

**REBUTTAL TESTIMONY**

**of**

**Mike Luth**

**Rate Analyst**

Rates Department  
Financial Analysis Division  
Public Utilities Bureau  
Illinois Commerce Commission

**Aqua Illinois, Inc.**

**Docket No. 04-0442**

**October 27, 2004**

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Witness Identification

1 Q. Please state your name and business address.

2 A. Mike Luth, Illinois Commerce Commission, 527 East Capitol Avenue,  
3 Springfield, Illinois 62701.

4 Q. Are you the same Mike Luth who filed direct testimony in this docket, which  
5 was identified as ICC Staff Exhibit 4.0 with accompanying schedules?

6 A. Yes, I am.

Introduction to Testimony

7 Q. What is the subject matter of this testimony?

8 A. In this phase of the docket I am submitting ICC Staff Exhibit 8.0 and  
9 accompanying schedules which present the water service rates for the  
10 Aqua Illinois, Inc. ("Aqua" or the "Company") Vermilion Water Division  
11 ("Vermilion"). The rates are developed from the revenue requirement  
12 shown in Staff witness Mary Everson's ICC Staff Exhibit 5.0, Schedule 5.01.  
13 I will also reply to the comments in the rebuttal testimony of Aqua witnesses  
14 David R. Monie (Aqua Ex. R-4.0) and Douglas K. Cunningham (Aqua Ex. R-  
15 5.0) regarding the cost of service study and rate design that I pre-filed in  
16 direct testimony.

17 Q. Please summarize your rebuttal testimony.

18 A. In this rebuttal testimony, I present my revised rates based upon Staff's  
19 revised revenue requirement and changes in the customer charge billing

20 units that Mr. Monie discussed, change public fire protection rates to  
21 implement the “Two Tier” method, reject Mr. Monie’s recommended  
22 continuation of the fourth usage block, reject Mr. Monie’s suggestion that  
23 customer charges are understated, and reject Mr. Monie and Mr.  
24 Cunningham’s recommendations that the Illinois Commerce Commission  
25 (“Commission”) continue to further discount TeePak, LLC’s (“Teepak”) rates  
26 relative to cost of service.

Rate Design

27 Q. Please describe ICC Staff Exhibit 8.1.

28 A. ICC Staff Exhibit 8.1 is an update of ICC Staff Exhibit 4.1 that was included  
29 in my direct testimony. The Company does not dispute the overall COSS  
30 results of ICC Staff Exhibit 4.1 (Aqua Ex. R-4.0, page 2, lines 27 and 28),  
31 although the Company does not agree with the design of rates that are also  
32 contained in ICC Staff Exhibit 4.1. As in ICC Staff Exhibit 4.1 of my direct  
33 testimony, the cost of service study and rates presented in ICC Staff Exhibit  
34 8.1 begin with plant-in-service balances and revenue requirements provided  
35 by the Company in its direct and replies to Staff data requests. The effect  
36 upon the cost of service study from Staff adjustments to revenue  
37 requirement are shown on pages 8 and 9.

Calculation of Revenues

38 Q. How significant is the revision of your determination of revenues from  
39 present rates that Mr. Monie discussed in his rebuttal testimony? (Aqua Ex.  
40 R-4.0, page 2, lines 29 through 46)

41 A. I disagree with Mr. Monie's statement that there were two errors in my  
42 testimony – there was only one error, and it was not significant. As  
43 explained below, Mr. Monie provided the data that is what he claims to be  
44 the second error. Furthermore, this docket is not determining present rates  
45 because those rates are already in effect. The only impact from a  
46 misstatement of revenues from present rates is in the comparison of  
47 revenues from present rates to revised rates. For example, if revenues  
48 from present rates are overstated by approximately eight one-hundredths of  
49 one percent, and the actual percentage of increase in revised rates is 11  
50 percent, the percentage of increase might be understated by nine one-  
51 hundredths of one percent at 10.91 percent. This would not be a significant  
52 difference, particularly when considering that the revised rates would not  
53 change, only the comparison of revised to present rates would change.

54 As discussed by Mr. Monie, when I applied the current third block rate to  
55 combined third and fourth usage blocks of the industrial customer class,  
56 present revenues were overstated. The overstatement of present revenues  
57 from the combination of the third and fourth usage block was approximately  
58 \$2,915, or approximately three one-hundredths of one percent. Mr. Monie  
59 did not mention that the mistake also slightly overstated revenues from the

60 Company's proposed rates, of approximately \$3,544, which is again  
61 approximately three one-hundredths of one percent. I have corrected this  
62 error in ICC Staff Exhibit 8.1.

63 The other "error" discussed by Mr. Monie originated from one of the  
64 worksheets that Mr. Monie filed with his COST OF SERVICE AND TARIFF  
65 DESIGN STUDIES (Aqua Illinois Exhibit 4.0, Schedule 1, WP 5b). I do not  
66 view my use of Mr. Monie's stated number of meters in service for the pro  
67 forma period as an error. If there was an error in the number of test year  
68 meters in service, the error was in the data provided by Mr. Monie.

69 Q. Did Mr. Monie mischaracterize the source of the meter units in service that  
70 you used in your cost of service study?

71 A. Yes, he did. Mr. Monie errs when he contends that my cost of service study  
72 ("COSS") used 12 times the number of equivalent units from his workpaper  
73 (Aqua Ex. R-4.0, page 2, lines 34 through 36) to determine the number of  
74 meter units in service. I used only the number of actual units in service, not  
75 the number of equivalent units. The number of actual meter units in service  
76 is lower than the number of equivalent units. In determining the number of  
77 equivalent units, larger meters are compared to the smallest meters in  
78 service, with multiples applied to the actual number of larger meters  
79 according to meter size so that each meter size is weighted for cost of  
80 service purposes. For the purposes of revenues from customer charges,  
81 actual units for each meter charge should be used, as was used in my

82 COSS, not equivalent units. Had I used the number of equivalent units, as  
83 Mr. Monie suggests, the number of customer charges for larger meters  
84 would have been considerably overstated. I used the number of actual  
85 meters in service that was presented on Mr. Monie's WP 5b, rather than  
86 equivalent meters in service, so the number of meters in service is not  
87 overstated in my COSS.

88 Q. Has the Company indicated that the number of meters in service is fluid,  
89 changing over a short period of time?

90 A. Yes, Staff data request ML-20 asked why Company witness Connolly stated  
91 that there were 17,057 meters in the Vermilion County Division in his  
92 testimony in Docket No. 04-0362, but Mr. Monie's WP 5b in this docket  
93 indicates that there are only 16,778 meters. In his response to Staff data  
94 request ML-20, Mr. Connolly stated that the number of active meters can  
95 vary significantly depending on the time of year since many meters are  
96 inactive during the winter months due to an absence of the customer or the  
97 disconnection of a sprinkler system.

98 Q. Is the difference between the number of meters in service indicated in Mr.  
99 Monie's preferred source for the forecasted number of meters in service and  
100 the source that you used significant?

101 A. The difference between Mr. Monie's preferred source for the forecasted  
102 number of meters in service, Table 9 of his COST OF SERVICE AND  
103 TARIFF DESIGN STUDIES, and the source that I used, which was Mr.

