

DIRECT TESTIMONY

of

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Rates Department

Financial Analysis Division

Illinois Commerce Commission

Illinois-American Water Company

Proposed general increase in water and sewer rates

Docket No. 07-0507

January 14, 2008

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

2 A. My name is Cheri L. Harden. My business address is 527 East Capitol Avenue,
3 Springfield, Illinois 62701.

4
5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by the Illinois Commerce Commission ("Commission") as a Rate
7 Analyst in the Rates Department in the Financial Analysis Division.

8
9 **Q. How long have you been employed by the Illinois Commerce Commission?**

10 A. I have been employed by the Commission since September 2000. My
11 responsibilities include rate design and cost of service analyses for electric, water
12 and gas utilities and the preparation of testimony on rates and rate-related
13 matters.

14
15 **Q. Please briefly state your qualifications.**

16 A. I graduated from the University of Maryland in 1993, with a Bachelor of Science
17 degree in Management Studies.

18
19 Previously, I worked for the Wyoming Public Service Commission for almost
20 seven years. The last two positions I held were as the Consumer Services
21 Coordinator and as a Rate Analyst. I analyzed telecommunications, electric

22 (investor-owned and cooperatives), gas, water and pipeline company filings. I
23 reviewed a variety of cases including mergers, tariff revisions, fuel adjustments,
24 certificate applications, complaints, contract/interconnection agreements and rate
25 cases. I also worked on special projects such as the Universal Service Fund,
26 Annual Reports and Year 2000 Preparedness.

27

28 **Q. Have you formerly testified before regulatory bodies?**

29 A. Yes, I have testified on several occasions before the Illinois Commerce
30 Commission and the Wyoming Public Service Commission.

31

32 **Q. What is the purpose of your testimony?**

33 A. The purpose of my testimony is to address Illinois American Water Company's
34 ("IAWC" or the "Company") filing for a general increase in rates. I will be
35 presenting testimony and exhibits concerning cost of service ("COS") and rate
36 design issues for IAWC's Champaign rate area and Chicago Metro water and
37 sewer rate areas. I will also discuss miscellaneous charges and uniformity of
38 those charges across all the IAWC districts.

39

40 **Q. Please explain how your testimony is organized.**

41 A. My testimony begins with the Company's proposed test year and billing
42 determinants. I then present the details of my COS study. Next, I discuss rate

43 design. Finally, I discuss bill impacts for Champaign and Chicago Metro rate
44 areas and miscellaneous tariff issues for all rate areas.

45

46 I. TEST YEAR

47

48 **Q. What test year is the Company proposing to use for COS purposes?**

49 A. The Company is proposing to use a future test year ending June 30, 2009.
50 (IAWC Exhibit 1.0, p. 8.)

51

52 II. BILLING DETERMINANTS

53

54 **Q. What billing determinants did you use in your COS studies?**

55 A. In both the Champaign and the Chicago Metro Water COS studies I input billing
56 determinants from the Company's Schedule E-4, column (F), which is Future
57 Sales and Billings based on the year ending June 30, 2009.

58

59 However, the billing determinants in Schedule E-4 for the Chicago Metro District
60 are presented in CCF (hundred cubic feet), even though the rates for Chicago
61 Metro Water are based on per thousand gallons. This requires an extra step to
62 convert CCF sales to per thousand gallons for use in the COS study.

63

64 III. COST OF SERVICE STUDIES

65

66 **Q. Did IAWC present a COS study in its filing?**

67 A. No, it did not. The Company is proposing rates that are based upon across-the-
68 board revisions to all rates for all rate areas in accordance with revenue
69 requirements applicable to each District. (IAWC Exhibit No. 4.00 (Revised), pp.
70 12, 39.)

71

72 **Q. Did you prepare COS studies for the Champaign and Chicago Metro water**
73 **and sewer rate areas?**

74 A. I prepared a COS study for the Champaign rate area (ICC Staff Exhibit 5.0,
75 Schedule 5.1-C) and the Chicago Metro Water rate area (ICC Staff Exhibit 5.0,
76 Schedule 5.1-CMW). However, since the Chicago Metro Water rate area has
77 residential customers and commercial customers that are distinguished by well
78 water usage, lake water usage, and Moreland water usage, I was only able to
79 prepare a COS study to determine customer charges and fire protection charges
80 for this rate area. The COS study used by Staff does not allow for the type of
81 allocations that are necessary to separate out the distinct differences prevalent
82 between well water, lake water, and Moreland lake water customers.
83 Additionally, I did not perform a COS study for the Chicago Metro Sewer rate
84 area. Staff does not currently have a sewer COS study.

85

86 **Q. Briefly describe the importance of a COS study as the basis for**
87 **determining rates for utility service.**

88 A. In general, a COS study is performed to assist in the development and design of
89 cost based rates. A more detailed explanation of embedded cost studies and
90 how costs are generally allocated is outlined in the attached Appendix A to this
91 exhibit.

92

93 **Q. What methodology did you use in preparing your COS study for the**
94 **Champaign and Chicago Metro Water rate areas?**

95 A. Each COS study uses the Base-Extra Capacity method of cost allocation to
96 distribute costs to customer classes. The Base-Extra Capacity method is the
97 same methodology employed and accepted by the Commission the last time
98 rates were set for IAWC (Docket No. 02-0690 for Champaign and Chicago Metro
99 rate areas). A further discussion of this methodology is provided in the attached
100 Appendix A to this exhibit.

101

102 **Q. Please provide a brief explanation of your COS study, identified as ICC**
103 **Staff Exhibit 5.0, Schedule 5.1-C and Schedule 5.1-CMW.**

104 A. I prepared a COS study for each rate area. The following suffixes were added to
105 the schedule number to identify the individual rate areas:

106 C - Champaign

107 CMW – Chicago Metro Water

108

109 My COS studies employ information from the Company in response to
110 Commission Staff (“Staff”) data requests. I also incorporated the Accounting
111 Staff’s proposed revenue requirement into my COS studies.

