

DIRECT TESTIMONY

of

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Rates Department  
Financial Analysis Division  
Illinois Commerce Commission

Illinois-American Water Company

Proposed General Increase in Rates For Water and Waste Water Service

Docket No. 16-0093

May 19, 2016

**Table of Contents**

**Witness Introduction.....2**

**Purpose of Testimony.....3**

**Summary of Conclusions and Recommendations.....3**

**Cost of Service and Rate Design.....5**

**Chicago Metro Sewer Division.....20**

**Bill Impacts.....24**

**Public Fire  
Protection.....28**

**Private Fire Protection.....30**

**Demand Study.....33**

**Summary of Recommendations.....37**

1           **I.     Witness Introduction**

2           **Q.     Please state your name and business address.**

3           A.     My name is Christopher L. Boggs and my business address is 527 E. Capitol  
4           Avenue, Springfield, IL 62701.

5

6           **Q.     By whom are you employed and in what capacity?**

7           A.     I am employed by the Illinois Commerce Commission (“Commission” or “ICC”) as  
8           a Rate Analyst in the Rates Department of the Financial Analysis Division. My  
9           responsibilities include rate design and cost of service analyses for electric, gas,  
10          water and sewer utilities and the preparation of testimony on rates and rate-  
11          related matters.

12

13          **Q.     Please discuss your educational and professional background.**

14          A.     I received a BS in Economics/Business Administration from Knox College in  
15          1987. I have been employed as a Rate Analyst at the Commission since April of  
16          2008. In my work as a Rate Analyst, I have testified in several rate cases on  
17          issues including rate design, cost of service, tariff language, miscellaneous fees  
18          and rates. Prior to my employment at the ICC, I worked more than 16 years in  
19          mortgage finance and mortgage operations management.

20 **II. Purpose of Testimony**

21 **Q. What is the purpose of your direct testimony?**

22 A. I address certain proposals presented in the direct testimony of Illinois-American  
23 Water Company (“Company” or “IAWC”) witnesses Jeffery T. Kaiser and Paul R.  
24 Herbert. Specifically, I address Mr. Herbert’s prepared cost of service (“COS”)  
25 study and his proposed rate design. I address Mr. Kaiser’s proposal to eliminate  
26 the demand study that the Company has been required to provide each time it  
27 files a rate case.

28 **Q. Are you including any attachments with your testimony?**

29 A. Yes. I am including the following attachments:

30 Attachment A Company’s Supplemental Response to Staff Data  
31 Request (“DR”) CB 7.03

32 Attachment B Company’s Response to Staff DR CB 5.01

33 Attachment C Company’s Response to Staff DR CB 3.02

34

35 **III. Summary of Conclusions and Recommendations**

36 **Q. Please begin your discussion by summarizing your conclusions and**  
37 **recommendations in this proceeding.**

38 A. I conclude that the Company’s proposed water COS is reasonable because it  
39 distributes the revenue requirement among the customer classes equitably in  
40 proportion to each class’s contribution to the Company’s overall cost of service.

41 The COS also conforms to the approach presented in the American Water Works  
42 Association M1 Manual of Water Supply Practices, Fifth Edition (“AWWA M1”).

43 I recommend the Commission approve the following:

- 44 • The Company’s proposed Customer Charges for all customers  
45 because they generally reflect the fixed costs of providing water  
46 service based on the size of meter installed on a ratepayer’s  
47 premises using the AWWA M1’s meter factor approach.
- 48 • The Company’s water Usage Charge rate design to recover the  
49 remainder of the approved revenue requirement that the Customer  
50 Charges do not cover.
- 51 • With a modification, the Company’s proposed rate design for  
52 Chicago Metro Sewer residential customers. The modification I  
53 recommend is to retain the two-block usage design for non-  
54 residential customers rather than adopting the Company’s proposed  
55 uniform, one-block rate design.
- 56 • The Company increase charges for Public Fire Protection so it  
57 recovers the full cost of providing this service.
- 58 • The Company’s proposed increase for Private Fire Protection rates  
59 for all divisions in this proceeding so it can move closer to  
60 recovering full cost of service to this class of customers.

- 61                   • Allow IAWC to limit the requirement for a Demand Study to once  
62                   every ten years.

63

64           **IV.    Cost of Service and Rate Design**

65   **Q.    What steps are undertaken to develop water rates?**

66   A.    The development of water rates, in general, involves the following steps  
67       described in the AWWA M1<sup>1</sup> and as discussed in detail in subsequent sections of  
68       my testimony:

- 69       1.    Determination of the total annual revenue requirements for the period in  
70       which the rates are to be effective.
- 71       2.    Allocation of the total annual revenue requirements to the basic functional  
72       cost components.
- 73       3.    Distribution of the component costs to the various customer classes in  
74       accordance with their requirements for service.
- 75       4.    Design of water rates that will recover from each class of customers,  
76       within practical limits, the cost to serve that class of customers.

77

78           **First Step: Determination of Total Annual Revenue Requirement**

---

<sup>1</sup> See also Appendix A, Description of COS Study Methodology

79 **Q. How is the total annual revenue requirement determined?**

80 A. The total annual revenue requirement is the summation of a utility's operating  
81 income plus the expenses incurred in providing utility service (e.g., operation  
82 and maintenance expense, depreciation, taxes) for a given test year. Staff's  
83 proposed revenue requirements are presented in Staff witness Richard Bridal's  
84 testimony. (ICC Staff Ex. 1.0.)

85

86 **Q. Did IAWC present a water COS Study in its filing?**

87 A. Yes. The Company's water COS Study is presented in IAWC Schedule 11.01.

88

89 **Q. What test year did the Company use in its water COS Study?**

90 A. The Company used a future test year ending December 31, 2017. (IAWC Ex.  
91 11.01.)

92

93 Second Step: Allocation to Basic Functional Cost Components

94 **Q. Please briefly describe the procedures to allocate basic functional cost**  
95 **components.**

96 A. The allocation procedures recognize the particular service requirements of the  
97 customers for total volume of water, peak rates of use and other factors. (AWWA  
98 M1, 49.) The cost components are: (1) base costs; (2) extra capacity costs; (3)

99 customer costs; and (4) direct fire protection costs.

100

101 **Q. How did the Company allocate the total annual revenue requirements to the**  
102 **basic functional cost components?**

103 A. The allocations by the Company are shown on Schedules B and C of IAWC  
104 Exhibit 11.01. Company witness Herbert discusses these schedules and his  
105 allocation methodology on pages 5-9 of his direct testimony. (IAWC Ex. 11.00, 5-  
106 9.)

107

108 Third Step: Distribution of Component Costs to the Various Customer Classes

109 **Q. Briefly describe the process of allocating costs among customer classes.**

110 A. A COS Study is performed to allocate costs among all customer classes to  
111 determine each customer class' respective responsibility for the costs imposed  
112 on the utility. The various costs on the utility system are allocated among the  
113 customer classes according to cost causation principles. The results are  
114 summarized in rates of return ("ROR") for customer classes, which document  
115 each customer class' relative performance in recovering costs. Classes  
116 generating above average returns are considered to be paying more than their  
117 fair share of the Company's revenue requirement, while classes with below  
118 average returns are viewed as paying too little. The COS Study determines the

119 cost to serve customers and thus provides the basis of designing rates for a  
120 utility.