104 Monie's WP 5b, is not significant. Table 9 of Mr. Monie's direct testimony  
105 indicates that 16,773 meters are in service, compared to 16,778 on his WP  
106 5b, which is a difference of 5 meters in service, or a difference of three one-  
107 hundredths of one percent. This compares to a difference of 264 meters  
108 between Company witness Connolly's testimony in Docket No. 04-0362 and  
109 Mr. Monie's Table 9 in this docket, or approximately 1.6 percent. The  
110 differences in meters in service between Mr. Monie's WP 5b and Table 9,  
111 and Mr. Connolly's testimony in Docket No. 04-0362 illustrate that a forecast  
112 of test year meters in services is an inexact science.

113 Q. Given that the difference between Mr. Monie's preferred source of  
114 forecasted meters in service for determining revenues from customer  
115 charges and the number of meters in service that Mr. Monie used to  
116 allocate customer costs is insignificant, do you accept Mr. Monie's  
117 suggestion to use the slightly smaller number of meters indicated in his  
118 Table 9?

119 A. In order to minimize the number of contested issues in this docket, I revised  
120 page 1 of ICC Staff Exhibit 8.1 so that the number of bills agrees with the  
121 number of bills shown on Mr. Monie's Table 9. As Mr. Monie discussed, the  
122 difference in revenues resulting from his revisions to ICC Staff Exhibit 4.1 is  
123 approximately \$7,467 at present rates, or approximately eight one-  
124 hundredths of one percent.

Public Fire Protection Rates

125 Q. Are current Vermilion public fire protection rates based upon the “Single  
126 Tier” method of determining public fire protection rates?

127 A. Yes, current Vermilion public fire protection rates are based upon the  
128 “Single Tier” method of determining public fire protection rates (Order,  
129 Docket Nos. 00-0337, -0338, -0339 (Consolidated), page 9), which is the  
130 method that I used in direct testimony. The Staff rebuttal COSS in those  
131 consolidated dockets pertaining to Vermilion used the “Single Tier” method  
132 to determine public fire protection rates and was adopted in the Order,  
133 contrary to Mr. Monie’s claim in this docket that the “Two Tier” Method was  
134 used.

135 Q. Do you accept Mr. Monie’s recommendation of the “Two Tier” method to  
136 determine public fire protection rates?

137 A. Yes, I accept the use of the “Two Tier” method of determining public fire  
138 protection rates in this docket. The “Two Tier” method narrows the  
139 differences in fire protection rates between fire protection districts that would  
140 be indicated by the “Single Tier” method because the “Two Tier” method  
141 separates hydrant costs and non-hydrant costs. It seems to be important to  
142 the Company in this docket to narrow the differences in public fire protection  
143 rates between fire protection districts because Mr. Monie has called for  
144 movement toward uniform public fire protection rates to be applied across  
145 the Vermilion service area (Aqua Ex. R-4.0, page 3, lines 60-63). Use of  
146 the “Two Tier” method will not result in uniform public fire protection rates,

147 but it will narrow differences between rates paid in different fire protection  
148 districts and is cost-based.

149 Differences in fire protection rates are appropriate because the quality of  
150 public fire protection can vary between fire protection districts. A greater  
151 number of hydrants in one public fire protection district, for example, can  
152 mean that public fire protection is superior to a fewer number of hydrants for  
153 the same number of connections in another public fire protection district, if  
154 the concentration of connections in the geographic areas of the two fire  
155 protection districts is similar. I do not agree, therefore, with Mr. Monie's  
156 suggestion that public fire protection rates should be the same for all  
157 customers across a water utility's service area that includes several public  
158 fire protection districts. For the purposes of this docket, I can accept the  
159 "Two Tier" method of determining public fire protection rates in the Vermilion  
160 service area. The "Two Tier" method of determining public fire protection  
161 rates is reflected in the revised public fire protection rates shown on page  
162 14 of ICC Staff Exhibit 8.1.

Fourth Usage Block

163 Q. Why did you propose to eliminate the fourth usage block from the Vermilion  
164 tariffs?

165 A. The fourth usage block does not apply to a significant volume of water  
166 usage, and the reduction from that rate does not appear to be sufficient to  
167 retain or attract large customers with heavy water usage. The Company's

168 proposed fourth usage block rate is approximately 49 percent of its  
169 proposed third usage block rate. My proposed third usage block is  
170 approximately 51 percent of my proposed first usage block rate, and 66  
171 percent of my proposed second usage block rate. These comparisons  
172 show that my reduction in the third usage block rate is sufficient to reflect  
173 the lower cost of service at larger volumes that Mr. Monie states as the  
174 reason for a fourth usage block (Aqua Ex. R-4.0, page 10, lines 246-252).  
175 Additionally, the Large Industrial usage rate, which is significantly reduced  
176 from my proposed third usage block but currently applicable only to TeePak,  
177 shows that the Commission will work with the Company to attract a potential  
178 large water customer to the Vermilion service area should the opportunity  
179 develop.

180 Based upon the test year, the fourth usage block is not necessary to  
181 accommodate a large user of water at Vermilion because usage in that  
182 block is only four percent of the Industrial customer class. The Company's  
183 proposed reduction in the fourth usage block compared to the third usage  
184 block would result in a reduction of an Industrial customer's bill of only 1 and  
185 one-third percent if the customer were responsible for all of the usage in the  
186 fourth usage block. Addition of fourth usage block billing units to the third  
187 usage block rate, which is the result of my proposed elimination of the fourth  
188 usage block, also serves to reduce the third usage block rate to a small  
189 degree. Elimination of the fourth usage block reduces some of the  
190 complexity in billing because only three usage blocks are applicable to

191 various levels of billed water usage, rather than four usage blocks. The  
192 benefits of reduced billing complexity, a slightly lowered third usage block  
193 from the combination of the third and fourth usage blocks, and minimal  
194 effect upon any test year customer currently billed in part through the fourth  
195 usage block makes eliminating the fourth usage block appropriate.

### Customer Charges

196 Q. Based upon your COSS, are customers paying more through customer  
197 charges than they would if the customer charge was based strictly upon  
198 your COSS?

199 A. Yes, they are. Comparing pages 1 and 9 of ICC Staff Exhibit 4.1 illustrates  
200 that customer charges recover more revenues than there are customer  
201 costs. Page 1 shows that, under Staff's proposed customer charges,  
202 revenues from customer charges would total \$2,752,055 ("TOTAL CUS  
203 CHARGE REVENUES – Staff"). Page 9 of the COSS shows that customer  
204 costs total \$2,548,447 (= \$1,094,480 + \$668,570 + \$785,397, from the  
205 "DIRECT CUSTOMER REVENUES" line, "Customer Costs – "Billing",  
206 "Meter", and "Services" columns). Customer charge revenues under Staff  
207 proposed rates represent 107.99 percent of customer costs (\$2,752,055  
208 divided by \$2,548,447). An increase in customer charges, other than the 6-  
209 inch turbine customer charge currently paid by TeePak, is unnecessary and  
210 inappropriate. The Commission should reject Mr. Monie's "compromise"  
211 suggestion to increase the Customer Charge by 50% of the overall percent  
212 increase in metered revenues other than for the Large Industrial Class

213 (Aqua Ex. R-4.0, page 11, line 278 through page 12, line 282), which favors  
214 TeePak at the expense of other customers (Aqua Ex. R-4.0, page 11, lines  
215 272-276).

TeePak

216 Q. Should the Commission accept Aqua's proposal to continue to increase the  
217 discount given to TeePak, the Vermilion customer using the largest volume  
218 of water?