112
113 The calculation and summary of total revenues at the Company’s present and
114 proposed rates, as well as my recommended rates for each primary customer
115 class are listed on pages 1 and 2 of each COS study. By examining those
116 pages, it is possible to compare my calculated COS and the revenues recovered
117 under my recommended rates, for each primary customer class.

118
119 The appropriate COS figures, excluding Fire Protection, for each of the primary
120 customer classes appear on page 2 at the line “Cost of Service.”

121
122 The Demand Factors for Max Day and Max Hour, for the primary customer
123 classes and Fire Protection, as well as the million gallons per day (“MGD”)
124 pumpage and consumption numbers are listed on page 3 of each COS study.
125 The Demand Factors allocate cost of service to the primary customer classes
126 and to Fire Protection. The allocation of these amounts is set forth on pages 11
127 and 12 of each COS study. The water usage and pumpage amounts in MGD are
128 used to allocate plant in service and operation and maintenance (“O&M”)
129 expenses to the plants Base, Max Day and Max Hour functions. Page 4 contains

130 a numerical listing of cost allocation codes for the COS study.

131

132 Allocation of Plant in Service to the Base Cost, Max Day, Max Hour, Billing,
133 Meters, Service Lines and Fire Protection categories are on pages 5 and 6 of
134 each COS study. Page 6 also displays the percentage allocations for the Plant
135 In Service categories. These percentages are used to allocate Utility Operating
136 Income, Other Taxes, and Income Taxes to the various plant functions on page 9
137 of the COS study.

138

139 The allocation of Total Revenue Requirement, *i.e.*, total Operations &
140 Maintenance Depreciation, Other Taxes, Income Taxes and Utility Operating
141 Income to the Base Cost, Extra Capacity, Customer Costs, and Fire Protection
142 functions is on pages 7, 8, 9, and 10 of each COS study. The total revenue
143 requirement is located on page 9 on the line "DIRECT CUSTOMER
144 REVENUES". The Total Revenues Allocated To Small Mains is on page 10 of
145 each COS study.

146

147 The cost of service allocation percentages for the primary customer classes and
148 fire protection are on page 11 of each COS study. The allocation percentages
149 are derived from annual consumption, demand factors, the number of monthly
150 bills and the number of monthly equivalent meters and services.

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The percent allocation of costs to the primary customer classes and fire protection, the total cost of service, and the cost of service according to each customer class are on page 12. The calculation of Public Fire Protection and Private Fire Protection cost of service is on page 13 of each COS study. Public Fire Protection Rates are on page 14 of each COS study.

The number of equivalent meters and service lines and their capacity ratios are on page 15. Distribution of customer costs by equivalent meter and service ratios recognizes that meter and service costs vary, depending on considerations such as size of service pipe, materials used, locations of meters, and other local characteristics for various sized meters as compared to 5/8" meters and services.

The number of equivalent meters and services (which is based on meter ratios) assists in allocating costs assigned for recovery in the customer charges. This is necessary to adjust the units of service for each customer class as indexed against the smallest meter size. Therefore, customers are allocated a charge that reflects the costs associated with their particular meter size. Equivalent Meters and Services ratios are taken from the AWWA Water Meters-Selection, Installation, Testing, and Maintenance Manual (M6), 1972, pages 32-33.

Depreciation Expense Allocation is on page 16 of each COS study. A brief

172 description of COS study allocation codes appears on page 17 of each COS
173 study.

174

175 **Q. Please discuss the demand data provided by IAWC.**

176 A. This information, and the reasonableness of its use in a COS study, is discussed
177 by Staff witness Peter Lazare (ICC Staff Exhibit 6.0). I used the demand data
178 provided in IAWC Exhibit 11.01 in my COS study.

179

180 **Q. What demand factors and pumpage data are you proposing to use for the**
181 **Champaign and Chicago Metro Water rate areas?**

182 A. The Company provided updated demand factors in IAWC Exhibit No. 11.01, p.
183 I-4. However, the Company's exhibit did not provide updated demand factors for
184 the Champaign District's University of Illinois and Raw Water customer classes. I
185 have an outstanding data request to the Company for updated demand factors
186 for these two customer classes. For the purposes of my direct testimony, I have
187 utilized the demand factors for these two classes that were approved in Docket
188 No. 02-0690. If the Company timely responds to my data request, my rebuttal
189 testimony will sponsor an updated COS study with the updated numbers
190 incorporated.

191

192 The Company provided updated pumpage data for these areas in its response to

193 Staff Data Request CLH 1.03-R1. I have utilized the 2006 full year data in my
194 COS study. However, the Company's response did not provide updated
195 pumpage data for the Chicago Metro Water District's Peak Hour Pumpage and
196 Peak Hour Pumpage plus Drawdown. I have an outstanding data request to the
197 Company for updated data for this specific area. For the purposes of my direct
198 testimony, I have utilized the pumpage data for this area that was approved in
199 Docket No. 02-0690. If the Company timely responds to my data request, my
200 rebuttal testimony will sponsor an updated COS study with the updated numbers
201 incorporated.

202

203 **Q. Please explain the steps you have taken to develop the information**
204 **necessary to complete your COS studies.**

205 A. The starting point for developing the information is the cost data based on the
206 NARUC 1984 chart of accounts provided by the Company in the second update
207 of its response to Staff Data Request CLH 1.01 on December 26, 2007. I
208 identified costs in transmission and distribution account numbers 601 (salaries
209 and wages) and 675 (miscellaneous expenses) that pertained to mains, meters,
210 services and hydrants. The breakdowns for Champaign and Chicago Metro
211 Water are presented in the attached Schedule 5.2.

212

213 These cost breakdowns were then introduced into the Revenue Requirements

214 section of my COS studies. The effect of these changes was to reduce the levels
215 of account numbers 601 (salaries and wages) and 675 (miscellaneous expenses)
216 and place positive values in account numbers 662 (mains), 663 (meters), 664
217 (services) and 677 (hydrants).

