection and bacteriological analysis must be performed for the completed project in accordance with the requirements of AWWA C651, C652, C653 or C654. For projects requiring these procedures, the sample results must be attached to the application. The construction permit number should be clearly visible on the sample results. Samples are to be taken every 1,200 feet of new water main unless otherwise approved by the Illinois EPA. Samples must be measured using the Membrane Filter technique. Colliert/Colisure will not be accepted for new construction projects.

This form may be completed online, a copy saved locally and printed before it is signed. You may also complete a printed copy manually. Submit the completed form to the Illinois EPA, Bureau of Water, Permit Section at the following address:

Illinois Environmental Protection Agency
Division of Public Water Supplies, Permit Section #13
1021 North Grand Avenue East, PO Box 18276
Springfield, IL 62794-9276

EXHIBIT (A)(2)- SAMPLE OPERATING REPORTS

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES

MONTHLY OPERATION AND CHEMICAL FEEDING REPORT
ON _____ PUBLIC WATER SUPPLY
FOR MONTH OF _____ 20__

Date	Time Meter Read	Meter Reading (1000 gal)	Water Treated (1000 gal)	CHLORINATION												FLUORIDATION					(OTHER CHEMICAL FEED) (PLEASE INDICATE ABOVE)				REMARKS							
				PRE-CHLORINATION CHLORINE DOSAGE			POST-CHLORINATION CHLORINE DOSAGE			FINISHED WATER CHLORINE TESTS (mg/l)						FLUORIDE DOSAGE			TESTS mg/l													
				Reading	Amount Used lbs or Gallon	Calcul. mg/l	Reading	Amount Used lbs. Or Gallons	Calcul. mg/l	Time	Read	Time	Read	Time	Read	Time	Read	Time	Read	Reading	Amount Used lbs or Gallons	Calcul. mg/l	Plant	Service		Reading	Amount Used lbs or Gallons	Calcul. mg/l	Plant	Service		
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	bb	cc	dd	ee	ff	
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31			0																													
Total			0																													
Avg.			0																													
Max.			0																													
Min.			0																													
*ENTER FINAL READINGS LAST MONTH				1	%CL ₂ SOLN FED			2	%Cl ₂ SOLN FED						3	% F SOLN FED			4	%		SOLN FED (NOTE: RECORD COLUMNS C,E,H,V,AA AT SAME TIME)										
METER LOCATION:								CHLORINATION								FLUORIDATION								This Agency is authorized to require this information under IL Rev. Stat. 1979, Chapter 111 1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continued, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the forms Management Center.								
I certify that the information in this report is complete and accurate to the best of my knowledge:								TYPE OF CHLORINE USED: (CHECK ONE)								TYPE OF FLUORIDE USED: FLUORIDE TEST INSTRUMENT																
REPORTED BY (SIGNATURE): _____ Cart. Or Reg. No. _____ Date Monthly _____ Baclerals Sent: _____ Phone: _____								CHLORINE GAS _____ CALCIUM HYPOCHLORITE _____ % STRENGTH SODIUM HYPOCHLORITE _____ % STRENGTH								_____ HYDROFLUOSILICIC ACID _____ HACK _____ TAYLOR _____ SODIUM FLUORIDE _____ HELIGE _____ OTHER _____ SODIUM SILICOFLUORIDE _____ mg/l NATURAL FLUORIDE _____ OTHER _____ OF RAW WATER																