219 A. No, the Commission should require TeePak to begin to approach its cost of  
220 service through the rates it pays, which would be accomplished through  
221 Staff's proposed rates. If the Commission were to adopt the Company's  
222 proposal to increase TeePak's rates by approximately six percent, and  
223 increase the rates of other customers by more than 15 percent, TeePak  
224 would pay less than half of the cost to provide service to TeePak.

225 Q. How significant is TeePak as a customer of Aqua?

226 A. TeePak has approximately 18.49 percent of test year usage in Vermilion,  
227 but would represent only 4.24 percent of metered Vermilion revenues under  
228 Company-proposed rates, and 5.96 percent of metered Vermilion revenues  
229 under Staff-proposed rates. If TeePak were to leave the Vermilion system,  
230 other customers would pay approximately 4.4 percent more under  
231 Company-proposed rates to recover test year revenues, or 6.3 percent  
232 more under Staff-proposed rates, to recover test year revenues. The 1.9  
233 percent higher increase under Staff-proposed rates if TeePak were to leave

234 the Vermilion system would be applied to lower rates because TeePak  
235 would pay more of total revenue requirement under Staff-proposed rates if  
236 TeePak did not leave the Vermilion system. The possible 1.9 percent  
237 greater increase, calculated by subtracting 4.4 percent from 6.3 percent,  
238 would not, therefore, result in 1.9 percent higher rates compared to the  
239 Company's proposed rates if TeePak left the Vermilion system because  
240 both the Company's and Staff's proposed rates are designed to recover no  
241 more than 100 percent of test year revenue requirement. To illustrate, the  
242 Company's proposed increase would require the Residential, Commercial,  
243 Industrial, and Resale customers to pay 95.76 percent of metered revenues  
244 (ICC Staff Exhibit 8.1, page 2 of 18, "TOTAL METERED REVENUES",  
245 (\$11,402,666 minus \$483,954) divided by \$11,402,666). A 4.4 percent  
246 increase in those metered revenues would equal 100 percent of metered  
247 revenues (.9576 times 1.044). By comparison, Staff's proposed increase  
248 would require the Residential, Commercial, Industrial, and Resale  
249 customers to pay 94.04 percent of metered revenues (\$10,728,289 minus  
250 \$639,002) divided by \$10,728,289). A 6.3 percent increase in those  
251 metered revenues would similarly equal 100 percent of metered revenues  
252 (.9404 times 1.063), with the result that other customers would not pay  
253 more under Staff's proposed rates with the hypothetical loss of TeePak  
254 revenues.

255 Q. Would the Staff-proposed rates reflect the minimal cost that the TeePak  
256 Plant Manager claims it costs Aqua to service TeePak (Aqua Ex. R-5.0,  
257 page 5, lines 110-111)?

258 A. Staff's proposed rates reflect a cost below the cost to serve TeePak, so  
259 Staff's proposed rates go beyond (or below) the claimed "minimal" cost to  
260 serve TeePak. TeePak's rates are therefore subsidized by other Aqua  
261 ratepayers because Staff is not proposing that Aqua forfeit the revenue  
262 recoveries from TeePak that are foregone by rates set below cost of  
263 service. Other Aqua ratepayers would pay more than cost of service to  
264 compensate for TeePak's below-cost of service rates.

265 Under Staff's proposed rates, and excluding fire protection, TeePak would  
266 pay approximately \$1.12 per CCF of metered water (ICC Staff Exhibit 8.1,  
267 page 2). If TeePak paid cost of service rates, TeePak would pay  
268 approximately \$1.87 per CCF. On average, other TeePak customers would  
269 pay approximately \$3.49 per CCF. Residential customers would pay  
270 approximately \$5.27 per CCF, Commercial customers would pay  
271 approximately \$3.40 per CCF, other Industrial customers would pay  
272 approximately \$2.37 per CCF, and Resale customers would pay  
273 approximately \$2.21 per CCF. Therefore, TeePak would pay on average  
274 only 21 percent of what a residential customer would pay per CCF, 32  
275 percent of the Vermilion average per CCF, and 47 percent of what other  
276 industrial customers would pay per CCF.

277 Q. Has the discounting of TeePak's rates succeeded in retaining employment  
278 at TeePak?

279 A. TeePak employment levels and employee benefits have been dropping as  
280 TeePak has shifted production away from its Danville facility, despite  
281 discounted water rates. In Docket Nos. 00-0337, -0338, and -0339  
282 (Consolidated), the Commission accepted Staff's COSS and rate design  
283 (Order, page 9), which resulted in recoveries of approximately 48.7 percent  
284 of TeePak's cost of service (Order, Appendix D-V, Page 2 of 2, "Large Gen.  
285 Ser."). According to the documents filed by the Company in this docket,  
286 TeePak has reduced the number of employees by about 33.5 percent, from  
287 700 employees to the current 465 (Aqua Ex. R-4.0, Att. R4-2, August 4,  
288 2004 letter on Vermilion Advantage letterhead). TeePak has shifted some  
289 of the production process to Zacapu, Mexico (Id.) and has plans to continue  
290 to do so (Aqua Ex. R-5.0, page 4, lines 88 and 89). The share of medical  
291 costs that TeePak employees pay has generally increased (Aqua Ex. R-4.0,  
292 Att. R4-2, August 3, 2004 letter on TeePak letterhead). These  
293 developments indicate that TeePak will continue to "consider its options"  
294 (Aqua Ex. R-5.0, page 5, lines 93-95) regardless of whether the  
295 Commission agrees to further discount TeePak rates relative to other  
296 customers. The Commission, and by extension other Aqua ratepayers,  
297 have done their part to encourage TeePak to remain in the Vermilion  
298 service area, but those efforts have not prevented TeePak from shifting  
299 production out of Danville, reducing employee benefits, and eliminating  
300 employees at Danville. Consequently, there is no apparent basis to further

301 discount TeePak's rates. Staff's proposed rates in this docket continue to  
302 provide TeePak with a substantial discount relative to cost of service, but do  
303 not increase the discount, as would be the result of the Company's rates  
304 proposal.

305 Q. Does this conclude your rebuttal testimony?

306 A. Yes, it does.



ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Revenues at Present and Proposed Rates"