218

219 IV. RATE DESIGN

220

221 **Q. What level of increase does the Company propose for the Champaign and**
222 **Chicago Metro Districts?**

223 A. IAWC proposes that Champaign and Chicago Metro Water receive rate
224 increases of 59.83% and 5.80%, respectively. The Company proposes a rate
225 decrease of -3.18% for Chicago Metro Sewer. (IAWC Exhibit 1.00, pp. 10 -11.)

226

227 **Q. Please describe the Company's present rate structure and the changes**
228 **proposed for the Champaign and Chicago Metro rate areas.**

229 A. The proposed rates reflect across-the-board revisions to all the rates for each
230 district. The Company indicates that its present rate design was established
231 based on the cost of service analysis in Docket No. 02-0690 and that there is no
232 change in circumstances since that time that would warrant a change in the
233 design of the Company's rates, with two notable exceptions. (IAWC Exhibit No.
234 4.00 (Revised), p. 39.) One notable exception is for the Chicago Metro Sewer
235 District which I will discuss further.

236

237 A. Chicago Metro Sewer District

238

239 **Q. Please explain Company's proposal for the Chicago Metro Sewer District.**

240 A. The Company is proposing to change the rate structure in the Chicago Metro

241 Sewer District for residential customers who fall under the tariff for sewer

242 collection and treatment. The Company is proposing to move to a combination

243 fixed and volumetric rate structure for these customers. The current rate

244 structure is a fixed rate structure of \$45.52 per month. The Company's proposal

245 is to move to a fixed charge of \$26.07, a usage allowance of 1,000 gallons per

246 month, a volumetric rate of \$3.7891 for the next 7,000 gallons and \$1.9311 for all

247 usage over 8,000 gallons. The Company believes the proposed combination

248 structure is a more reasonable rate design. The proposed rate structure applies

249 the volumetric rates to winter usage levels. In other words, a winter average

250 usage level will be determined based on the months of November through April,

251 with this usage level being used to calculate the sewer bills for the months of

252 May through October. The use of a winter average is appropriate in light of the

253 impact during other months of outdoor water use, which does not affect the

254 sanitary wastewater flow. The Company's proposal results in a rate decrease for

255 the Chicago Metro Sewer District. (IAWC Exhibit No. 4.00 (Revised), p. 40.)

256

257 **Q. Do you agree with the Company's rate proposal for the Chicago Metro**

258 **Sewer District?**

259 A. Yes, I do. The change in the rate structure in the Chicago Metro Sewer District
260 for residential customers who fall under the tariff for sewer collection and
261 treatment will result in a bill decrease for most customers who have little winter
262 usage and a slight increase in the monthly bill for customers using an average of
263 7,000 gallons per month. I am not aware of a sewer company in the State of
264 Illinois that has a similar rate design for sewer customers. However, the
265 Company's proposed rate structure will lower customers' bills from the flat
266 monthly charge they have paid in the past, if there are months with no water
267 usage. The new rate design for these customers will provide the option to
268 reduce the sewer bill by reducing water usage.

269
270 On January 9, 2008, the Company provided me with revised bill impacts for the
271 Chicago Metro Sewer District Residential Collection and Treatment. The bill
272 impact information shows very high increases to usage customers and I will need
273 more time to review this information. Therefore, my proposed Chicago Metro
274 Sewer rates will be presented in my rebuttal testimony.

275

276 B. Champaign District

277

278 **Q. What is the basis for your rate design in the Champaign District?**

279 A. I set the monthly Facilities Charge at the cost that was calculated by my COS

280 study. This results in a customer charge higher than the Company proposed in
281 all but the 10" disk.

282
283 The Industrial and University of Illinois customer classes were both recovering
284 just under 80% of COS when the usage rates were changed on an equal
285 percentage basis. I have increased the usage charges for these two customer
286 classes to move them toward COS at about 90% COS. The remaining customer
287 classes have also been increased, although not by as much as the Industrial and
288 University of Illinois classes and recover just over 100% of COS.

289
290 If Staff's recommended adjustments to the Company's requested revenue
291 requirement are approved in this proceeding, then I recommend that the rates
292 that appear as described above on ICC Staff Schedule 5.1-C for Champaign rate
293 area, be approved.

294
295 **Q. Have you deviated in any way from COS in your proposed rate design for**

296 **Champaign?**

297 A. Yes. I deviated from costs in my calculation of private fire protection rates. My
298 COS study results suggest that decreases are in order for private fire protection
299 rates. For example, the current rates of \$14, \$28 and \$48 for 6 inch, 8 inch and
300 10 inch connections exceed my calculated cost of service of \$6, \$10 and \$16.

301 Setting these private fire protection rates equal to the cost of service would
302 require increases in other charges to recover the Staff proposed Revenue
303 Requirement. To moderate the increases in other charges, I set my proposed
304 private fire protection rates at current levels.

305

306 **Q. Do your proposed rates include any revisions to the Company's proposed**
307 **miscellaneous revenues?**

308 A. No, I have not identified any adjustments to the Company's proposed
309 miscellaneous revenues for this proceeding.

310

311 **Q. What are your recommendations for the proposed monthly customer**
312 **charges, private fire protection charges, public fire protection charges, and**
313 **water usage charges for the Champaign rate area?**

314 A. My proposed rates for customer charges and usage charges are in ICC Staff
315 Exhibit 5.0, Schedule 5.1-C in the column labeled "STAFF RATES". On the
316 same schedules, page 2, under "PVT. FIRE PROT RATES, MONTHLY", the fifth
317 line under this heading is my recommended private fire rates. The public fire
318 protection surcharge that I recommend is on the same schedules, page 14,
319 under "monthly rates" for each of the customers listed.