121

122 **Q. Are there different types of COS Studies?**

123 A. Yes. There are two main types of COS Studies listed in the AWWA M1: the  
124 Base-Extra Capacity Method and Commodity-Demand Method.

125

126 **Q. Please describe the differences between these methods.**

127 A. Costs are separated into four primary cost components for either the Base-Extra  
128 Capacity Method or the Commodity-Demand Method. Two of the cost  
129 components are common to both methods: customer costs and fire protection  
130 costs. In the Base-Extra Capacity Method the other two components are: base  
131 costs and extra capacity costs. In the Commodity-Demand Method the other two  
132 components are: commodity costs and demand costs.

133

134 **Q. Is there one type of COS Study that is predominantly used by the**  
135 **Commission to set rates for water companies?**

136 A. Yes. The Base-Extra Capacity Method approach has been accepted for water  
137 utility ratemaking in Illinois for many decades. There is considerable precedent  
138 for using the Base-Extra Capacity Method approach which has been accepted for

139 water utility ratemaking in Illinois for many decades. (A few recent examples are  
140 the final orders in Aqua Illinois Docket No. 11-0436, IAWC Docket No. 09-0319,  
141 and IAWC Docket No. 11-0767.)

142

143 **Q. Which method did IAWC use for the water COS Study filed in IAWC**  
144 **Schedule 11.01?**

145 A. The Company used the Base-Extra Capacity Method. (IAWC Ex. 11.00, 5.)

146

147 **Q. What is your opinion of the Company's decision to use the Base-Extra**  
148 **Capacity Method approach?**

149 A. I consider the Base-Extra Capacity Method approach acceptable for ratemaking  
150 in this case. The precedent for this approach in Illinois and its acceptance by the  
151 AWWA make it a reasonable choice in this case.

152

153 **Q. How is the method of the distribution of component costs to the various**  
154 **customer classes determined?**

155 A. Many fully allocated or fully distributed cost methods have capacity cost  
156 allocations based on both the demand and consumption components of each  
157 customer class.

158

159 **Q. Please explain the Company's choice of customer class allocators for the**  
160 **COS Study.**

161 A. The Company used average usage demands to allocate the base portion of  
162 system costs. For the excess of Non-Coincident Peak ("NCP") demand factors,  
163 the Company used over the average usage demands to allocate the "extra"  
164 component of costs required to meet the demands that exceeded the average.

165

166 **Q. What are NCP demand factors?**

167 A. These are the maximum usage demands for each individual customer class for  
168 the year. The maximum demands for different customer classes may occur at  
169 the same time or they may occur on different days of the year. (IAWC Ex. 11.02,  
170 Tables 1E through 1G.)

171

172 **Q. What role do demand factors play in the COS?**

173 A. These factors represent the amount of demand each customer class places on  
174 the system and the costs of the system that are then allocated to that class.  
175 Demand factors are the foundation for the Company's Base-Extra Capacity  
176 Method. They must be developed as precisely as possible to ensure the  
177 accuracy of the allocation factors proposed for this case. If they are calculated  
178 inaccurately, that will undermine the COS Study results. For COS Study results  
179 to be accurate, not only must the choice of allocators be reflective of costs in the

180 first step, but the method by which those allocators are developed must be  
181 accurate as well. If the proposed allocator fails to reasonably represent the  
182 demands of rate classes, then the allocation of costs will be inaccurate and the  
183 results of the study will be problematic.

184

185 **Q. What is IAWC's method for estimating demand factors in this case?**

186 A. The Company directly measured demands to derive its demand factors. (IAWC  
187 Ex. 3.00, 28.) This approach is discussed in greater detail later in my testimony.

188

189 Fourth Step: Design of Water Rates

190 **Q. Briefly describe the process of designing water rates.**

191 A. Generally, water rates are designed to recover revenues from each customer  
192 class that cover the costs to serve each class. Customer Charges are typically  
193 established to recover the fixed costs in providing water service based on the  
194 size of meter installed on a ratepayer's premises. Usage Charges are typically  
195 established to recover the variable costs in providing water service and are  
196 based on the volume of water a customer uses on a monthly basis.

197

198 **Q. How does the Company propose to recover the cost to serve each class of**  
199 **customers?**

200 A. Company witness Herbert states:

201 The Company's proposed rate design continues the basic existing  
202 rate structure that includes a customer charge which varies by  
203 meter size and a single consumption block for residential  
204 customers and multiple declining block rates for non-residential  
205 customers. Generally, rates were designed to move revenues more  
206 in-line with cost of service indicators without necessarily moving all  
207 the way to cost of service. This was done primarily to avoid drastic  
208 shifts in revenues based on the results of the direct demand study.  
209 Also, certain classes, primarily residential and commercial,  
210 proposed revenue exceeds the cost of service level in order to  
211 make up for those classes on contract or competitive rates that  
212 cannot be increased to recover their full cost of service.

213  
214 (IAWC Ex. 11.00, 12-13.)  
215

216 The Company's COS Study shows that currently, most customer classes provide  
217 revenues that generally reflect the underlying costs. There are a few exceptions  
218 (i.e. Zone 1--Large Commercial, Industrial, Competitive Industrial, Other Public  
219 Authority and Large Other Public Authority; Pekin—Residential and Other Public  
220 Authority; Lincoln—Industrial and Other Public Authority; Zone 1 Alternate—  
221 Large Commercial, Industrial, Competitive Industrial, Large Other Public  
222 Authority and Large Other Water Utility). Private Fire Protection rates for Pekin  
223 do not provide revenues that reflect underlying costs. Thus, the Company  
224 proposes some of the largest increases for Private Fire Service Rates for Pekin  
225 to move them closer to COS while the proposed Public Fire Service Rates are  
226 also increased to full cost of service levels for all operating divisions except  
227 Lincoln which is set to recover just under the full COS.

228

229 **Q. What Customer Charges does the Company propose for the Residential**  
230 **class in each of its water divisions?**

231 A. The Company proposes a \$20.00 Customer Charge for the 5/8" meter  
232 Residential class of the Zone 1 and Pekin Divisions. It proposes a \$15.90  
233 Customer Charge for the 5/8" meter Residential class for the Lincoln Division and  
234 \$19.12 for the 5/8" meter Residential class of the South Beloit territory of the  
235 Zone 1 Division.

236

237 **Q. Why does the Company propose a lower Customer Charge for South**  
238 **Beloit?**

239 A. The lower charge is proposed to recognize that South Beloit currently has a fixed  
240 purchase water rate area; that is, the customers pay for water supply through a  
241 purchased water rider. Thus, the Company proposes the residential Customer  
242 Charge for South Beloit to be equal to the Zone 1 Customer Charge less the  
243 fixed charge portion of the purchased water surcharge of \$0.88 for a 5/8" meter.  
244 Customer charges for the other meter sizes in South Beloit were also increased  
245 to the level of Zone 1, less the applicable purchased water surcharge. Id. at 14.