ITEM	RESIDENTIAL		COMMERCIAL		INDUSTRIAL		TeePak		SALES FOR RESALE		BILL ANA.	ADJUST.	BILL ANA.	ADJUST.	BILL ANA.	ADJUST.	TOTAL		
	BILL ANA.	ADJUST.	BILL ANA.	ADJUST.	BILL ANA.	ADJUST.	BILL ANA.	ADJUST.	BILL ANA.	ADJUST.									
USAGE CHARGE REVENUES	Present	3,453,815	0	1,498,319	0	796,669	0	451,451	0	473,438	0	0	0	0	0	0	6,676,607		
	Proposed	4,197,299	0	1,821,047	0	968,404	0	478,596	0	575,464	0	0	0	0	0	0	8,044,354		
	Staff	4,143,945	0	1,768,416	0	915,849	0	631,906	0	516,118	0	0	0	0	0	0	7,976,234		
OTHER ADJUSTMENTS	Present	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Proposed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL METERED REVENUES	Present	5,726,943	0	1,882,791	0	876,252	0	456,503	0	481,214	0	0	0	0	0	0	9,423,703		
	Proposed	6,979,322	0	2,289,336	0	1,065,140	0	483,954	0	584,915	0	0	0	0	0	0	11,402,666		
	Staff	6,417,073	0	2,152,888	0	995,432	0	639,002	0	523,894	0	0	0	0	0	0	10,728,289		
PVT. FIRE PROT RATES, MONTHLY										PRIVATE HYDRANTS									
Size Connection	Less than 3"	3"	4"	6"	8"	10"	12"	16"											
Present	E-2	6.00	8.00	12.00	26.00	50.00	85.00	135.00	283.00	0.00									
Proposed	E-2	7.20	9.60	14.40	31.20	60.00	102.00	162.00	339.60	0.00									
Per Cost of Service Study		7.01	10.14	15.54	34.90	68.30	118.54	188.17	394.93	N/A									
Staff		7.00	10.10	15.50	34.90	68.30	118.50	188.20	394.90	0.00									
Units (ANNUAL)	Table 10	71	0	384	1,187	625	192	48	0	0									
NON-METERED REVENUES										PVT. FIRE		PUBLIC FIRE		OTHER OPERATING		VARIABLE REVENUES		TOTAL NON-METERED	
Present		89,946	0	666,689	666,689	25,553	53,487	835,675											
Proposed		107,935	0	744,890	744,890	25,553	53,487	931,865											
Staff		122,348	0	889,539	889,539	25,553	61,682	1,099,123											
TOTAL REVENUES	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	TeePak	RESALE	NON-METERED		TOTAL											
Present	5,726,943	1,882,791	876,252	456,503	481,214	0	0	835,675	10,259,378										
Proposed	6,979,322	2,289,336	1,065,140	483,954	584,915	0	0	931,865	12,334,531										
Staff	6,417,073	2,152,888	995,432	639,002	523,894	0	0	1,099,123	11,827,412										
PER STAFF	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	TeePak	RESALE	PUB. FIRE		PVT FIRE											
Cost of Service	6,136,575	2,061,934	964,590	1,065,639	500,252	0	0	888,818	122,373										
Percent Increase	12.1	14.3	13.6	40.0	8.9	0.0	0.0	33.4	36.0										
Percent Cost of Service	104.6	104.4	103.2	60.0	104.7	0.0	0.0	100.1	100.0										

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Demand Factors"

DEMAND FACTORS		
Customer Class	Max Day	Max Hour
Residential	2.25	3.30
Commercial	1.95	2.40
Industrial	1.30	1.70
Large Industrial	1.30	1.70
Sales for Resale	1.75	2.50
	0.00	0.00
	0.00	0.00
Fire Protection	0.63	5.04
Gallons Per Minute	3,500	
Hours of Protection	3	

  

MGD PUMPAGE		
Average Daily Rate	ML-10	8.489
Max. Daily Rate	wp 1b, ML-10	10.623
Max. Hourly Pumpage Rate	ML-10	15.192
Max. Hourly Consumption Rate	ML-10	15.192

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Allocation to Cost Functions"

Description	Alloc. Code	Base Cost Percent	Extra Capacity		Customer Costs			Fire Service Percent
			Max Day Percent	Max Hour Percent	Billing Percent	Meter Percent	Services Percent	
Base Cost	1	100.00%						
Base-Max Day	2	79.91%	20.09%					
Base-Max Hr.	3	55.88%		44.12%				
Max Hour	4			100.00%				
Commercial	5				100.00%			
Meters	6					100.00%		
Services	7						100.00%	
Hydrants	8							100.00%
Plant	9	52.13%	12.11%	16.02%	0.00%	6.71%	9.29%	3.75%
Adm. and Gen	10	47.19%	11.03%	8.73%	33.04%	N/A	N/A	N/A
Labor B'fits	11	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Base/Max Day/ Max Hour	12	55.88%	14.05%	30.08%				

Refer to last page for brief allocation code explanations

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Plant in Service Allocation"

Act. No.	Account	Utility Cost (B-4)	Depreciation Reserve (B-2.1)	Net Cost	Base Cost	Extra Capacity		Customer Costs			Fire Service	Alloc. Code
						Max Day	Max Hour	Billing	Meter	Services		
	INTANGIBLE PLANT	142,885										
301	Organization	6,248		6,248	6,248							1
302	Franchises	136,637		136,637	136,637							1
339	Miscellaneous	0		0	0							1
	SOURCE OF SUPPLY PLANT	4,284,514										
303	Land and land rights	965,241		965,241	870,857	94,384	0	0	0	0	0	13
304	Structures and improvements	0		0	0	0	0	0	0	0	0	13
305	Collecting reservoirs	1,814,386	463,256	1,351,130	1,351,130							1
306	Intakes	1,074,790	127,747	947,043	756,796	190,247						2
307	Wells	179,128	43,294	135,834	108,547	27,287						2
308	Infiltration Galleries	0		0	0	0						2
309	Supply mains	250,969	52,429	198,540	158,656	39,884						2
339	Other plant	0		0	0	0						2
	PUMPING PLANT	1,903,550										
303	Land and land rights	26,755		26,755	14,950	3,758	8,047	0	0	0	0	13
304	Structures and improvements	350,645	946,502	(595,857)	(332,954)	(83,699)	(179,204)	0	0	0	0	13
310	Power Generation Equip	202,291	138,659	63,632	35,556	8,938	19,137					12
310	Other power productior	0	0	0	0	0	0					12
311	Steam pumping	0	0	0	0	0	0					12
311	Electrical Pumping	1,323,859	320,737	1,003,122	560,525	140,907	301,689					12
311	Diesel Pumping	0	0	0	0	0	0					12
339	OtherPlant & Misc. Equip.	0	0	0	0	0	0					12
	WATER TREATMENT PLANT	19,460,449										
303	Land and land rights	7,227	0	7,227	5,775	1,452	0	0	0	0	0	13
304	Structures and improvements	10,419,562	1,593,020	8,826,542	7,053,423	1,773,119	0	0	0	0	0	13
320	Water treatment	9,033,660	2,714,907	6,318,753	5,049,411	1,269,342						2
339	OtherPlant & Misc. Equip.	0	0	0	0	0						2
	TRANSMISSION/DISTRIBUTION	37,663,222										
303	Land and land rights	51,349	0	51,349	16,256	4,086	13,732	0	5,870	8,127	3,278	13
304	Structures and improvements	617,601	(231,591)	849,192	268,832	67,580	227,093	0	97,079	134,395	54,212	13
330	Dist. reservoirs and standpipe:	3,139,800	580,225	2,559,575			2,559,575					4
331	Mains	21,711,866	6,767,615	14,944,251	8,350,563	2,099,199	4,494,489					12
333	Services	6,018,628	1,843,988	4,174,640						4,174,640		7
334	Meters	3,542,678	679,052	2,863,626					2,863,626			6
334	Meter installations	158,780	6,894	151,886					151,886			6
335	Hydrants	2,332,204	648,247	1,683,957							1,683,957	8
336	Backflow Prevention Devices	0	0	0						0		7
339	OtherPlant & Misc. Equip.	90,316	15,344	74,972	23,734	5,966	20,049	0	8,571	11,865	4,786	13

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Plant in Service Allocation"