320

321 **Q. Are you proposing a Raw Water rate for the Champaign District?**

322 A. No, I am not proposing a Raw Water rate in my direct testimony. I have sent a
323 data request to the Company to ask for updated billing determinants for the Raw
324 Water class. I will further discuss this class in my rebuttal testimony.

325

326 **Q. What percentage increases do you recommend for the various customer**
327 **classes in the Champaign District?**

328 A. My recommended increases for each customer class for this rate area is found on
329 page 2 of my COS study, on the line titled "Percent Increase", on ICC Staff
330 Exhibit 5.0, Schedule 5.1-C.

331

332 **Q. If the Commission adopts a revenue requirement that is different from**
333 **Staff's proposed revenue requirement, what do you propose?**

334 A. If the difference in revenue requirement is 5% or less, I recommend that the
335 usage rates be changed by a uniform percentage to generate the approved
336 revenue. If the difference is larger than 5%, I recommend that the customer
337 charges and usage charges be adjusted to reflect cost of service by updating the
338 Staff's COS study.

339

340 C. Chicago Metro Water District

341

342 **Q. What is the basis for your rate design in the Chicago Metro Water District?**

343 A. The monthly Customer Charge is above the cost that was calculated by my COS

344 study so I have maintained the current Customer Charges in this rate area.

345

346 I have adjusted all usage charges on an equal percentage basis to recover
347 Staff's proposed Revenue Requirement.

348

349 If Staff's recommended adjustments to the Company's requested revenue
350 requirement are approved in this proceeding, then I recommend that the rates
351 that appear as described above on Schedule 5.1-CMW, for Chicago Metro Water
352 rate area be approved.

353

354 **Q. Have you deviated in any way from COS in your proposed rate design for**
355 **the Chicago Metro Water District?**

356 A. Yes. I deviated from costs in my calculation of private fire protection rates. My
357 COS study results suggest that decreases are in order for private fire protection
358 rates. For example, the current rates of \$37, \$66 and \$103 for 6 inch, 8 inch and
359 10 inch connections exceed my calculated cost of service of \$11, \$18 and \$30.
360 Setting these private fire protection rates equal to the cost of service would
361 require increases in other charges to recover the Staff proposed Revenue
362 Requirement. To moderate the increases in other charges, I set my proposed
363 private fire protection rates at current levels.

364

365 Also, as I discussed earlier in my testimony, the Chicago Metro Water rate area
366 has residential customers and commercial customers that are distinguished by
367 well water usage, lake water usage, and Moreland water usage, I was only able
368 to prepare a COS study to determine customer charges and fire protection
369 charges for this rate area. The COS study used by Staff does not allow for the
370 type of allocations that are necessary to separate out the distinct differences
371 prevalent between well water, lake water, and Moreland lake water customers. I
372 have increased each of the usage charges by an equal percentage.

373

374 **Q. Do your proposed rates include any revisions to the Company's proposed**
375 **miscellaneous revenues?**

376 A. No, I have not identified any adjustments to the Company's proposed
377 miscellaneous revenues for this proceeding.

378

379 **Q. What are your recommendations for the proposed monthly customer**
380 **charges, private fire protection charges, public fire protection charges, and**
381 **water usage charges for the Chicago Metro Water rate area?**

382 A. My proposed rates for customer charges and usage charges are in ICC Staff
383 Exhibit 5.0, Schedule 5.1-CMW in the column labeled "STAFF RATES". On the
384 same schedules, page 2, under "PVT. FIRE PROT RATES, MONTHLY", the fifth
385 line under this heading is my recommended private fire rates. The public fire

386 protection surcharge that I recommend is on the same schedules, page 14,
387 under “monthly rates” for each of the customers listed.

388

389 **Q. What percentage increases do you recommend for the various customer**
390 **classes in the Chicago Metro Water District?**

391 A. My recommended increases for each customer class for this rate area is found on
392 page 2 of my COS study, on the line titled “Percent Increase”, on ICC Staff
393 Exhibit 5.0, Schedule 5.1-CMW.

394

395 **Q. If the Commission adopts a revenue requirement that is different from**
396 **Staff’s proposed revenue requirement, what do you propose?**

397 A. If a change in revenue requirement is 5% or less, I recommend that the usage
398 rates be changed by a uniform percentage to generate the approved revenue. If
399 the change is larger than 5%, I recommend that the customer charges and usage
400 charges be adjusted to reflect cost of service by updating the Staff’s COS study.

401

402 V. BILL IMPACTS

403

404 **Q. Has the Company presented an analysis of the bill impacts associated with**
405 **its proposed rates?**

406 A. Yes. That analysis was presented in response to Staff Data Request ML 1.01.

407

408 **Q. What do the results show for the Champaign and Chicago Metro divisions?**

409 A. The results indicate that the increases will be evenly distributed among retail
410 customers under the Company's proposed rates. That result is logical
411 considering that IAWC has proposed to recover its proposed increase through
412 equal percentage increases on current charges.

413

414 **Q. Would your proposed rates produce a similar distribution of bill increases?**

415 A. No, they would not. First, Staff is proposing a smaller rate increase than IAWC
416 has requested for the Champaign and Chicago Metro Water divisions. Second, I
417 am proposing to base rates on my COS study results. The percentage increases
418 for individual charges will differ and as a result customers will not receive the
419 same percentage increases in their bills.

420

421 **Q. How will the bill impacts of your rates be examined?**

422 A. I will present an analysis of the bill impacts of the updated rates submitted with
423 my rebuttal testimony. Those analyses will provide the most accurate
424 assessment of the impacts for the rates I will be recommending in this case.

425

426

427 VI. MISCELLANEOUS CHARGES AND UNIFORMITY IN ALL IAWC DISTRICTS

428

429 **Q. Please discuss the miscellaneous charges that IAWC collects through its**

430 **tariffs.**

431 A. The Company has several miscellaneous, or ancillary, charges, including a
432 charge for non-sufficient funds, a charge for bills that are paid late, a charge to
433 reconnect a customer, a customer activation charge for the Champaign District,
434 which the Company is proposing to implement in all of its other districts, and a
435 franchise fee. There is also a Sewage Treatment Plant Connection Fee for the
436 Chicago Metro Sewer District. Each of these charges is discussed more fully
437 below.