246

247 **Q. What support did the Company provide for its proposal to increase its**  
248 **Customer Charges for each water division?**

249 A. The Company based its proposal to increase Customer Charges on Schedule E  
250 of the COS Study for each water division. The Company noted that it wished to  
251 increase Customer Charges to recover a greater portion of customer costs for

252 each division through the Customer Charge as well as move toward a single  
253 Customer Charge for all tariff groups. Id. at 12.

254

255 **Q. Do you support the Company's proposed Customer Charges for the**  
256 **Residential class of each division?**

257 A. Yes. Generally, the Company's proposed Residential class Customer Charges  
258 will recover the cost of service in each division.

259

260 **Q. Did you examine alternatives to the Company's proposed Customer**  
261 **Charges for water service?**

262 A. No, I saw no need to examine alternatives. With the exception of the Commercial  
263 class in each of the Company's three water divisions, the revenue that the  
264 Company proposes to recover in most classes in each division either will be  
265 nearly the full cost to serve that class or will increase the percentage of revenues  
266 recovered from what was approved in Docket No. 11-0767 to serve that class  
267 (some classes that have provided subsidies to other classes in the past will also  
268 reduce the subsidies that they will contribute to other classes under this  
269 proposal). Because the Company's proposal seems to move toward full cost  
270 recovery for each class, I have no objections to the Company's Customer Charge  
271 proposals.

272

273 **Q. What do you recommend regarding the Company's Customer Charge**  
274 **proposal?**

275 A. I recommend that the Commission approve the Company's proposed Customer  
276 Charges for all ratepayers. The Customer Charges are based on the AWWA  
277 meter factor approach. This approach relates the flow for meters larger than 5/8"  
278 to that of the volume of flow for 5/8" meter. In other words, equivalent meter  
279 ratios, expressed in terms of the ratio of related meter capacity for each meter  
280 size relative to a 5/8" meter size, should be applied.<sup>2</sup> The remainder of the  
281 approved revenue requirement increase will be recovered through the Usage  
282 Charge.

283

284 **Q. What are Usage Charges?**

285 A. Usage or volumetric rates are rates that are applied based on the volume of  
286 water used.

287

288 **Q. What Usage Charges does the Company propose for the Residential class**  
289 **in each of its water divisions?**

290 A. The Company's proposed Usage Charges for all divisions have been set such  
291 that it will recover the remainder of the Company's proposed revenue  
292 requirement not covered by its proposed Customer Charges.

---

<sup>2</sup> American Water Works Association, AWWA Manual M1, 2000, p. 202.

293

294 **Q. Please explain the Company's proposed Usage Charges.**

295 A. For Zone 1, the Company conformed to the Order from Docket No. 11-0767,  
296 which approved IAWC's proposal to consolidate transmission and distribution  
297 related costs of Zone 1 and what was formally known as the Chicago Metro  
298 water district. The Company's proposal for this rate case is to design rates that  
299 reflect transmission and distribution (non-production) costs that are equal for  
300 Zone 1 and "Zone 1 Chicago Metro" customers. Thus, while production costs  
301 may differ, the non-production costs of transmission and distribution processes  
302 associated with water delivery will be the same for all customers in the Zone 1  
303 water district. Id. at 15. Mr. Herbert indicates that "[R]emoving production costs  
304 to develop a common non-production cost recognizes the operational differences  
305 between Chicago Metro customers and Zone 1 and other Zone 1 customers in  
306 that Chicago Metro is supplied primarily by purchased Lake Michigan water,  
307 while Zone 1's source of supply is surface and groundwater produced by IAWC.  
308 The production costs are then added back for Zone 1 and non-Chicago Metro  
309 Lake customers, only." Id.

310 To illustrate, IAWC Exhibit 11.03 calculates the unit costs associated with the  
311 production of water in Zone 1. The production unit costs were then subtracted  
312 from the Company's proposed Usage Charges for the former Chicago Metro  
313 Lake Water customers which yielded its proposed non-production rate.

314 Similarly, Chicago Well customers do not purchase water, so there is no  
315 purchased water surcharge. The Company proposes to set the Usage Charges  
316 for these customers equal to the rates proposed for Zone 1 customers.

317 Consumption rates will also be adjusted for other areas. For South Beloit, the  
318 Company linked usage rates to the Zone 1 rates less the cost of purchased  
319 water. Subtracting the cost of South Beloit's purchased water from the Zone 1  
320 usage rate equalized the usage portion of the bill for the entire Zone 1 division.  
321 Id. at 14. For Pekin, the Company proposes to increase the current Usage  
322 Charges in order to move revenues as close to the cost of service indicators as  
323 possible while additionally considering bill impacts to the customers in this  
324 division. Id. For Lincoln, the Company proposes to keep the Usage Charges  
325 unchanged because the proposed increase to the Customer Charges for Lincoln  
326 will provide enough revenues to recover the total revenue increase required. Id.

327

328 **Q. How do you assess the Company's proposed Usage Charge justifications?**

329 A. I consider them to be reasonable because the Company's proposal equalizes the  
330 non-production rate for all customers regardless of the source of water being  
331 delivered.

332

333 **Q. What is your recommendation with respect to Usage Charge rate design**  
334 **proposed in this proceeding?**

335 A. I have no objections to the Company's proposed Usage Charge rate design for  
336 water customers in this case. However, my recommendation is to use water  
337 Usage Charges as the residual rate to capture the approved revenue  
338 requirement, to the extent the revenue requirement approved by the Commission  
339 differs from the one proposed by the Company. Because the Customer Charges  
340 will yield a set amount of revenue, the Usage Charges can be adjusted on an  
341 equal percentage basis to allow the Company to recover the remainder of its  
342 approved revenue requirement not recovered through Customer Charges. Once  
343 the Commission approves a revenue requirement, the Usage Charge rate design  
344 proposed by the Company should be used to recover any approved revenue that  
345 the Customer Charges do not capture. In developing my Usage Charge  
346 recommendations for each division, I gave consideration to the following  
347 objectives: uniformity, gradualism, rate shock and recovery of non-customer  
348 costs.

349 Because the Zone 1 rate division was recently consolidated with what was  
350 formally known as the Chicago Metro water division, it is my opinion that all Zone  
351 1 ratepayers should pay uniform rates where feasible. Since these customers  
352 face the same set of non-production costs, the reasonable approach is to  
353 develop a set of rates that apply to all similar customers within the Zone 1  
354 territory while still taking into account differences in production costs. The  
355 Company's proposal achieves these objectives, as it endeavors to balance  
356 gradualism, uniformity and potential rate shock to ratepayers while recovering  
357 non-customer costs that were not recovered through the Customer Charge.