Act. No.	Account	Utility Cost	Depreciation Reserve	Net Cost	Base Cost	Extra Capacity		Customer Costs			Fire Service	Alloc. Code
						Max Day	Max Hour	Billing	Meter	Services		
	GENERAL PLANT	3,042,815										
303	Land and land rights	6,141	0	6,141	3,201	744	984	0	412	570	230	9
304	Structures and improvements	334,263	18,782	315,481	164,452	38,198	50,534	0	21,169	29,307	11,822	9
340	Office furniture	602,166	539,069	63,097	32,891	7,640	10,107	0	4,234	5,861	2,364	9
341	Transportation	984,786	584,228	400,558	208,800	48,499	64,161	0	26,878	37,210	15,010	9
342	Stores	41,226	16,101	25,125	13,097	3,042	4,025	0	1,686	2,334	941	9
343	Tools etc	385,965	216,305	169,660	88,439	20,542	27,176	0	11,384	15,761	6,357	9
344	Laboratory	314,205	61,709	252,496	131,619	30,572	40,445	0	16,943	23,456	9,461	9
345	Power operated	63,985	18,214	45,771	23,859	5,542	7,332	0	3,071	4,252	1,715	9
346	Communications	115,763	151,135	(35,372)	(18,438)	(4,283)	(5,666)	0	(2,374)	(3,286)	(1,325)	9
347	Miscellaneous	194,315	18,611	175,704	91,590	21,274	28,144	0	11,790	16,322	6,584	9
348	Other Tangible Plant	19,959	2,768	17,191	8,961	2,081	2,754	0	1,154	1,597	644	9
399	RECONCILIATION	0	0	0	0	0	0	0	0	0	0	9
	TOTAL PLANT IN SERVICE	66,517,394	18,337,247	48,180,147	25,183,415	5,816,301	7,694,603	0	3,223,380	4,462,410	1,800,037	
	Allocation Code 9	Cross check =		48,180,147	52.13%	12.11%	16.02%	0.00%	6.71%	9.29%	3.75%	
	Calculation			Total	Base Cost	Max Day	Max Hour					
	Small Main Plant in Service	ML-9		11,152,089	6,231,575	1,566,519	3,353,995					
	Small Main CIAC	ML-9		2,011,242	1,123,844	282,516	604,882					
	Total Plant CIAC	Schedule B-1		3,915,663	2,187,998	550,028	1,177,637					
	Allocated Total Plant less General				24,434,944	5,642,450	7,464,608					
	% Small Main to Allocated Total Plant				25.50%	27.76%	44.93%					
	Small Main with General Plant Allocated				6,422,455	1,614,786	3,457,336					
	Small Main with General Plant Allocated less CIAC				5,298,611	1,332,269	2,852,454					
	Allocated Total Plant less CIAC				22,995,417	5,266,273	6,516,965					

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Revenue Requirement Allocation"

Act. No.	Account	Utility Cost	Staff Adjust.	Net Cost	Base Cost	Extra Capacity		Customer Costs			Fire Service	Alloc. Code
						Max Day	Max Hour	Billing	Meter	Services		
	SOURCE OF SUPPLY	3,686										
601	Salaries and Wages ML-3	3,686		3,686	2,946	740						2
610	Purchased water	0	0	0	0							1
615	Purchased Power	0	0	0	0							1
616	Fuel for Power Prod.	0	0	0	0							1
618	Chemicals	0	0	0	0							1
	SOURCE OF SUPPLY	45,437										
620	Materials and Supplies ML-5	6,669	0	6,669	5,329	1,340						2
631	Contractual Serv.	0	0	0	0	0						2
635	Contractual Serv. - Testing	0	0	0	0	0						2
636	Contractual Serv. - Other ML-5	31,236	0	31,236	24,961	6,275						2
641	Rental of Property	0	0	0	0	0						2
642	Rental of Equipment ML-5	1,138	0	1,138	909	229						2
650	Transportation Exp. ML-5	1,044	0	1,044	834	210						2
658	Insurance	0	0	0	0	0						2
668	Water Res. Conserv. Exp.	0	0	0	0	0						2
675	Misc. Expenses ML-5	5,350	0	5,350	4,275	1,075						2
	PUMPING EXPENSES	429,039										
601	Salaries and Wages ML-3	16,340		16,340	9,130	2,295	4,914					12
615	Purchased Power ML-5	412,699	0	412,699	412,699							1
616	Fuel for power production	0	0	0	0							1
620	Materials and Supplies	0	0	0	0	0	0					12
631	Contractual Serv.	0	0	0	0	0	0					12
635	Contractual Serv. - Testing	0	0	0	0	0	0					12
636	Contractual Serv. - Other	0	0	0	0	0	0					12
641	Rental of Property	0	0	0	0	0	0					12
	PUMPING EXPENSES	0										
642	Rental of Equipment	0	0	0	0	0	0					12
650	Transportation Expenses	0	0	0	0	0	0					12
658	Insurance	0	0	0	0	0	0					12
675	Misc. Expenses	0	0	0	0	0	0					12
	WATER TREATMENT EXPENSE	719,184										
601	Salaries and Wages C-T1.1, page 2	362,398		362,398	289,598	72,800						2
615	Purchased Power	0	0	0	0	0						2
616	Fuel for power production	0	0	0	0	0						2
618	Chemicals ML-5	310,121	0	310,121	310,121							1
620	Materials and Supplies ML-5	46,665	0	46,665	37,291	9,374						2

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Revenue Requirement Allocation"

Act. No.	Account	Utility Cost	Staff Adjust.	Net Cost	Base Cost	Extra Capacity Max Day	Max Hour	Customer Costs Billing	Meter	Services	Fire Service	Alloc. Code
WATER TREATMENT EXPENSE		137,158										
631	Contractual Serv.	0	0	0	0	0						2
635	Contract. Serv. - Testing ML-5	21,780	0	21,780	17,405	4,375						2
636	Contractual Serv. - Other ML-5	73,764	0	73,764	58,946	14,818						2
641	Rental of Property	0	0	0	0	0						2
642	Rental of Equipment ML-5	4,171	0	4,171	3,333	838						2
650	Transportation Exp. ML-5	10,379	0	10,379	8,294	2,085						2
658	Insurance	0	0	0	0	0						2
675	Misc. Expenses ML-5	27,064	0	27,064	21,627	5,437						2
TRANSMISSION/DISTRIBUTION		265,051										
601	Salaries and Wages C-11.1, page 2	243,265		243,265	150,942	29,392	62,931	0	0	0	0	13
661	Storage Facilities	0	0	0			0					4
662	Mains	0	0	0	0	0	0					12
663	Meters	0	0	0				0				6
664	Services	0	0	0						0		7
615	Purchased Power ML-5	21,786	0	21,786	21,786							1
616	Fuel for Power Prod.	0	0	0	0							1
TRANSMISSION/DISTRIBUTION		296,167										
618	Chemicals	0	0	0	0							1
620	Materials and Supplies ML-5	72,291	0	72,291	44,855	8,735	18,701	0	0	0	0	13
672	Dist. reservoirs and standpipes	0	0	0			0					4
631	Contractual Serv.	0	0	0	0	0	0	0	0	0	0	13
635	Contractual Serv. - Testing	0	0	0	0							1
636	Contractual Serv. - Other ML-5	76,675	0	76,675	47,576	9,264	19,835	0	0	0	0	13
641	Rental of Property	0	0	0	0	0	0	0	0	0	0	13
677	Hydrants	0	0	0							0	8
642	Rental of Equipment ML-5	4,375	0	4,375	2,715	529	1,132	0	0	0	0	13
650	Transportation Exp. ML-5	133,999	0	133,999	74,876	18,823	40,300					12
658	Insurance	0	0	0	0	0	0					12
675	Misc. Expenses ML-5	8,827	0	8,827	5,477	1,067	2,283	0	0	0	0	13
CUSTOMER ACCOUNTS EXPENSE		421,513										
601	Salaries and Wages C-11.1, page 2	365,275		365,275				365,275				5
615	Purchased Power ML-5	1,582	0	1,582				1,582				5
616	Fuel for Power Prod.	0	0	0				0				5
670	Bad Debt Expense ML-5	41,635	(1,650)	39,985	18,870	4,412	3,491	13,211	0	0	0	10
620	Materials and Supplies ML-5	13,021	0	13,021				13,021				5
CUSTOMER ACCOUNTS EXPENSE		189,719										
631	Contractual Serv.	0	0	0				0				5
635	Contractual Serv. - Testing	0	0	0				0				5
636	Contractual Serv. - Other ML-5	163,168	0	163,168				163,168				5
641	Meter Reading	0	0	0				0				5
642	Rental of Equipment ML-5	4,975	0	4,975				4,975				5
650	Transportation Exp. ML-5	0	0	0				0				5
658	Insurance	779	0	779				779				5
675	Misc. Expenses ML-5	20,797	0	20,797				20,797				5



ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Revenue Requirement Allocation"

	Net Cost	Base Cost	Max Day	Max Hour	
Acct. 662 allocated to small mains	0	0	0	0	
Small mains with overhead	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Total Expense less Adm. & General anc less Pro Forma Adjustments		1,574,796	194,112	153,588	
% Small Mains to Total Expense		#DIV/0!	#DIV/0!	#DIV/0!	
Small Mains with Adm. & General anc Pro Forma Adjustments* Allocat		#DIV/0!	#DIV/0!	#DIV/0!	
Depreciation		208,688	55,537	91,520	
Other Taxes		90,608	23,107	52,889	
Income Taxes		169,116	43,128	98,714	Total
Utility Operating Income		436,904	111,419	255,024	
TOTAL REVENUES ALLOCATED TO SMALL MAINS		905,316	233,190	498,147	1,636,653

\* excluding Fuel & Power, Chemical and Waste Dispos

Revenue Requirement from Small Mains	Residential	Commercial	Industrial	TeePak	Sales for Resale				Total
Remove From	789,901	333,094	166,113	224,627	122,917	0	0	0	1,636,653
Reallocate to Blocks	1,061,719	432,638	142,296	0	0	0	0	0	1,636,653
Net Adjustment	271,818	99,544	(23,818)	(224,627)	(122,917)	0	0	0	0

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Customer Group Allocation Factors"

Customer Class	Annual Consumption			Max Day				Max Hour				Commercial		Equivalent Meters		Equivalent Services	
	Usage	MGD	%	% of Ave.	Amt. MGD	Excess MGD	%	% of Ave.	Amt. MGD	Excess MGD	%	Monthly Bills	%	Monthly No.	%	Monthly No.	%
Residential	1,218,475	2.497	39.20%	225%	5.618	3.121	52.98%	330%	8.240	5.743	39.12%	185,815	91.18%	191,235	78.51%	187,112	89.71%
Commercial	632,440	1.296	20.35%	195%	2.527	1.231	20.90%	240%	3.111	1.814	12.36%	14,696	7.21%	40,732	16.72%	19,504	9.35%
Industrial	420,839	0.862	13.54%	130%	1.121	0.259	4.39%	170%	1.466	0.604	4.11%	731	0.36%	9,581	3.93%	1,789	0.86%
TeePak	569,080	1.166	18.31%	130%	1.516	0.350	5.94%	170%	1.983	0.816	5.56%	12	0.01%	1,080	0.44%	72	0.03%
Sales for Resale	236,719	0.485	7.62%	175%	0.849	0.364	6.18%	250%	1.213	0.728	4.96%	24	0.01%	960	0.39%	96	0.05%
	0	0.000	0.00%	0%	0.000	0.000	0.00%	0%	0.000	0.000	0.00%	0	0.00%	0	0.00%	0	0.00%
	0	0.000	0.00%	0%	0.000	0.000	0.00%	0%	0.000	0.000	0.00%	0	0.00%	0	0.00%	0	0.00%
	0	0.000	0.00%	0%	0.000	0.000	0.00%	0%	0.000	0.000	0.00%	0	0.00%	0	0.00%	0	0.00%
SUBTOTAL	3,077,553	6.307	99.01%		11.632	5.325	90.38%		16.012	9.705	66.10%	201,278	98.77%	243,588	100.00%	208,573	100.00%
Fire Prot.	30,776	0.063	0.99%		0.630	0.567	9.62%		5.040	4.977	33.90%	2,507	1.23%	-----	-----	-----	-----
TOTAL	3,108,329	6.370	100.00%		12.262	5.892	100.00%		21.052	14.682	100.00%	203,785	100.00%	243,588	100.00%	208,573	100.00%

Number of public fire protection bills ignored as immaterial

No services assigned to public fire protection; services considered to be part of hydrant

No services assigned to private fire protection since customer generally pays for service line

Fire Protection Consumption set at 1% of other consumption

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Percent Allocation to Customer Groups"

DESCRIPTION	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	TeePak	SALES FOR RESALE				FIRE PROTECTION	TOTAL
Base	39.20%	20.35%	13.54%	18.31%	7.62%	0.00%	0.00%	0.00%	0.99%	100.00%
Maximum Day	52.98%	20.90%	4.39%	5.94%	6.18%	0.00%	0.00%	0.00%	9.62%	100.00%
Maximum Hour	39.12%	12.36%	4.11%	5.56%	4.96%	0.00%	0.00%	0.00%	33.90%	100.00%
Commercial	91.18%	7.21%	0.36%	0.01%	0.01%	0.00%	0.00%	0.00%	1.23%	100.00%
Meters	78.51%	16.72%	3.93%	0.44%	0.39%	0.00%	0.00%	0.00%	-----	100.00%
Services	89.71%	9.35%	0.86%	0.03%	0.05%	0.00%	0.00%	0.00%	-----	100.00%
Fire Service-Hyd	-----	-----	-----	-----	-----	-----	-----	-----	100.00%	100.00%

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Cost Allocation to Customer Groups"

DESCRIPTION	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	TeePak	SALES FOR RESALE	0	0	0	FIRE PROTECTION	TOTAL
Base	2,443,989	1,268,533	844,109	1,141,447	474,805	0	0	0	61,729	6,234,613
Maximum Day	681,673	268,901	56,505	76,409	79,459	0	0	0	123,814	1,286,762
Maximum Hour	558,153	176,342	58,671	79,338	70,718	0	0	0	483,684	1,426,905
Commercial	997,967	78,929	3,926	64	129	0	0	0	13,464	1,094,480
Meters	524,878	111,796	26,297	2,964	2,635	0	0	0	-----	668,570
Services	704,585	73,445	6,735	271	361	0	0	0	-----	785,397
Fire Service-Hyd	-----	-----	-----	-----	-----	-----	-----	-----	330,688	330,688
Adjustments *	(46,488)	(15,555)	(7,835)	(10,228)	(4,940)	0	0	0	(2,189)	(87,235)
Small Main Adjustment	271,818	99,544	(23,818)	(224,627)	(122,917)	0	0	0		0
TOTAL COST OF SERVICE	6,136,575	2,061,934	964,590	1,065,639	500,252	0	0	0	1,011,190	11,740,180
Percent of COSS	52.27%	17.56%	8.22%	9.08%	4.26%	0.00%	0.00%	0.00%	8.61%	100.00%