438

439 I have also included a short discussion of the Company's Home Inspection Fee.

440

441 **Q. Are the miscellaneous charges uniform for all the IAWC districts?**

442 A. Generally, the miscellaneous charges are uniform across all IAWC districts. In
443 the discussions below regarding the miscellaneous charges, I discuss and make
444 recommendations for uniformity in those situations where the charges are not
445 uniform.

446

447 **Q. Do you believe that there are benefits to uniform charges for IAWC?**

448 A. Yes. Uniformity of the miscellaneous charges for IAWC provides benefits for
449 customers, the Company and the Commission.

450

451 Customers benefit because charges are more easily understood and less
452 confusing. The Company benefits because its employees can better serve
453 customers in all districts when the Company's policies, practices and charges are
454 the same company-wide. The Commission benefits because regulation
455 becomes simplified for processes where they are appropriate, such as the
456 uniformity of charges that I have described above.

457

458 **Q. What is your recommendation regarding uniformity of IAWC's**
459 **miscellaneous charges?**

460 A. In general, I recommend that miscellaneous charges should be uniform across all
461 the Company's districts in the State. In discussions below I address, and make
462 recommendations about, the uniformity of specific miscellaneous charges.

463

464 A. Non-Sufficient Funds Charge

465

466 **Q. Is the Company making a proposal regarding its non-sufficient funds (NSF)**
467 **charge?**

468 A. Yes. In the Revised Direct Testimony of Company witness Grubb, at lines 269-
469 278, the Company is proposing that the NSF charge for the South Beloit tariff
470 area should be set at \$15.

471

472 **Q. Is the Company's charge for NSF the same across all other tariff areas of**

473 **the Company?**

474 A. Yes. In all other areas of the Company, the NSF charge is \$15.

475

476 **Q. What is your recommendation regarding the Company's proposal to set the**
477 **South Beloit NSF charge at \$15?**

478 A. I recommend that the NSF charge for the South Beloit area be set at \$15.

479

480 B. Late Fees

481

482 **Q. Are the charges for late fees uniform across all the tariff areas of the**
483 **Company?**

484 A. Yes. Therefore, no further discussion or changes need to be presented, because
485 the recommendation for uniformity already exists.

486

487 C. Reconnection Fees

488

489 **Q. Is the Company making a proposal regarding its fee for service**
490 **reconnections during normal business hours?**

491 A. Yes. In Revised Direct Testimony, Company witness Grubb states, at lines 274-
492 277, that "The costs incurred by the Company for NSF and service reconnections
493 during normal business hours are not materially different for the South Beloit
494 District than for the other districts." However, according to the tariff sheet for
495 South Beloit, Ill.C.C. No. 4, Original Sheet No. 77, the existing reconnection

496 charge in the South Beloit District is:

497 1) \$20 for reconnection of service during regular business hours

498 2) \$35 for reconnection of service after regular business hours

499

500 Thus, it appears from Mr. Grubb's testimony that the Company is proposing that
501 the service reconnection charge should continue to be \$20 and \$35.

502

503 **Q. What are the reconnection charges for the other districts?**

504 A. From my review of the Company's tariff sheets, the reconnection fee is \$32 for
505 the other IAWC districts.

506

507 Additionally, in the non-Chicago Metro districts other than South Beloit, tariff
508 language is included that states the charge for reconnection at the request of the
509 customer after regular business hours will be at the actual cost incurred by the
510 Company.

511 However, in the Chicago Metro District, there is no tariff language regarding
512 charges for reconnection at the customer's request after regular business hours.

513

514 **Q. Do you agree that the Company should continue to charge customers in
515 the South Beloit District a reconnection charge of \$20 or \$35?**

516 A. No. According to Mr. Grubb's statement above, the costs for reconnections are

517 not materially different for the South Beloit District than for the other districts. If
518 the costs are not materially different, then I believe that the Company should be
519 uniform and consistent with its various miscellaneous charges across all districts
520 of the Company.

521

522 **Q. What is your recommendation for the reconnection charge in the South**
523 **Beloit District?**

524 A. I recommend that the reconnection charge for the South Beloit District should be
525 set at \$32, so that the reconnection charge of \$32 is uniform for all districts of
526 IAWC.

527

528 Also, I recommend that the Company include the following language for each of
529 its districts:

530 The charge for any service turned on at the request of a
531 Customer after regular business hours or on Saturdays,
532 Sundays or holidays, will be the actual cost incurred by
533 the Company.

534

535 This language will provide the uniformity that is needed for the Company's tariff
536 language and charges for reconnection fees.

537

538 D. Customer Activation Charge

539

540 **Q. Is the Company proposing a Customer Activation Charge in all of its rate**
541 **areas?**

542 A. Yes. In the testimony of Company witness Grubb, IAWC Exhibit No. 4.00
543 (Revised), page 13, he states:

544 Currently, the Champaign District has a customer activation
545 charge of \$10. The Company is proposing to institute the
546 \$10 activation fee in all Districts of the Company.
547

548 For clarification, the Champaign District currently has a Service Charge and the
549 Company is proposing to change the name of the charge to Customer Activation
550 Charge.

551

552 **Q. How does the Company describe its proposed Customer Activation**
553 **Charge?**

554 A. In the testimony of Company witness Grubb, the only statement related to the
555 proposed Customer Activation Charge is that which is quoted in my previous
556 answer above.

557

558 **Q. Does the Company provide any other information in its filing about its**
559 **proposed Customer Activation Charge?**

560 A. No.

561

562 **Q. Does the Company provide any documentation or analysis in support of**
563 **applying this charge to the other Company districts?**

564 A. No.

565

566 **Q. Has the Company provided any information regarding the Customer**
567 **Activation Charge in response to a data request?**

568 A. Yes. In response to Staff Data Request CLH 2.04, the Company states that the
569 existing \$10 Customer Activation Charge was approved by the Commission in
570 Docket Nos. 00-0340 and 02-0690.