358

359 **Q. Did you review IAWC's Water Schedule E-7 Typical Monthly Bill**  
360 **Comparison?**

361 A. Yes. IAWC's Water Schedule E-7 computes bill comparisons under the present  
362 rates and the rates as proposed by the Company. This schedule shows that a  
363 residential customer who uses 5,000 gallons of water in a month could  
364 experience an increase in rates ranging between 0.19% (Sterling district) and  
365 21.78% (Granite City in the Interurban district).

366

367 **Q. What are your conclusions about this schedule?**

368 A. It shows generally that the largest bill increases are found in the Commercial and  
369 Industrial customer classes. It also indicates that IAWC's proposed rate design  
370 will necessitate slightly larger than average increases for typical residential  
371 customers using 5 ccf (1 "ccf" is equal to 100 cubic feet of water) in a month in  
372 the Interurban district (Granite City and Belleville).

373 Further, the bill increases will not be evenly distributed among all customers  
374 under the Company's proposed rates. However, the larger bill increases are a  
375 result of bringing those customers' rates closer to their cost of service which is  
376 the ultimate goal in setting cost-based rates. Therefore, some classes of  
377 customers will experience a monthly bill impact higher than the Company's  
378 proposed total revenue requirement percent increase while others will experience

379 a lower monthly bill impact than the Company's proposed total revenue  
380 requirement percent increase.

381

382 **V. CHICAGO METRO SEWER DIVISION**

383 Rates and Rate Design

384 **Q. Please explain the Company's rate proposal for the Chicago Metro Sewer**  
385 **District.**

386 A. Referring to the COS Study (IAWC Ex. 11.01, Schedule A-CMWW), the cost of  
387 service for Collection and Treatment service is \$19,407,056, whereas the  
388 Company is currently recovering only \$13,104,757 at present rates, or 67.53% of  
389 the cost of service. The Company proposes a 48.1% increase in rates for  
390 Collection and Treatment service customers, which would produce revenues of  
391 \$19,405,292, or nearly 100% recovery of cost of service. The Company also  
392 proposes a 1,000 gallon allowance for all customers, which is included in the  
393 minimum charge. A Usage Charge would be assessed for all water usage over  
394 1,000 gallons. Furthermore, the Company proposes a flat rate charge based on  
395 an average 4,500 gallons per month for those customers without metered water  
396 usage data.

397 The following tables show a comparison of current and proposed residential and  
398 non-residential general sanitary charges:

399

400

**Table 6.1 Sewer Service Customer Charge Comparisons**

<b>Customer</b>	<b>Non-Residential</b>			<b>Residential</b>		
<b>Collection and Treatment</b>	<b>Current</b>	<b>Company Proposed</b>	<b>% Increase</b>	<b>Current</b>	<b>Company Proposed</b>	<b>% Increase</b>
Base	\$41.72	\$67.75	62.39%	\$47.46	\$67.75	42.75%
Multi-unit	-	-	-	\$37.97	\$29.27	(22.91)%

401

**Table 6.2 Sewer Service Usage Charge Comparisons**

<b>Consumption Charges</b>	<b>Residential</b>		
<b>Collection and Treatment</b>	<b>Current</b>	<b>Company Proposed</b>	<b>% Increase</b>
First 1,000 gallons	\$0.00	\$0.00	0%
Over 1,000 gallons (rate per 100 gal.)	\$0.37189	\$0.53090	42.76%
	<b>Non-Residential</b>		
	<b>Current</b>	<b>Company Proposed</b>	<b>% Increase</b>
First 20,000 Gallons	\$0.34477	\$0.53090	53.99%
Over 20,000 Gallons	\$0.27581	\$0.53090	92.49%

402

403 **Q. Do you agree with the Company's rate design proposal for the Chicago**  
 404 **Metro Sewer District?**

405 A. Not entirely. I agree with the Company's proposed rate structure<sup>3</sup> for residential  
406 customers, which was approved by the Commission in a previous IAWC rate  
407 case and is currently in place for the residential class. Illinois-American Water  
408 Company, ICC Order Docket No. 09-0319, 177 (April 13, 2010) ("IAWC 09 Rate  
409 Case"). There have been no significant changes to the characteristics of the  
410 residential class since IAWC's last rate case that would warrant a change to that  
411 rate design. Thus, I do not agree with the Company's proposal to eliminate the  
412 declining block Usage Charges for non-residential customers. A declining block  
413 rate structure is one in which the unit rate of each succeeding block of usage is  
414 charged at a lower unit rate than the previous blocks. Non-residential customers,  
415 who are larger water users, usually have favorable cost of service characteristics  
416 that justify a declining block structure. The average cost to serve larger  
417 customers falls as their usage increases because their usage is more evenly  
418 distributed throughout the year. The Company has not provided any  
419 documentation or analysis that would justify deviating from the declining block  
420 usage rate structure that has been approved by the Commission in prior rate  
421 cases.

422

423 **Q. What do you recommend regarding the Company's rate design proposal**  
424 **for the Chicago Metro Sewer District?**

---

<sup>3</sup> Block rates are volumetric tariffs that contemplate an increase or decrease in rates as usage increases or decreases. The number of blocks in a rate structure refers to the number of times a rate can change, relative to a base usage amount. Increasing block usage charges increase the usage charge with increased consumption, while declining block usage charges do the opposite.

425 A. I recommend the Commission approve the one-block rate structure for residential  
426 customers and the 1,000 gallon allowance for *all* customers, which is included in  
427 the minimum charge. I also recommend the Commission approve the  
428 Company's proposed flat rate charge based on an average 4,500 gallons per  
429 month for those customers without metered water usage data. However, I  
430 recommend that the Commission reject the Company's proposal to align the non-  
431 residential rate structure with the residential rate structure and reject the  
432 Company's proposal to eliminate the declining block Usage Charges for this  
433 class. Instead, I recommend the Commission approve the Company's proposed  
434 rate design for non-residential customers contained in Attachment A. This rate  
435 design provides a declining block usage structure for large water users similar to  
436 the design that was approved in the Company's last rate case.

437

438 **Q. What does the Company propose for Treatment Only (wholesale)**  
439 **customers?**

440 A. For the Treatment Only customers in Tinley Park, which are the Company's only  
441 wholesale sewer service customers, the Company calculated its proposed flat  
442 rate fee of \$59.33 per user per month by subtracting the average collection only  
443 bill from the average collection and treatment bill. The Tinley Park West monthly  
444 flat fee, covering a multi-unit development, was set at nearly one-half of the  
445 Tinley Park rate or \$29.27 per unit per month, which conforms to the agreement  
446 between IAWC and Tinley Park. (IAWC Ex. 11.00, 17.)

447

448 **Q. What is your opinion of this proposal?**

449 A. I consider it reasonable because it identifies the cost for Treatment Only that  
450 applies to these customers by isolating the treatment component of an average  
451 collection and treatment bill. Therefore, I recommend the Commission approve  
452 the Company's rate structure proposal for Treatment Only customers.