EXHIBIT (A)(2)- SAMPLE OPERATING REPORTS

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY										MONTHLY COAGULATION AND LIME SOFTENING REPORT													Remarks																												
DIVISION OF PUBLIC WATER SUPPLIES										ON FOR MONTH OF _____ PUBLIC WATER SUPPLY 20__																																									
T R E A T M E N T P L A N N E D	S T A G E	RAW WATER		CHEMICALS APPLIED				FILTERS					RAW				PRE-FILTERED			FINISHED						pH	Stability																								
		PUMPED	AMT USED	CONCENTRATION	AMT USED	CONCENTRATION	AMT USED	CONCENTRATION	AMT USED	CONCENTRATION	1	2	3	4	5	pH	Tot Alk as (CaCO ₃)	Tot Hard as (CaCO ₃)	Fa	Mn	Turb	Odor	Alk as (CaCO ₃)	Turb	pH			Alk as (CaCO ₃)	Tot Hard as (CaCO ₃)	Fa	Mn	Turb	Odor	pH	Alk as (CaCO ₃)	Tot															
Date	hrs	ft	1000 gals	lbs	mg/l	lbs	mg/l	lbs	mg/l	lbs	mg/l	1	2	3	4	5	mg/l	mg/l	mg/l	mg/l	TU		P	Tot	TU	oa	fo	ft	gg	hh	ii	jj	kk	ll	mm	nn	oo	pp	qq	rr											

Monthly reports... shall be submitted... within 30 days following the last day of each month... (PCB (102b) (2) Rules & Regulations, Ch. 6, Rule 310)

Point of Application

These four columns should include the primary coagulant & compound used for pH & alkalinity adjustment. Record chlorine & fluoride compounds on separate form.

Note: (_____Ea/day + mg/day) x 8.34 Ea/gal = _____ mg/L

HLI

1	Filt Rate, gpm - Surf. A, Sq. ft. - Rate
2	- -
3	- -
4	- -
5	- -

NOTE: Above data should be obtained & recorded at the same time each day. Indicate hour above data was obtained.

RAW WATER _____ AM/PM
CHEMICALS APPLIED _____ AM/PM
CHEMICAL TESTS _____ AM/PM

NOTE: CaCO₃ stability recorded results should be those obtained after sitting 24 hours. Ex.: Results record on the 6th should be from tests completed on the 6th.

This Agency is authorized to require the information under Ill. Rev. Stat. 1976, Ch. 111 1/2, Section 1019. Disclosure of this information is required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the flow continues, a fine up to 1,000.00 and imprisonment up to one year. This form has been approved by the State Management Center.

Verify that the information in this report is complete and accurate to the best of my knowledge.

Recorded by: J. S. [Signature] Cert. Or. Lic. No. _____

EXHIBIT (A)(2)- SAMPLE OPERATING REPORTS

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

DISTRIBUTION SYSTEM OPERATING REPORT

DIVISION OF PUBLIC WATER SUPPLIES

Report For:

Water Supply

For Month of:

20

DATE	TIME METER READ	METER READING (1000 GAL)	WATER USED (1000 GALS)	CHLORINE TESTS (mg/l)						REMARKS (Use back of sheet for additional comments)	
				TIME TESTED	Chlorine Residual	*	TEST LOCATION	TIME TESTED	Chlorine Residual		*
1											
2			0								
3			0								
4			0								
5			0								
6			0								
7			0								
8			0								
9			0								
10			0								
11			0								
12			0								
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24			0								
25			0								
26			0								
27			0								
28			0								
29			0								
30			0								
31			0								
Total Water Used - _____			Meter Location: _____				<small>The Agency is authorized to require this information under the Ill. Rev. Stat. 1975, Chapter 111-10, Section 1219. Disclosure of the information if required. Failure to do so may result in a civil penalty up to \$10,000.00 and an additional civil penalty up to \$1,000.00 for each day the failure continues, a fine up to \$1,000.00 and imprisonment up to one year. This form has been approved by the Iowa Management Center.</small>				
Total Daily Average - Days - _____			Type of Cl Test Kit and/or method used: _____								
*Indicate type of Cl residual F-Free; C-Combined; T-Total			Date Monthly Bacteriological Samples Submitted: _____				I certify that the information in this report is complete and accurate to the best of my knowledge: Reported by: _____ (Signature) Cert. Or Reg. No. _____				
**Record meter reading from last day of previous month			Phone Number (include Area Code): _____								