571

572 **Q. What is your opinion about the proposed Customer Activation Charge?**

573 A. It appears that the Company is simply relying on the fact that the Champaign
574 District has an existing Customer Activation Charge (Service Charge) and
575 therefore, it is proposing to implement a similar charge in its other districts.
576 However, without any discussion, documentation and analysis on the need for
577 such a charge, it is not possible to recommend approval of the charge.

578

579 And while IAWC is seeking approval of a Customer Activation Charge for its
580 other districts in this docket, it apparently did not believe that it has been needed
581 in those districts until now, because such a charge does not exist in its other
582 districts, even though the Company has been before the Commission in previous
583 rate cases and did not seek approval of the charge in those cases.

584

585 **Q. Are you aware of a Customer Activation Charge in existence for other water**

586 **utilities regulated by the Commission in Illinois?**

587 A. No. I reviewed the tariffs of the Commission regulated water utilities in Illinois
588 and have not found a similar charge. Thus, it appears that a Customer Activation
589 Charge in Illinois is only in the IAWC Champaign District.

590

591 **Q. What are you recommending for the proposed Customer Activation Charge**
592 **for all districts?**

593 A. I recommend that the proposed Customer Activation Charge not be approved
594 unless the Company is able to provide supporting discussion, documentation and
595 analysis for the charge.

596

597 **Q. Are you making a recommendation regarding the existing Customer**
598 **Activation Charge (Service Charge) in the Champaign District?**

599 A. Yes. I recommend that the existing Customer Activation Charge (Service
600 Charge) in the Champaign District be eliminated. It appears that the charge in
601 the Champaign District is the only Customer Activation Charge in a Commission
602 regulated utility in Illinois. While it appears that the charge in the Champaign
603 District was analyzed and approved in a previous case, other Commission
604 regulated water utilities have not required approval of such a charge.

605

606 **Q. What would be the impact on the Company and the customers if the**

607 **existing charge is eliminated?**

608 A. The impact would be minimal because the revenues which are currently collected
609 through the Customer Activation Charge would become part of the overall
610 revenue requirement and collected through the customer charge or the usage
611 charge.

612

613 However, the revenue requirement for each district has not been adjusted to
614 reflect the elimination, or non-implementation, of the Customer Activation
615 Charge, because there is no information in the Company's filing regarding the
616 amount of revenue that would be collected from this charge.

617

618 **Q. Would elimination of the Champaign District Customer Activation Charge**
619 **(Service Charge) have any other impact?**

620 A. Yes. Elimination of the Customer Activation Charge in the Champaign District
621 would have the effect of treating all the IAWC districts, and all the water utilities
622 that are regulated by the Commission, in a uniform and consistent manner.

623

624 E. Connection Fee

625

626 **Q. Does the Company propose a change to the Sewage Treatment Plant**
627 **Connection Fee for the Chicago Metro Sewer District?**

628 A. Yes. The Company proposes changing the Sewage Treatment Plant Connection
629 Fee for the Chicago Metro Sewer District. The current average project unit cost
630 of \$831.76 per population equivalent (P.E.), found in the Chicago Metro Sewer
631 District's Rule, Regulation and Condition of Service 16 (ILL. C.C. No. 5, Sheet
632 No. 53), is based on 2002 construction costs. Since 2002, when the unit cost
633 was last adjusted, the Company has experienced an increase in the construction
634 unit prices. The Company attributes the increase in prices to new environmental
635 regulations and inflation. Additionally, two nationally recognized construction
636 cost indices show an approximately 24% increase in construction cost since
637 2002. The ENR construction cost index has increased from 6498 in 2002 to
638 8008 in August 2007. The Handy-Whittman Index for water and sewer has
639 increased from 383 in 2002 to 474 in January 2007. IAWC's recently bid project
640 for the Oak Valley Water Reclamation Facility expansion is projected to cost
641 \$8,697,930. This expansion will add treatment capacity for 7,500 P.E. at a unit
642 cost of \$1,159/P.E. This cost reflects the higher treatment standards and
643 inflation. Therefore, IAWC is proposing that the Average Project Unit Cost be
644 revised to \$1,159/P.E. (IAWC Exhibit No. 4.00 (Revised), pp. 13 – 14.)

645

646 **Q. Do you recommend approval of this revision?**

647 A. Yes. The Company's response to Staff Data Request CLH 2.05 shows the
648 calculation of the average project unit cost charge (Sewer Treatment Plant

649 Connection Fee) and provides other supporting documentation. The charge was
650 developed using the Oak Valley WRF Expansion Cost Estimate which was
651 divided by the treatment capacity for this project to arrive at an average project
652 unit cost. I have reviewed the information and the charges appear to be
653 reasonable. This is the only sewer district in IAWC's rate areas.

654

655 VII. Other Miscellaneous Charges

656

657 **Q. Are there any other miscellaneous charges that should be uniform across**
658 **the Company's districts?**

659 A. Yes. According to Ill.C.C. No. 22, Third Revised Sheet No. 15, the Company has
660 a Home Inspection Fee, which states:

661 When an inspection of a customer's premises is requested
662 by the customer/owner for purposes of identifying water loss,
663 a charge in the amount of Twenty-five Dollars (\$25) will be
664 assessed to cover the cost of performing such an inspection.

665

666

667 A. Home Inspection Fee

668

669 **Q. Is the Company making a proposal regarding its Home Inspection Fee?**

670 A. No.

671

672 **Q. What is your recommendation regarding the Company's Home Inspection**
673 **Fee?**

674 A. The Home Inspection Fee appears to only be included in the tariffs of Ill.C.C. No.

675 22, and applies to all the districts in Ill.C.C. No. 22, except the Lincoln District.
676 The Company's Home Inspection Fee is an example of how the Company's
677 tariffs have evolved in a disjointed and non-uniform manner over time, because it
678 does not apply to the Lincoln District, which is in Ill.C.C. No. 22, and does not
679 apply to the other IAWC districts in the state that are not in Ill.C.C. No. 22.