453

454 **VI. Bill Impacts**

455 **Q. What does the Company's analysis of the bill impacts show for the Chicago**  
456 **Metro Sewer District?**

457 A. As shown in Table 6.3 below, the Company provided actual billing data for  
458 residential customers who represent the 1ccf, 5ccf, 10ccf, 15ccf, and 20ccf  
459 usage levels for the Chicago Metro Waste Water Collection and Treatment  
460 customer classes. In addition, the Company provided actual billing data for non-  
461 residential customers who represent the 50ccf, 250ccf, 500ccf, 750ccf and  
462 1,000ccf usage levels. These comparisons reflect the annual percentage  
463 increases that a broad range of residential and commercial customers would see  
464 under the Company's proposed rate design.

465

466  
 467

**Table 6.3<sup>4</sup> Chicago Waste Water Collection and Treatment Increase Proposals**

<b>% Increase Residential</b>	<b>% Increase Multi Unit Residential</b>	<b>% Increase Small Commercial</b>
35.96% (1ccf)	69.22% (1ccf)	105.87% (50ccf)
35.95% (5ccf)	69.23% (5ccf)	88.18% (250ccf)
35.95% (10ccf)	69.23% (10ccf)	85.78% (500ccf)
35.96% (15ccf)	69.23% (15ccf)	84.96% (750ccf)
35.95% (20ccf)	69.23% (20ccf)	84.56% (1000ccf)

468

469 For Collection and Treatment customers, Table 6.3 shows a fairly even  
 470 distribution of the Company's proposed rate increases throughout the residential  
 471 customer classes and slightly under the 48.09% overall Company proposed  
 472 increase. However, the proposed rate percentage increases for Multi-unit and  
 473 Commercial Collection and Treatment customers are higher than the Company's  
 474 overall proposed revenue requirement increase of 48.09% for the entire Chicago  
 475 Metro Waste Water operation. This is because the revenues currently recovered  
 476 from the Collection and Treatment customers are not sufficient to recover the  
 477 cost to serve them. For Waste Water Collection Only customers, this pattern  
 478 holds true as well. For both Waste Water Collection and Treatment customers  
 479 and the Waste Water Collection Only customers, IAWC is proposing a larger

<sup>4</sup> Data Source: IAWC Ex. 4.03 (Supp.), 63-65.

480 increase than the overall average increase in order to better align revenue  
481 recovery with the cost to serve these customer groups. However, for Waste  
482 Water Treatment Only customers, the rates currently over recover the cost to  
483 serve this group of customers and, therefore, the Company proposes a below  
484 average rate increase for that group.

485

486 **Q. Do you take issue with the Company's rate proposal for Waste Water**  
487 **Treatment Only customers?**

488 A. No, I do not. The Company's proposed below overall average rate increase for  
489 the Waste Water Treatment Only customers enables the Company to propose a  
490 larger than overall average increase for the Waste Water Collection and  
491 Treatment customers and the Waste Water Collection Only customers. This  
492 result will better align revenue recovery with the cost to serve these three  
493 customer groups. If the rate for the Waste Water Treatment Only customers  
494 were adjusted downward to move more aggressively toward cost of service, that  
495 would exacerbate the increase for the Waste Water Collection and Treatment  
496 customers and the Waste Water Collection Only customers, which are already  
497 greater than the overall average.

498

499 **Q. What are your conclusions regarding the Company's Waste Water bill**  
500 **impacts?**

501 A. I conclude the bill impacts that are shown in Table 6.3 generally result in bill  
 502 increases of 35.95% for residential customers, 69.23% for multi-unit residential  
 503 customers and range from 84.56% to 105.87% for small commercial Collection  
 504 and Treatment customers. The percentage increases are primarily driven by the  
 505 overall Company proposed revenue requirement increase. Under the  
 506 Company's proposed rate design, the following monthly dollar impact amounts  
 507 can be expected for the broad range of customers:

508  
 509

510 **Table 6.4<sup>5</sup> Dollar Impacts to a Customer's Monthly Waste Water Bill at**  
 511 **Various Usage Levels at Company Proposed Revenues**

Monthly \$ Increase Residential	Monthly \$ Increase Multi Unit Residential	Monthly \$ Increase Small Commercial
\$17.92 (1ccf)	\$27.60 (1ccf)	\$168.62 (50ccf)
\$23.53 (5ccf)	\$138.01 (5ccf)	\$651.21 (250ccf)
\$30.55 (10ccf)	\$276.01 (10ccf)	\$1,254.46 (500ccf)
\$37.58 (15ccf)	\$414.02 (15ccf)	\$1,857.71 (750ccf)
\$55.59 (20ccf)	\$552.03 (20ccf)	\$2,460.96 (1,000ccf)

512

<sup>5</sup> Data Source: IAWC Ex. 4.03 (Supp.), 63-65.

513 Table 6.4 shows that customers with higher usage will see a higher dollar  
514 increase.

515 Currently, the Company recovers 64.95% of the cost of service from Collection  
516 and Treatment customers. (IAWC Ex. 11.01, Schedule A-CMWW.) Therefore, in  
517 order to align revenue recovery closer to costs, an increase in sewer rates for  
518 that group is necessary. Overall, the effect of the changes varies depending on  
519 the level of water use, size of meter, service classification and other factors.

520

521 **VII. Public Fire Protection Charges**

522 **Q. Please address the Company's COS Study that involves Public Fire**  
523 **Protection Charges for Zone 1, Pekin and Lincoln Divisions.**

524 A. Referring to Table 6.5 below, the Company's proposed rate increases for Public  
525 Fire Protection will recover nearly 100% of the cost to serve the customers in  
526 Zone 1 and Lincoln and will recover 109% in the Pekin district.

527

528 **Table 6.5<sup>6</sup> Public Fire Protection Cost Recovery: Current vs. Company**  
529 **Proposed**

---

<sup>6</sup> Data source: IAWC Ex. 11.1, Schedule A of each current Water division.

Service Division	Current Cost	Current Recovery %: Cost to Serve Ratio	Company Proposed Rate % Increase	Revenues From the Company's Proposed Rate Increase	Cost Recovery % After Company Proposed Increase
<b>Zone 1</b>	\$15,161,607	91.74%	8.96%	\$15,155,763	99.96%
<b>Pekin</b>	\$907,765	109.04%	-0.0005%	\$989,370	108.99%
<b>Lincoln</b>	\$556,741	87.01%	9.62%	\$531,038	95.38%

530

531 **Q. What are your recommendations regarding the Company's proposals in**  
 532 **Public Fire Service rates for the Zone 1, Pekin and Lincoln divisions?**

533 A. I recommend that in order to align revenues and the costs associated with  
 534 providing Public Fire Protection Service for each of the three water districts, the  
 535 Public Fire Protection rate for each of these divisions be set such that the  
 536 revenues recovered would be equal to the cost to serve the Public Fire  
 537 Protection. In the Company's last rate case, rates were approved to recover  
 538 100% of the Public Fire Protection costs in Zone 1, Pekin and Lincoln, and I see  
 539 no reason not to set the rates such that full cost of service is recovered for Public  
 540 Fire Protection in each district in this rate case.