EXHIBIT (A)(2)- SAMPLE OPERATING REPORTS

Water Supply Name: _____ Supply IEPA ID: _____
 Month of _____, Year _____

Overall Plant Operation, Excel Sheet 1

Day of Month	Raw Water MG	Finished Water MG	Wash Water MG	Raw Water Temp. Max. & Min.	Raw Water Turbidity Max. & Min.	Chlorine Used lbs. Or Gal.	Chlorine calc. dose mg/L	Chlorine *Tested dose, mg/L	Fluoride Used lbs. Or Gal.	Fluoride calc. Dose mg/L	Fluoride *Tested dose, mg/L	Phosphate Used lbs. Or Gal.	Phosphate calc. Dose mg/L	Phosphate *Tested dose, mg/L
1														
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31														

I certify that the information in this report is complete and accurate to the best of my knowledge:

REPORTED BY (SIGNATURE): _____
 Phone _____

Type of fluoride used: _____
 Type of chlorine used: _____
 Type of Phosphate used: _____

EXHIBIT B– ILLINOIS EPA’S RESPONSES TO CWLP’S PRE-FILED QUESTIONS

Section 604.725 Residual Chlorine

1. The current regulations require a minimum free chlorine residual of 0.2 mg/l and a combined residual concentration of 0.5 mg/l. The proposed rules would raise the free chlorine minimum residual to 0.5 mg/l and the combined to 1.0 mg/l.

a. Explain the technical basis for this change to the free chlorine residual minimum requirement.

Agency Response: The basis for the change from 0.2 mg/l to 0.5 mg/l revolves around limitations in instrumentation and recent studies by the U.S. EPA Office of Research and Development (“ORD”) and Office of Water (“OW”). The detection limit for most test equipment utilized by water supply operational staff and Illinois EPA staff do not reliably report concentrations of 0.2 mg/l. Additionally, ORD and OW have presented information to states that indicates concentrations above 0.5 mg/l significantly reduce the number of samples that are positive for total coliform bacteria. *See* webinar presentation found at: <https://www.youtube.com/watch?v=nd0pFsiKL30>.

b. Explain the technical basis for this change to the minimum combined chlorine residual requirement.

Agency Response: Maintaining an adequate disinfectant residual is a key public health barrier in drinking water treatment and distribution. A combined residual relies upon the formation of chloramines which are a combination of free chlorine and free ammonia. This combination results in the formation of three inorganic species: monochloramine, dichloramine and trichloramine. Monochloramine is widely held as the most effective disinfectant species. Unfortunately, monochloramine testing has not advanced to a state where a readily available testing device has been approved by the U.S. EPA. Therefore, testing of combined chlorine residual is necessary.

However, there are problems associated with demands placed on the residual testing by natural organic matter. This organic matter can cause the formation of organic chloramines which are poor disinfectants, can interfere with accurate testing of inorganic chloramines, cause other water quality concerns and be persistent throughout the distribution system.

When combined chlorine concentrations (chloramine concentrations) are low nitrification in the distribution system can become a problem. The American Water Works Association M-56 Fundamentals and Control of Nitrification in Chloraminated Drinking Water Distribution Systems is less likely to occur at concentrations greater than 1.5 mg/l.

c. Provide a brief explanation for the record of where and how compliance with these new minimums will be determined?

Agency Response: A minimum free chlorine residual of 0.5 mg/l or a minimum combined residual of 1.0 mg/l shall be maintained in all active parts of the distribution system at all times. *See* proposed Section 604.725(a). Therefore, compliance can be determined by samples that are from, or representative of, the distribution system.

d. How will these minimum chlorine residual requirements be enforced for community water supplies that purchase water?

Agency Response: Community water supplies (“CWSs”) shall monitor chlorine residual to determine the amount and type of residuals existing at different points in the distribution system. There is no differentiation between types of water systems in this regulation.