680
681 Therefore, my recommendation is that the Company be required to file, in its next
682 rate case with supporting documentation and analysis, to make this fee
683 applicable to all the districts, or to file for the elimination of the fee in all districts
684 where it is now in effect. In either case, supporting documentation and analysis
685 should be provided by the Company.

686

687 **Q. Are there any other charges that should be uniform?**

688 A. If the Commission adopts my recommendations above, it would appear that all
689 miscellaneous charges, other than franchise fees, would be uniform across all of
690 IAWC's rate areas. However, if IAWC knows of any additional miscellaneous
691 charges that is not uniform across all IAWC districts, then I recommend that
692 these charges be identified in the Company's rebuttal testimony.

693

694 B. Franchise Fees

695

696 **Q. Is IAWC proposing to change the charges for municipal franchise fees?**

697 A. Yes. In the Alton, Cairo and Interurban Districts, the Company is proposing to
698 increase the charges for customers as shown on tariff sheet No. 7 of Ill.C.C. No.
699 22. Also, on the same tariff sheet, the Company shows that for the Lincoln
700 District some charges remain the same and some charges are proposed to
701 increase.

702

703 For the Champaign District, the Company proposes that all the franchise fees
704 decrease as shown on tariff sheet No. 2.7 of Ill.C.C. No. 5. Also, the Company
705 proposes to increase the franchise fee for Orland Hills, as shown on tariff sheet
706 No. 49 of Ill.C.C. No. 4.

707

708 **Q. Do you agree with the Company's proposals for changes to franchise fees?**

709 A. No. It is difficult to agree with the Company's proposals because the Company
710 does not provide any discussion, analysis or support of how it arrived at its
711 various proposals. IAWC witness Grubb addresses the franchise fee proposals
712 on page 12 of his direct testimony where he states that fees increase or
713 decrease based on usage or customer count.

714

715 **Q. What is your recommendation regarding the Company's proposal to**
716 **change franchise fees?**

717 A. I recommend that the Company's proposed changes for franchise fees be

718 denied, unless the Company is able to provide detailed support for its proposed
719 changes to franchise fees in its rebuttal testimony.

720

721 **Q. Does this conclude your prepared direct testimony in this proceeding?**

722 A. Yes.

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

| ITEM | PRESENT RATES | PROPOSED RATES | STAFF RATES | RESIDENTIAL | | COMMERCIAL | | INDUSTRIAL | | UNIVERSITY OF IL | | RAW WATER | | STANDBY | | PUB. AUTH. | | OTHER WATER UTILITIES | | TOTAL | |
|---------------------------|------------------|----------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|------------------|
| | | | | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | | |
| FAC CHARGES, MONTHLY | | | | | | | | | | | | | | | | | | | | | |
| 5/8" disk | 7.60 | 12.19 | 13.21 | 588,297.0 | 0 | 23,591.9 | 0.0 | 50.2 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 1,421.1 | 0.0 | 0.0 | 0 | 613,360 | |
| 3/4" disk | 9.73 | 15.61 | 17.43 | 9,621.4 | 0 | 2,997.3 | 0.0 | 25.1 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 317.3 | 0.0 | 0.0 | 0 | 12,961 | |
| 1" disk | 14.00 | 22.46 | 25.87 | 7,537.0 | 0 | 6,878.7 | 0.0 | 125.5 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 676.1 | 0.0 | 12.0 | 0 | 15,229 | |
| 1 1/2" disk | 24.65 | 39.55 | 46.98 | 2,236.2 | 0 | 4,420.0 | 0.0 | 125.5 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 289.7 | 0.0 | 0.0 | 0 | 7,071 | |
| 2" disk | 37.35 | 59.93 | 72.30 | 179.5 | 0 | 1,408.9 | 0.0 | 263.5 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 538.1 | 0.0 | 0.0 | 0 | 2,390 | |
| 3" disk | 77.00 | 123.55 | 131.39 | 13.8 | 0 | 234.8 | 0.0 | 87.8 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 41.4 | 0.0 | 24.0 | 0 | 402 | |
| 4" disk | 130.00 | 208.60 | 215.81 | 13.8 | 0 | 69.1 | 0.0 | 12.5 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 12.0 | 0 | 107 | |
| 6" disk | 270.00 | 433.24 | 426.86 | 41.4 | 0 | 41.4 | 0.0 | 50.2 | 0.0 | 48.0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 12.0 | 0 | 193 | |
| 8" disk | 385.00 | 617.77 | 680.12 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0 | 0 | |
| 10" disk | 617.00 | 990.04 | 975.59 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0 | 12 | |
| 12" disk | 0.00 | 0.00 | 0.00 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Remove Parallel Meters | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Bills | | | | 607,940 | 0 | 39,642 | 0 | 740 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 3,284 | 0 | 60 | 0 | 651,726 | |
| TOTAL CUS CHARGE REVENUES | Present | | | 4,746,053 | 0 | 504,580 | 0 | 37,258 | 0 | 20,364 | 0 | 0 | 0 | 0 | 0 | 53,780 | 0 | 6,816 | 0 | 5,368,850 | |
| | Proposed | | | 7,612,530 | 0 | 809,475 | 0 | 59,781 | 0 | 32,676 | 0 | 0 | 0 | 0 | 0 | 86,282 | 0 | 10,937 | 0 | 8,611,682 | |
| | Staff | | | 8,274,584 | 0 | 914,794 | 0 | 64,956 | 0 | 32,196 | 0 | 0 | 0 | 0 | 0 | 99,748 | 0 | 11,176 | 0 | 9,397,455 | |
| USAGE CHARGES | (100 cubic feet) | | 00 cubic feet | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) |
| First Block | 1.9055 | 3.0576 | 2.7046 | 4,254,930 | 0 | 482,815 | 0 | 8,947 | 0 | 300 | 0 | 0 | 0 | 0 | 23,815 | 0 | 1,038 | 0 | 4,771,845 | | |
| Second Block | 1.3832 | 2.2195 | 1.9632 | 254,088 | 0 | 436,945 | 0 | 25,652 | 0 | 1,200 | 0 | 0 | 0 | 0 | 37,425 | 0 | 4,153 | 0 | 759,463 | | |
| Third Block | 1.2350 | 1.9817 | 1.7529 | 55,845 | 0 | 514,940 | 0 | 173,600 | 0 | 13,500 | 0 | 0 | 0 | 0 | 53,568 | 0 | 41,890 | 0 | 853,343 | | |
| Fourth Block | 0.9870 | 1.5837 | 1.8000 | 15,700 | 0 | 137,807 | 0 | 553,286 | 0 | 105,000 | 0 | 0 | 0 | 0 | 154,441 | 0 | 163,730 | 0 | 1,129,964 | | |
| Fifth Block (U of I) | 0.8892 | 1.4268 | 1.5500 | 0 | 0 | 0 | 0 | 0 | 0 | 1,501,522 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,501,522 | | |
| Raw Water | 0.5875 | 0.9427 | 0.5875 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Seventh Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Eighth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Ninth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Tenth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Eleventh Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Twelfth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| ADJUSTMENTS | | | | | | | | | | | | | | | | | | | | | |
| First Block | 1.9055 | 3.0576 | 2.7046 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Second Block | 1.3832 | 2.2195 | 1.9632 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Third Block | 1.2350 | 1.9817 | 1.7529 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Fourth Block | 0.9870 | 1.5837 | 1.8000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Fifth Block | 0.8892 | 1.4268 | 1.5500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sixth Block | 0.5875 | 0.9427 | 0.5875 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Seventh Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Eighth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Ninth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tenth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Eleventh Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Twelfth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Usage | | | | 4,580,563 | 0 | 1,572,507 | 0 | 761,485 | 0 | 1,621,522 | 0 | 0 | 0 | 0 | 269,249 | 0 | 210,811 | 0 | 9,016,137 | | |