Special Tariff Revenues	0
Other Operating Revenues	25,553
Unbilled Revenues	61,682
Total Revenues	11,827,416

\* for Other and for Unbilled

**ILLINOIS COMMERCE COMMISSION**  
**Cost of Service Study**  
**"Fire Protection Allocation"**

	Equivalent Connections
FIRE PROTECTION	
Public, monthly	18,900
Private, monthly	3,688
Total Equivalent Connections:	22,588
Total Fire Protection per Cost of Service Study	1,011,190
Less Billing Costs	13,464
Less Hydrant Costs	330,688
Total Non-hydrant Fire Protection Cost:	667,038
Total Non-hydrant Fire Protection Cost: Per Equivalent Connection, monthly:	29.53
Public Fire Protection Connection Cost:	558,129
Plus Hydrant Costs	330,688
Total Public Fire Protection Cost:	888,818
Total Private Fire Protection Connection Cost:	108,908
Plus Billing Costs	13,464
Plus Hydrant Costs	0
Total Private Fire Protection Cost:	122,373

Private Fire Protection Rates:

Private Fire Prot.	Ratio #	Monthly COSS Rates	Monthly Staff Rates
less than 3'	0.056	7.01	7.01
3	0.162	10.14	10.14
4	0.344	15.54	15.54
6	1.000	34.90	34.90
8	2.131	68.30	68.30
10	3.832	118.54	118.54
12	6.190	188.17	188.17
16	13.192	394.93	394.93

# - ratio based on capacity

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Public Fire Protection Surcharge"  
"Two - Tier Method"

Customer	Hydrants	Total Cost*	Municipal Paid	Customer Surcharge	MONTHLY BILLS				Fire Prot Bills	Equiv. Fire Prot Bills	Monthly Rates				Actual Surcharge Revenues	Hydrant Costs	Non-Hydrant Costs
					5/8"	3/4"	1"	1 1/2"			5/8"	3/4"	1"	1 1/2"			
Total	1,575	888,818	0	888,818	193,882	84	4,932	3,768	202,666	225,178					889,539	330,688	558,129
Outside	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0	0
Danville	1,243	673,728	0	673,728	140,615	72	3,744	3,288	147,719	166,523	4.05	6.08	10.13	20.25	674,437	260,981	412,746
Lynch	36	44,408	0	44,408	13,127	0	408	144	13,679	14,867	2.99	4.49	7.48	14.95	44,454	7,559	36,850
Kickapoo	73	47,227	0	47,227	11,832	12	192	108	12,144	12,870	3.67	5.51	9.18	18.35	47,234	15,327	31,900
Tilton	128	60,336	0	60,336	12,600	0	168	96	12,864	13,500	4.47	6.71	11.18	22.35	60,346	26,875	33,461
Westville	39	34,363	0	34,363	9,540	0	192	108	9,840	10,560	3.25	4.88	8.13	16.25	34,321	8,188	26,174
Bismarck	43	22,725	0	22,725	4,836	0	228	24	5,088	5,526	4.11	6.17	10.28	20.55	22,713	9,028	13,697
Indianola	13	6,031	0	6,031	1,332	0	0	0	1,332	1,332	4.53	6.80	11.33	22.65	6,034	2,729	3,302

\* Total cost = hydrant cost plus non-hydrant cost  
Hydrant Costs allocated on number of hydrants  
Non-hydrant Costs allocated on number of equivalent bills

ILLINOIS COMMERCE COMMISSION  
Cost of Service Study  
"Equiv. Meters and Services"

ITEM	METER RATIO	SERVICE RATIO	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	TeePak	SALES FOR RESALE			TOTAL
METER SIZE										
5/8" disk	1.0	1.0	183,086	9,438	83	-	-	-	-	192,607
3/4" disk	1.5	1.1	83	-	-	-	-	-	-	83
1" disk	2.5	1.4	2,345	2,396	145	-	-	-	-	4,886
1 1/2" disk	5.0	1.8	178	1,136	95	-	-	-	-	1,409
2" disk	8.0	2.5	99	1,298	211	-	-	-	-	1,608
3" disk	15.0	3.0	12	176	7	-	-	-	-	195
4" disk	25.0	4.0	12	36	12	-	-	-	-	60
6" disk	50.0	5.0	-	-	-	-	-	-	-	-
8" disk	80.0	6.0	-	-	-	-	-	-	-	-
10" disk	115.0	6.5	-	12	-	-	-	-	-	12
12" disk	168.0	7.0	-	-	-	-	-	-	-	-
3" turbine	17.5	3.0	-	144	24	-	12	-	-	180
4" turbine	30.0	4.0	-	60	107	-	-	-	-	167
6" turbine	62.5	5.0	-	-	47	-	12	-	-	59
8" turbine	90.0	6.0	-	-	-	12	-	-	-	12
10" turbine	145.0	6.5	-	-	-	-	-	-	-	-
Parallel	?	?	-	-	-	-	-	-	-	-
Equiv Meters			191,235	40,732	9,581	1,080	960	-	-	243,588
Equiv Services			187,112	19,504	1,789	72	96	-	-	208,573

Act. No.	Account	Utility Depreciation (C-12)	Staff Adjust.	Net Cost	Base Cost	Extra Capacity		Customer Costs			Fire Service	Alloc. Code
						Max Day	Max Hour	Billing	Meter	Services		
	INTANGIBLE PLANT	0										
301	Organizator			0	0							1
302	Franchises			0	0							1
339	Miscellaneous			0	0							1
	SOURCE OF SUPPLY PLANT	50,749										
303	Land and land right:			0	0	0	0	0	0	0	0	13
304	Structures and improvement:			0	0	0	0	0	0	0	0	13
305	Collecting reservoir:	27,216	0	27,216	27,216							1
306	Intakes	15,799	0	15,799	12,625	3,174						2
307	Wells	2,991	0	2,991	2,390	601						2
308	Infiltration Gallerie:			0	0	0						2
309	Supply mains	4,743	0	4,743	3,790	953						2
339	Other plant			0	0	0						2
	PUMPING PLANT	56,133										
303	Land and land right:			0	0	0	0	0	0	0	0	13
304	Structures and improvement:	7,960	0	7,960	4,448	1,118	2,394	0	0	0	0	13
310	Power Generation Equip	6,736	0	6,736	3,764	946						12
310	Other power productior			0	0	0	0					12
311	Steam pumping			0	0	0	0					12
311	Electrical Pumping	41,437	0	41,437	23,154	5,821	12,462					12
311	Diesel Pumping			0	0	0	0					12
339	OtherPlant & Misc. Equip			0	0	0	0					12
	WATER TREATMENT PLANT	612,166										
302	Land and land right:			0	0	0	0	0	0	0	0	13
304	Structures and improvement:	289,664	0	289,664	231,475	58,189	0	0	0	0	0	13
320	Water treatment	322,502	0	322,502	257,716	64,786						2
339	Other Plant & Misc. Equip			0	0	0						2
	TRANSMISSION/DISTRIBUTION	939,060										
303	Land and land right:			0	0	0	0	0	0	0	0	13
304	Structures and improvement:	25,754	0	25,754	5,329	1,340	4,355	0	6,437	5,682	2,612	13
330	Dist. reservoirs and standpipe	52,435	0	52,435			52,435					4
331	Mains (net of Contributions in Aid of Constructior	336,348	0	336,348	187,945	47,246	101,157					12
333	Services	200,420	0	200,420						200,420		7
334	Meters	220,000	0	220,000					220,000			6
334	Meter installations	7,050	0	7,050					7,050			6
335	Hydrants	92,122	0	92,122							92,122	8
336	Backflow Prevention Device:			0						0		7
339	OtherPlant & Misc. Equip	4,931	0	4,931	1,020	256	834	0	1,233	1,088	500	13
	GENERAL PLANT	315,576										
303	Land and land right:			0	0	0	0	0	0	0	0	9
304	Structures and improvement:	13,371	0	13,371	6,136	1,487	1,417	0	1,893	1,671	768	9
340	Office furniture, includes Corporat	121,928	0	121,928	55,950	13,562	12,917	0	17,260	15,236	7,003	9
341	Transportator	106,061	0	106,061	48,669	11,797	11,236	0	15,014	13,253	6,092	9
342	Stores	1,352	0	1,352	620	150	143	0	191	169	78	9
343	Tools etc	28,214	0	28,214	12,947	3,138	2,989	0	3,994	3,526	1,620	9
344	Laboratory	15,710	0	15,710	7,209	1,747	1,664	0	2,224	1,963	902	9
345	Power operatec	3,199	0	3,199	1,468	356	339	0	453	400	184	9
346	Communications	14,470	0	14,470	6,640	1,609	1,533	0	2,048	1,808	831	9
347	Miscellaneous	10,610	0	10,610	4,869	1,180	1,124	0	1,502	1,326	609	9
348	Other Tangible Plan	661	0	661	303	74	70	0	94	83	38	9
399	RECONCILIATION	0	0	0	0	0	0	0	0	0	0	9
	TOTAL DEPRECIATION	1,973,684	0	1,973,684	905,684	219,531	209,095	0	279,392	246,623	113,359	
	Allocation Code 9 Calculator	Cross check =		1,973,684	45.89%	11.12%	10.59%	0.00%	14.16%	12.50%	5.74%	100.00%