2. For combined chlorine community water supply systems like CWLP, what public health improvements would be achieved by the proposed change?

Agency Response: The public health protection afforded by the increase in combined chlorine concentration for a water system that already reports concentrations above the proposed change would be difficult to access. However, based upon information provided by U.S. EPA ORD and the AWWA, water systems that are not routinely providing concentrations in excess of 1.0 mg/l may be vulnerable to nitrification may develop difficulties maintaining sufficient disinfection, and may be subject to biological growth in the distribution system including waterborne disease if pathogens penetrate the distribution system.

3. What consequences of raising the total chlorine residual requirement were considered in developing this proposal? What negative public health impacts from the proposed change were evaluated?

Agency Response: The Illinois EPA does not anticipate raising the total chlorine residual requirements will have adverse impacts on most CWSs in Illinois and should not have negative health impacts. Compliance with existing maximum contaminant levels for disinfection byproducts must continue to be met. The Illinois EPA does not believe that increased chemical addition should be necessary at most water systems in Illinois. The belief is that the problem rests in proper management of water distribution systems.

4. What percentage of community water supplies do not currently meet the proposed minimum residuals requirements?

Agency Response: The Illinois EPA reviewed available disinfection data for the month of June 2017. Approximately 80% of samples reported by CWSs with combined chlorine residuals would meet the 1 ppm standard (approximately 10% reported would not meet the existing 0.5 ppm standard). Additionally, approximately 90% of the samples reported by CWS with a free chlorine residual would meet the 0.5 ppm standard.

5. What additional steps will need to be taken by the communities that do not currently meet this requirement?

Agency Response: With proper planning and operational measures residuals leaving the treatment works should be maintained in all areas of the distribution system. Water systems need to be encouraged to install tank mixers, loop water mains, and employ flushing when necessary to keep fresh water flowing to all consumers.

a. What cost was assumed for this increased chemical usage?

Agency Response: The Agency believes there could be a minimal increase in chemical usage. Increased cost may result from proper water quality management including, but not limited to, installation of tank mixers, looping water mains, employing flushing, and enhancement to treatment (e.g. improved organic removal, biological active filtration, and improved chemical addition controls).

b. What safety or environmental impacts of increased chemicals storage were considered?

Agency Response: See response to (a) *supra*.

c. What is the taste and odor impact of this change?

Agency Response: The Agency believes that aesthetic properties will be improved by enhanced water quality management.

6. What evidence was relied on to determine the current standard is not protective?

Agency Response: The Illinois EPA relied upon information supplied by U.S. EPA's ORD and OW as well as information provided in the American Water Works Association M-56 Fundamentals and Control of Nitrification in Chloraminated Drinking Water Distribution Systems. See webinar presentation found at: <https://www.youtube.com/watch?v=nd0pFsiKL30>.

7. Will a community water supply be more likely to exceed the disinfection by-products requirements as a result of this proposal?

Agency Response: If water systems properly manage their distribution systems, disinfection by-products concentrations should not increase.

8. What incremental increase in trihalomethane levels will occur as a result of this proposal?

Agency Response: If water systems properly manage their distribution systems, trihalomethane concentrations should not increase.

9. What other States' requirements were looked at in developing this Section of the proposed rule? Which States have this same requirement? Which States have different requirements?

Agency Response: The Agency reviewed the follow states: Alabama, Colorado, Delaware, Florida, Georgia, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Missouri, Nebraska, Nevada, New Jersey, North Carolina, Ohio, Oklahoma, Tennessee, Texas, Vermont and West Virginia. See data published here - <http://www.pabulletin.com/secure/data/vol46/46-8/278.html>