541 This recommendation requires that the Company increase its proposed Public  
 542 Fire Protection rates for Zone 1 so that an additional \$5,844 can be recovered  
 543 through the rate increase to fully recover Public Fire Protection costs for this  
 544 division.

545 For Lincoln, this recommendation requires that the Company increase its  
546 proposed Public Fire Protection rates so that an additional \$25,703 can be  
547 recovered through the rate increase to fully recover Public Fire Protection costs  
548 for this division.

549 For Pekin, this recommendation requires that the Company *decrease* its  
550 proposed Public Fire Protection rates so that \$81,605 can be reduced from the  
551 revenues that its proposal would recover through Public Fire Protection costs for  
552 this division.

553 My above recommendations are consistent with Section 9-223(a) of the Act  
554 which states in relevant part:

555 Any fire protection charge imposed shall reflect the costs  
556 associated with providing fire protection service for each  
557 municipality or fire protection district.

558 220 ILCS 5/9-223(a)

559 The Company's COS Study indicates that the Company's proposed Public Fire  
560 Protection Charges are too low to recover the cost to serve Zone 1 and the  
561 Lincoln tariff divisions and greater than the cost to serve Pekin. Thus, I find it  
562 reasonable to recommend that the revenues recovered from Zone 1 and Lincoln  
563 divisions be increased and that the proposed revenues in Pekin be decreased  
564 through rates in order to align them with the calculated cost of service.

565

566 **VIII. Private Fire Protection Charges**

567 **Q. Please address the Company’s COS Study that involves Private Fire**  
 568 **Protection Charges for Zone 1, Pekin and Lincoln District tariff divisions.**

569 A. Referring to Table 6.6 below, the Company clearly does not currently recover the  
 570 full cost of Private Fire Protection service from the customers in any of its water  
 571 divisions. The Company has proposed various increases in Private Fire  
 572 Protection rates to continue towards full recovery of the costs to provide this  
 573 service.

574 **Table 6.6<sup>7</sup> Private Fire Protection Cost Recovery: Current vs. Company**  
 575 **Proposed**

Service Division	Current Cost	Current Recovery Percentage: Cost to Serve Ratio	Company Proposed Rate % Increase	Revenues From the Company’s Proposed Rate Increase	Cost Recovery % After Company Proposed Increase
<b>Zone 1</b>	\$4,194,205	91.74%	17.6%	\$4,189,088	99.88%
<b>Pekin</b>	\$174,518	75.67%	32.0%	\$174,319	99.89%
<b>Lincoln</b>	\$130,609	47.16%	10.0%	\$67,750	51.87%

576

577 **Q. What is your recommendation regarding Company’s proposed increase in**  
 578 **the Private Fire Service rates?**

579 A. I recommend approval of the Company’s proposal to increase Private Fire  
 580 Service rates for Zone 1 by 17.6%. The 99.88% cost of service recovery that  
 581 would result would continue to move Private Fire Protection Services for Zone 1  
 582 closer to full cost of service.

<sup>7</sup> Data source: IAWC Ex. 11.1, Schedule A of each current and proposed Water division.

583 In addition, I recommend approval of the Company's proposal to increase the  
584 Private Fire Protection Services rates for the Pekin tariff division by 32.0%. This  
585 proposed increase would conform to the principle of gradualism and, at 99.89%  
586 cost recovery, would continue to move toward full cost of service recovery for the  
587 Pekin tariff division.

588 Similarly, I recommend approval of the Company's proposal to increase the  
589 Private Fire Protection Service revenues for the Lincoln tariff division by 10.0%.  
590 This proposed increase would also conform to the principle of gradualism and, at  
591 51.87% recovery, would continue to move toward full cost of service recovery for  
592 the Lincoln tariff division. Although the proposed Private Fire Protection Service  
593 revenue percentage increases for Zone 1 and Pekin are slightly higher than the  
594 proposed increase to that of the Lincoln tariff division, Zone 1 and Pekin are very  
595 close to cost of service. I anticipate that Zone 1 and Pekin should receive  
596 increases in the next rate case to move Private Fire Protection Service revenues  
597 to full cost of service. However, the Lincoln Private Fire Protection Service  
598 revenue recovery percentage lags further behind than the other two tariff  
599 divisions in this proceeding and would need a 52.84% increase to move to full  
600 cost of service. Therefore, in the interest of gradualism, Lincoln Private Fire  
601 Protection Service will need more time to achieve full cost of service recovery.  
602 Therefore, I take no issue with the Company's proposed rate increase for Lincoln  
603 Private Fire Protection Service customers.

604

605 **IX. Demand Study**

606 **Q. Please describe the purpose of a demand study.**

607 A. A demand study determines peak day and peak hour ratios to average annual  
608 customer demand for each customer class. These demand ratios are used to  
609 assist in the development of allocation factors for the COS study which is the  
610 basis of the design of rates for each customer class.

611

612 **Q. Please describe the different methods by which a demand study can be**  
613 **performed.**

614 A. One method to perform a demand study is outlined in the AWWA M1. This  
615 method develops demand factors through the analysis of aggregate customer  
616 usage data and is the most commonly-used method for developing demand  
617 factors used ultimately in the allocation process for the design of rates for each  
618 customer class.

619 The second method is the direct measurement method, which is the method  
620 IAWC used in this rate case in keeping with the Commission's directive in the  
621 Final Order of Docket No. 09-0319. IAWC 09 Rate Case, 151.

622

623 **Q. Do you find the Company's direct measurement method adequate for**  
624 **developing demand factors for this rate case?**

625 A. Yes. The Company has monitored the demand data of approximately 780  
626 customers in various locations across each of the operating districts in its service  
627 territory for use in the demand study. It is my opinion that the direct demand  
628 study using sample sizes of different customer classes and in different locations  
629 provides adequate representation of the demand factors for the study.

630

631 **Q. What does the Company propose regarding the direct measurement**  
632 **demand study?**

633 A. The Company proposes that the Commission discontinue the direct  
634 measurement demand study and data collection.

635

636 **Q. What is your assessment of the Company's proposal to discontinue the**  
637 **direct measurement demand study?**

638 A. Pursuant to a directive in Docket No. 09-0319, the Company developed a  
639 methodology to collect demand data for use in subsequent rate cases. Since  
640 then, the Company has monitored the data, but has encountered practical  
641 difficulties in collecting the data. First, the Company's need to physically access  
642 the meters that are installed in the customer homes in the sample has proven  
643 burdensome. Since May 2011, the Company is required to schedule  
644 appointments with each sample residential customer to access the meter and  
645 data. The data is collected twice yearly to capture the 180 day period of peak

646 summer usage. (IAWC Ex. 3.00, 30.) Data for non-residential customers is  
647 collected quarterly year-round as typically the demand usage for these  
648 customers is not tied to summer peaks. Id.

649 Second, Company witness Kaiser indicates that approximately 30 employees are  
650 involved in the data collection process and the Company's internal costs since  
651 2012 have been \$48,000 annually. In addition, the Company incurs a \$290,000  
652 expense to have an outside consultant analyze the demand data and complete a  
653 demand study utilized in this rate case. Id. at 31.