AQUA ILLINOIS, Inc.  
Staff Cost of Service Study  
Explanation of Allocation Codes

- 1 This code refers to allocations made 100 percent to Base Cost. Base Costs are costs which tend to vary with the quantity of water used and do not contain elements necessary to meet variations in demand.
- 2 This code refers to allocations divided between Base Cost and Extra Capacity Cost on the ratio of the average annual consumption per day to the maximum consumption on the Maximum Day. Extra Capacity costs are those costs associated with meeting rate of use requirements in excess of the average.
- 3 This code refers to allocations divided between Base Cost and Extra Capacity Cost on the ratio of the average annual consumption per day to the maximum hourly consumption.
- 4 This code refers to allocations made 100 percent to Extra Capacity - Maximum Hour.
- 5 This code refers to allocations made 100 percent to commercial costs associated with serving customers irrespective to the amount of water used or the maximum demand. They include meter reading, billing, customer accounting and collection expenses.
- 6 This code refers to allocations made 100 percent to maintenance and capital charges on customer meters.
- 7 This code refers to allocations made 100 percent to maintenance and capital charges on customer services.
- 8 This code refers to allocations made 100 percent to Fire Protection - Hydrants.
- 9 This code refers to allocations divided among various cost functions in the same ratio as the average allocation of plant in service as developed and shown on page 6 of 18 of this Schedule.

AQUA ILLINOIS, Inc.  
Staff Cost of Service Study  
Explanation of Allocation Codes

- 10 This code refers to allocations divided among various cost functions in the same ratio as the average allocation of operating and maintenance expenses has been allocated before administrative and general expenses and without considering fuel, power and chemical costs.
- 11 This code refers to allocations divided among various cost functions in the same ratio as the average allocation of labor costs if available or on the basis of Allocation Code 10 if not.
- 12 This code refers to allocations divided among Base Cost, Extra Capacity - Maximum Day and Extra Capacity - Maximum Hour.
- 13 This code refers to allocations divided among various cost functions in the same percentage ratio as the average of all items in that subgroup.

**AQUA ILLINOIS, Inc.**  
**TYPICAL BILL COMPARISONS**  
**VERMILION WATER DIVISION**

Residential -Danville:

	CURRENT	COMPANY PROPOSED	STAFF PROPOSED
FACILITIES CHARGE	\$ 12.00	\$ 14.69	\$ 12.00
USAGE CHARGE (CCF)	\$ 2.8710	\$ 3.4890	\$ 3.4480
FIRE SURCHARGE	\$ 3.36	\$ 3.69	\$ 4.21

LINE NO.	USAGE 100'S CU. FT.	USAGE IN GALLONS	CURRENT MONTHLY BILL	COMPANY PROPOSED MONTHLY BILL	DOLLAR INCREASE	PERCENT INCREASE	STAFF PROPOSED MONTHLY BILL	DOLLAR INCREASE	PERCENT INCREASE
1	1	748	\$18.23	\$21.87	\$3.64	19.97%	\$19.66	\$1.43	7.8%
2	2	1,496	\$21.10	\$25.36	\$4.26	20.19%	\$23.11	\$2.01	9.5%
3	3	2,244	\$23.97	\$28.85	\$4.88	20.36%	\$26.55	\$2.58	10.8%
4	4	2,992	\$26.84	\$32.34	\$5.50	20.49%	\$30.00	\$3.16	11.8%
5	5	3,740	\$29.72	\$35.83	\$6.11	20.56%	\$33.45	\$3.73	12.6%
6	6	4,488	\$32.59	\$39.31	\$6.72	20.62%	\$36.90	\$4.31	13.2%
7	7	5,236	\$35.46	\$42.80	\$7.34	20.70%	\$40.35	\$4.89	13.8%
<b>8**</b>	<b>8</b>	<b>5,984</b>	<b>\$38.33</b>	<b>\$46.29</b>	<b>\$7.96</b>	<b>20.77%</b>	<b>\$43.79</b>	<b>\$5.46</b>	<b>14.2%</b>
9	9	6,732	\$41.20	\$49.78	\$8.58	20.83%	\$47.24	\$6.04	14.7%
10	10	7,480	\$44.07	\$53.27	\$9.20	20.88%	\$50.69	\$6.62	15.0%

**Notes:**

**\*\* Typical monthly residential usage**

Large Industrial (TeePak):

	Present Rates	Company Proposed Rates	Staff Proposed Rates
3-inch turbo meter customer charge, per month	\$ 421.00	\$ 446.47	\$ 591.29
All usage	\$ 0.7933	\$ 0.8410	\$ 1.1104
Fire Protection per month	\$ 16.80	\$ 18.45	\$ 21.05

LINE NO.	USAGE 100'S CU. FT.	USAGE IN GALLONS	CURRENT MONTHLY BILL	COMPANY PROPOSED MONTHLY BILL	DOLLAR INCREASE	PERCENT INCREASE	STAFF PROPOSED MONTHLY BILL	DOLLAR INCREASE	PERCENT INCREASE
1	35,567	26,604,303	\$28,653.30	\$30,376.98	\$1,723.68	6.02%	\$40,106.22	\$11,452.92	40.0%
2	47,423	35,472,404	\$38,058.47	\$40,347.66	\$2,289.19	6.01%	\$53,270.84	\$15,212.37	40.0%
3	59,279	44,340,505	\$47,463.63	\$50,318.35	\$2,854.72	6.01%	\$66,435.47	\$18,971.84	40.0%