State	Minimum Distribution System Residual (mg/L)
Alabama	0.2 (free), 0.5 (total)
Colorado	0.2 (free or total)
Delaware	0.3 (free)
Florida	0.2 (free), 0.6 (total)
Georgia	0.2 (free)
Illinois	0.2 (free), 0.5 (total)
Indiana	0.2 (free), 0.5 (total)
Iowa	0.3 (free), 1.5 (total)
Kansas	0.2 (free), 1.0 (total)
Kentucky	0.2 (free), 0.5 (total)
Louisiana	0.5 (free or total)
Minnesota	0.1 (free or total)
Missouri	0.2 (total)
Nebraska	SW-0.2 (free), 0.25 or 0.5 (total); GW-0.1 (free)
Nevada	0.05 (free or total)
New Jersey	0.05 (free or total)
North Carolina	0.2 (free), 1.0 (total)
Ohio	0.2 (free), 1.0 (total)
Oklahoma	0.2 (free), 1.0 (total)
Tennessee	0.2 (free)
Texas	0.2 (free), 0.5 (total)
Vermont	0.1 (free)
West Virginia	0.2 (total)

10. **Did the Agency study virus inactivation at plants complying with the current minimum chlorine residual requirements in developing the proposal? If so, what was found?**

Agency Response: No. Virus inactivation targets pathogens in the source water. This is different than maintaining disinfectant residuals in the distribution system. As described previously, there are three primary reasons to maintain a distribution system residual: limit biological growth in the distribution system; reduce risk of waterborne disease in case pathogens penetrate the distribution system; provide an indicator of intrusion or other localized events.

11. **Mr. McMillan testifies that “Illinois EPA believes that the impact of this increase in disinfectant residual reflects the best practices already in place in most Illinois’ water supplies.” p. 5.**

- a. **What residual data from existing water supplies was this statement based on?**

Agency Response: The Illinois EPA evaluated data collected for the revised total coliform rule under Part 611.

- b. **What best practices is this statement referring to?**

Agency Response: The best practices being referenced here are the measures being taken to maintain the current residual disinfectants being placed in distribution system. (e.g. properly balancing chemical addition, the looping of water mains, mixers in storage tanks, flushing, automatic hydrant flushing, and other means to keep water fresh in water supply distribution systems.)

604.730 Continuous Chlorine Analyzers

12. **The proposed change contained in Section 604.730 states "Community water supplies that rely on chlorination for disinfection pursuant to Section 604.700(a) present in the source water must have continuous chlorine residual analyzers and other equipment that automatically shuts down the facility when chlorine residuals at the entry point to the distribution system are below the limits established in Section 604.725."**

- a. **What does the phrase "present in the source water" mean in this sentence?**

Agency Response: The Agency proposes the following revision to Section 604.730:

Community water supplies that rely on chlorination for disinfection pursuant to Section 604.700(a) ~~present in the source water~~ must have continuous chlorine residual analyzers and other equipment that automatically shuts down the facility when chlorine residuals at the entry point to the distribution system are below the limits established in Section 604.725.

- b. **Would this provision require all surface water plants to have their chlorine analyzer shut-down water production if the analyzer residuals fall below the new minimum chlorine residual requirements of proposed Section 604.725?**

Agency Response: Yes

- c. **Did the Agency consider the frequency or impacts of chlorine analyzer failures on the community water supply in developing this requirement?**

Agency Response: Yes, however, manually controlling operations and verifying adequate disinfectant residuals would be an option if an analyzer failure occurred.

- d. Did the Agency consider the alternative technology of requiring an alarm with the requirement to manually check residual levels and determine a course of action as an alternative to automatic shut-down?**

Agency Response: Yes, alarms may be appropriate for certain aspects of operation. However, in this case inadequate disinfection rises to a higher level of public health protection.

- e. What is the cost of the automatic shut-down equipment required by this provision?**

Agency Response: The Illinois EPA does not have precise cost information but believes costs to be minimal. However, in this case, public health protection is a definite concern. Again, the ability to briefly shut down of a water plant to ensure adequate disinfection is appropriate.