654 Staff inquired whether the Company had any automatic read water meters in  
655 place. The Company responded that it did have automatic read meters in place  
656 for demand data and that those meters recorded hourly usage data for  
657 approximately 95 days. That data however is limited to being recovered via radio  
658 transmission from a vehicle on the street and only the last hourly read of the  
659 meter is available for analysis. To get more comprehensive data, the Company  
660 still must physically access the meter in order to download the entire stored  
661 memory of the device. A last option that would enable the Company to access  
662 hourly data would be to install an AMI system. The Company indicates this  
663 system would require intermediate radios, electrical power service and significant  
664 infrastructure and software installation to access the needed data. (See  
665 Attachment B)

666 Furthermore, the Company asserts that demand data is useful for up to 10 years.  
667 Mr. Herbert indicates that demand ratios measure the relationship of peak use to

668 average use. He states consumer consumption patterns change year to year  
669 primarily due to weather conditions, but the peak use to average use ratios have  
670 not changed significantly in recent years. Therefore, the current demand data  
671 should be representative of future data because the above ratios remain  
672 relatively unchanged. (See Attachment C).

673

674 **Q. What is your recommendation regarding the Company's proposal to**  
675 **eliminate the Demand Study for future rate cases?**

676 A. I recommend the Commission allow IAWC to limit the requirement for a Demand  
677 Study to once every ten years. The current data shows that the relationship of  
678 peak use to average use has not significantly changed since 2012 (the last  
679 recorded year of customer peak use). However, I recommend that each time the  
680 Company files a rate case prior to the expiration of the Demand Study data  
681 (2026), it be required to provide evidence that there has not been a significant  
682 and continual change in the overall system maximum day to average day ratio  
683 that may reveal an event which would indicate updated demand data is  
684 necessary. Because the demand meters will remain in place at the various  
685 customer locations, there should not be a significant expense to the Company  
686 if/when it is determined that demand data is necessary to be retrieved for use in  
687 Demand Studies in the future.

688

689           **X.     Summary of Recommendations**

690   **Q.     Please summarize your recommendations.**

691   A.     I recommend the Commission approve the following:

- 692                   • The Company's proposed Customer Charges for all customers  
693                   because the charges generally reflect the fixed costs of providing  
694                   water service based on the size of meter installed on a ratepayer's  
695                   premises using the AWWA M1's meter factor approach.
  
- 696                   • The Company's water Usage Charge rate design to recover the  
697                   remainder of the approved revenue requirement that the Customer  
698                   Charges do not cover.
  
- 699                   • With modification, the Company's proposed rate design for Chicago  
700                   Metro Sewer residential customers. The modification I recommend  
701                   is to retain a declining two-block usage design for non-residential  
702                   customers rather than adopting the Company's proposed uniform,  
703                   one-block rate design.
  
- 704                   • The Company's increase charges for Public Fire Protection so it  
705                   recovers the full cost of providing this service.
  
- 706                   • The Company's proposed increase for Private Fire Protection rates  
707                   for all divisions in this proceeding so it can move closer to  
708                   recovering full cost of service to this class of customers.

709                   • Allow IAWC to limit the requirement for a Demand Study to once  
710                   every ten years.

711

712   **Q.    Does this conclude your direct testimony?**

713   **A.    Yes, it does.**

**ILLINOIS-AMERICAN WATER COMPANY**  
**RESPONSE TO ILLINOIS COMMERCE COMMISSION**  
**DATA REQUEST NUMBER CB 07.003**

Witness Responsible:	<u>Paul Herbert</u>
Title:	<u>President, Valuation and Rate Division, Gannett Fleming, Inc.</u>
Phone No.:	<u>(717) 763-7211</u>
Date Received:	<u>March 25, 2016</u>
Docket No.:	<u>16-0093</u>

**CB 07.003**

Please provide a rate design for waste water Collection and Treatment, similar to IAWC's current rate design, that captures the Company's revenue requirement while maintaining a two-block waste water usage rate structure for non-residential customers. The design should provide a rate for usage volumes of 20,000 gallons or less and a rate for usage volumes in excess of 20,000 gallons.

**RESPONSE**

See attached requested non-residential rate design for collection and treatment.

**Attachment:** CB 07.003\_Attachment

**Date Response Provided:** April 8, 2016

**UPDATED RESPONSE**

See the attached non-residential rate design for collection.

**Attachment:** CB 07.003\_Update Attachment.pdf

**Date Updated Response Provided:** April 15, 2016

ILLINOIS-AMERICAN WATER COMPANY  
 Future Test Year Revenues at Current and Proposed Rates  
 Period Reported: 12 Months Ending September 30, 2013

Docket No. 11-\_\_\_\_\_  
 Section 285.5105  
 Schedule E-5

Chicago District - Waste Water  
 Workpaper Reference: \_\_\_\_\_

Line No.	<u>Commercial</u> Class/ Description (A)	Customer Meter Billings (B)	Current Sales (Hundred Gallons) (C)	Current Rates (D)	Current Total Revenue (E)	Proposed Sales (Hundred Gallons) (F)	Proposed Rates (G)	Proposed Total Revenue (H)
1	<b><u>COLLECTION ONLY</u></b>							
2	<b>Customer Charges:</b>							
3	Minimum	2,982.7		\$6.58	\$19,626		\$0.00	\$0
4	Proposed Minimum	8,429.0		-	\$0		23.00	\$193,867
5								
6	<b>Consumption Charges:</b>							
	First 10 00 Gallons					84,290	\$ 0.10000	8,429
7	First 200 00 Gallons		768,036.7	\$0.12483	95,874	683,746.7	0.10000	68,375
8	Over 200 00 Gallons		1,946,043.9	0.06340	123,379	1,946,043.9	0.09600	186,820
9	<b><u>COLLECTION AND TREATMENT</u></b>							
10	<b>Customer Charges:</b>							
11	Minimum	1,564.8		\$41.72	\$65,282		\$0.00	\$0
12	Proposed Minimum	4,013.0		-			67.75	\$271,881
13								
14	<b>Consumption Charges:</b>							
	First 10 00 Gallons					40,130.0	\$ 0.53090	21,305
15	First 200 00 Gallons		582,815.3	\$0.34477	200,937	542,685.3	0.53090	288,112
16	Over 200 00 Gallons		1,068,774.4	0.27581	294,779	1,068,774.4	0.51300	548,281
17								
15	FALs and Credits							
16	Other							
17		<u>16,989</u>	<u>4,365,670</u>		<u>\$799,877</u>	<u>4,365,670</u>		<u>\$1,587,070</u>

ILLINOIS-AMERICAN WATER COMPANY  
 Future Test Year Revenues at Current and Proposed Rates  
 Period Reported: 12 Months Ending September 30, 2013

Docket No. 11- \_\_\_\_\_  
 Section 285.5105  
 Schedule E-5

Chicago District - Waste Water  
 Workpaper Reference: \_\_\_\_\_

Page 2 of 3

Line No.	<u>Industrial</u> Class/ Description (A)	Customer Meter Billings (B)	Current Sales (Hundred Gallons) (C)	Current Rates (D)	Current Total Revenue (E)	Proposed Sales (Hundred Gallons) (F)	Proposed Rates (G)	Proposed Total Revenue (H)
1	<b><u>COLLECTION ONLY</u></b>							
2	<b>Customer Charges:</b>							
3	Minimum	-		\$6.58	\$0			\$0
4	Proposed Minimum							
5								
6	<b>Consumption Charges:</b>							
7	First 10 00 Gallons		-	\$0.12483	0	0.0	\$0.10000	0
8	First 200 00 Gallons		-	0.06340	0	0.0	0.10000	0
9	<b><u>COLLECTION AND TREATMENT</u></b>							
10	<b>Customer Charges:</b>							
11	Minimum	-		\$41.72	\$0			\$0
12	Proposed Minimum	12.0		-			67.75	\$813
13								
14	<b>Consumption Charges:</b>							
15	First 10 00 Gallons					120.0	\$ 0.53090	64
15	First 200 00 Gallons		4,010.3	\$0.34477	1,383	3,890.3	0.53090	2,065
16	Over 200 00 Gallons		145,124.8	0.27581	40,027	145,124.8	0.51300	74,449
17								
15	FALs and Credits							
16	Other							
17		<u>12</u>	<u>149,135</u>		<u>\$41,410</u>	<u>149,135</u>		<u>\$77,391</u>

ILLINOIS-AMERICAN WATER COMPANY  
 Future Test Year Revenues at Current and Proposed Rates  
 Period Reported: 12 Months Ending September 30, 2013

Docket No. 11- \_\_\_\_\_  
 Section 285.5105  
 Schedule E-5

Chicago District - Waste Water  
 Workpaper Reference: \_\_\_\_\_

Line No.	<u>Other Public Authority</u> Class/ Description (A)	Customer Meter Billings (B)	Current Sales (Hundred Gallons) (C)	Current Rates (D)	Current Total Revenue (E)	Proposed Sales (Hundred Gallons) (F)	Proposed Rates (G)	Proposed Total Revenue (H)
1	<b><u>COLLECTION ONLY</u></b>							
2	<b>Customer Charges:</b>							
3	Minimum	81.3		\$6.58	\$535		\$0.00	\$0
4	Proposed Minimum	637.0		-			23.00	\$14,651
5								
6	<b>Consumption Charges:</b>							
	First 10 00 Gallons					6,370	\$ 0.10000	637
7	First 200 00 Gallons		95,795.2	\$0.12483	11,958	89,425.2	0.10000	8,943
8	Over 200 00 Gallons		293,916.2	0.06340	18,634	293,916.2	0.09600	28,216
9	<b><u>COLLECTION AND TREATMENT</u></b>							
10	<b>Customer Charges:</b>							
11	Minimum	22.7		\$41.72	\$947		\$0.00	\$0
12	Proposed Minimum	46.0		-	\$0		67.75	\$3,117
13								
14	<b>Consumption Charges:</b>							
	First 10 00 Gallons					460.0	\$ 0.53090	244
15	First 200 00 Gallons		14,507.0	\$0.34477	5,002	14,047.0	0.53090	7,458
16	Over 200 00 Gallons		3,146.0	0.27581	868	3,146.0	0.51300	1,614
17								
15	FALs and Credits							
16	Other							
17	OPA Total	<u>787</u>	<u>407,364</u>		<u>\$37,944</u>	<u>407,364</u>		<u>\$64,880</u>

**ILLINOIS-AMERICAN WATER COMPANY**  
**RESPONSE TO ILLINOIS COMMERCE COMMISSION**  
**DATA REQUEST NUMBER CB 05.001**

Witness Responsible:	<u>Jeffrey Kaiser</u>
Title:	<u>Director of Engineering, IAWC</u>
Phone No.:	<u>(618) 239-3231</u>
Date Received:	<u>March 17, 2016</u>
Docket No.:	<u>16-0093</u>

**CB 05.001**

IAWC Exhibit 3.00, V. Demand Study, Pages 30-31, states that the most significant difficulty (with installing meters to collect data) relates to the necessity to physically access the meter to collect data. In service areas where meters are installed inside homes, scheduling an appointment with home owners to enter their homes and collect the usage information has been very difficult. In addition, it is a burden on our customers to require them to be available. These difficulties primarily occur in our northern districts and include approximately 140 of the customer meters. Mr. Kaiser further explains that approximately 30 employees are involved in data collection. This includes employees contacting customers to schedule appointments for access to homes as well as field personnel who physically collect data through direct interaction with the meters. Please answer the following:

- a) Why has IAWC not put automatic read water meters in place?

**RESPONSE:**

IAWC has installed automatic read meters manufactured by both Neptune and Mueller. The meters record hourly usage and hold that data for approximately 95 days. However, during normal meter reading activities (radio collection of data from a vehicle in the street) only the last hourly read of the meter is available.

To access the stored data, personnel must be able to physically access the meter to “activate” it in order to download its entire stored memory. This requires shining a light in a specific area of the meter register which triggers the download of all stored data, not just the last hourly read.

The only other option for acquiring hourly data would be the installation of an AMI system which would interrogate the meter each hour. This AMI approach would require intermediate radios, electrical power service, and much more significant installation of AMI infrastructure and software.

**Date Response Provided:** April 6, 2016

**ILLINOIS-AMERICAN WATER COMPANY**  
**RESPONSE TO ILLINOIS COMMERCE COMMISSION**  
**DATA REQUEST NUMBER CB 03.002**

Witness Responsible:	<u>Paul Herbert</u>
Title:	<u>President, Valuation and Rate Division, Gannett Fleming, Inc.</u>
Phone No.:	<u>(717) 763-7211</u>
Date Received:	<u>February 24, 2016</u>
Docket No.:	<u>16-0093</u>

**CB 03.002**

In his direct testimony, Paul Herbert states “[i]n my estimation, this study (demand study) is more than sufficient for determining the demand ratios for this case and for cases in the future.” (IAWC Ex. 11.00, 10.) Please identify for how many years the demand ratios would be sufficient. Please provide a detailed explanation of why the current demand study data would be representative of future demand. Please also identify and explain an event that the Company would anticipate having to adjust demand ratio.

**RESPONSE:**

The demand ratios would be expected to be sufficient for at least 10 years.

The demand study determines the demand ratios to use for cost allocation purposes. Demand ratios measure the relationship of peak use to average use. Although customer consumption patterns may change from year to year, primarily due to weather conditions or the gradual decline in residential usage experienced over recent years, the relationship of peak use to average use has not changed significantly. Current demand study data would therefore be representative of future demand because this relationship remained unchanged.

A significant and continual change in the overall system maximum day to average day ratio may indicate an event that would lead the Company to consider investigating and updating the class demand factors.

**Date Response Provided:** March 16, 2016