Section 604.1150 Fluoride

- 13. Section 604.1150(a) of the proposal provides: “Basis of Design – Equipment shall have the capacity to maintain the fluoride content in the finished water at 0.7 mg/l.”**

- a. Is this requirement technologically feasible?**

Agency Response: The Illinois EPA mirrored state law requirements that the owners or official custodians of public water supplies follow the recommendations on optimal fluoridation for community water levels as proposed and adopted by the U.S. Department of Health and Human Services and the Centers for Disease Control and Prevention and the rules and regulations adopted by the Illinois Environmental Protection Agency and the Pollution Control Board. *See* 415 ILCS 40/7a. 35 Ill. Adm. Code 611.125 provides that all CWSs that are required to add fluoride to the water must maintain a fluoride ion concentration, reported as F, of 0.7 mg/L in its distribution system.

Technological feasibility was therefore not considered. Public Act 97-43 amended Section 7a of the Public Water Supply Regulation Act by removing the required range of fluoride content.

- b. Is it physically or scientifically possible for any equipment to maintain a fluoride level of precisely 0.7 mg/l at all times?**

Agency Response: See previous response to 13(a).

- 14. Why did the Agency not propose a range of values as is found in 35 Ill. Adm. Code 653.701(b)?**

Agency Response: See previous response to 13(a).

Section 604.1340 Elevated Storage

15. **Proposed Section 604.1340(a) provides that “The minimum storage capacity shall be equal to the average daily usage or be based on an engineering study of the distribution system hydraulic conditions, anticipated domestic water demands of the system, and where fire protection is provided, fire flow demands...”**

a. **Why did the Agency decide to require minimum storage capacity to be equivalent to average daily usage?**

Agency Response: This is derived from 35 Ill. Adm. Code 653.108(c). The Agency “added average daily usage” pursuant to the Recommended Standard found at 7.0.1.

b. **Is this provision found in Part 653 or the Recommended Standards?**

Agency Response: See response (a) above.

16. **How will this new requirement change the interpretation of what serves as an appropriate engineering study?**

Agency Response: This derived from 35 Ill. Adm. Code 653.108(c). There was no change to the requirement. An engineering study is not required when using the average daily usage.

17. **Will communities that do not currently have storage equivalent to their average daily usage be required to redo engineering studies as a result of this change?**

Agency Response: No, not as a result of this proposal. This derived from 35 Ill. Adm. Code 653.108(c). There was no change to the requirement.

18. **How much do the engineering studies required in this Section cost?**

Agency Response: Engineering studies are not required by this Section. The cost of the engineering study would be the same as it is under the current regulation.

19. **How many community water supplies are expected to need additional storage as a result of this requirement? What additional storage costs were assumed in developing the rulemaking proposal?**

Agency Response: None. The cost of storage under the proposal is the same as under current regulation.

20. **How does a uniform requirement of storage “equal to average daily usage” for all size community water supply systems address the concern that “Excess storage capacity can cause deterioration of the finished water quality and must be avoided”? Statement of Reasons at p. 50.**

Agency Response: There is no uniform requirement of storage “equal to average daily usage” because a study could be completed evaluating storage needs. However, the Illinois EPA recognizes that the regulations must strike a balance between the need for

stored water for emergencies with properly managing water as a perishable commodity. This regulation is attempting to accomplish this task.

CERTIFICATE OF SERVICE

Rex L. Gradeless, Assistant Counsel for the Illinois EPA, herein certifies that he has served a copy of the foregoing NOTICE OF FILING, and ILLINOIS EPA'S RESPONSES TO PRE-FILED QUESTIONS, 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 October 12, 2017, or by sending an email from my email account (Rex.Gradeless@Illinois.gov) to the email addresses designated below with the following attached as a 46 PDF document in an e-mail transmission on or before 5:00 pm on October 12, 2017.

By: /s/Rex L. Gradeless

THIS FILING IS SUBMITTED ELECTRONICALLY AND SERVED ON RECYCLED PAPER

SERVICE LIST

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