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

| ITEM | RESIDENTIAL | | COMMERCIAL | | INDUSTRIAL | | U of IL | | RAW WATER | | STANDBY | | PUB. AUTH. | | OTHER WATER UTILITIES | | TOTAL | | |
|-------------------------------------|-------------|-------------|------------|-----------|------------|-----------------|-----------|-----------------------|-------------|-------------------|-----------|------------------|------------|---------|-----------------------|---------|-------|------------|--------|
| | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | | | |
| USAGE CHARGE REVENUES | Present | 8,543,688 | 0 | 2,296,353 | 0 | 813,020 | 0 | 1,457,692 | 0 | 0 | 0 | 0 | 0 | 315,735 | 0 | 221,058 | 0 | 13,647,546 | |
| | Proposed | 13,709,354 | 0 | 3,684,756 | 0 | 1,304,553 | 0 | 2,338,994 | 0 | 0 | 0 | 0 | 0 | 506,625 | 0 | 354,704 | 0 | 21,898,987 | |
| | Staff | 12,132,664 | 0 | 3,314,306 | 0 | 1,374,774 | 0 | 2,543,190 | 0 | 0 | 0 | 0 | 0 | 509,775 | 0 | 379,103 | 0 | 20,253,812 | |
| OTHER ADJUSTMENTS Reconciliation | Present | (33) | 0 | 2 | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 | (9) | 0 | 8 | 0 | (38) | |
| | Proposed | (53) | 0 | 3 | 0 | (5) | 0 | (5) | 0 | 0 | 0 | 0 | 0 | (14) | 0 | 13 | 0 | (61) | |
| | Staff | (51) | 0 | 3 | 0 | (5) | 0 | (5) | 0 | 0 | 0 | 0 | 0 | (15) | 0 | 14 | 0 | (59) | |
| TOTAL METERED REVENUES | Present | 13,289,708 | 0 | 2,800,935 | 0 | 850,274 | 0 | 1,478,053 | 0 | 0 | 0 | 0 | 0 | 369,507 | 0 | 227,882 | 0 | 19,016,359 | |
| | Proposed | 21,321,832 | 0 | 4,494,234 | 0 | 1,364,330 | 0 | 2,371,665 | 0 | 0 | 0 | 0 | 0 | 592,893 | 0 | 365,654 | 0 | 30,510,608 | |
| | Staff | 20,407,198 | 0 | 4,229,102 | 0 | 1,439,725 | 0 | 2,575,381 | 0 | 0 | 0 | 0 | 0 | 609,509 | 0 | 390,293 | 0 | 29,651,208 | |
| PVT. FIRE PROT RATES, MONTHLY | Less than | | | | | | | | | | | PRIVATE HYDRANTS | | | | | | | |
| Size Connection | 3" | 3" | 4" | 6" | 8" | 10" | 12" | 14" | | | | | | | | | | | |
| Present | 5.00 | 5.00 | 7.00 | 14.00 | 28.00 | 48.00 | 75.00 | 157.00 | | | | | | | | | | | 14.84 |
| Proposed | 8.02 | 8.02 | 11.23 | 22.46 | 44.93 | 77.02 | 120.35 | 251.92 | | | | | | | | | | | 23.81 |
| Per Cost of Service Study | 5.00 | 6.00 | 7.00 | 10.00 | 17.00 | 27.00 | 40.00 | 80.00 | | | | | | | | | | | 23.26 |
| Staff | 5.00 | 5.00 | 7.00 | 14.00 | 28.00 | 48.00 | 75.00 | 157.00 | | | | | | | | | | | 14.84 |
| Units (ANNUAL) | 1743.7 | 601.8 | 3839.0 | 6314.5 | 1177.8 | 204.1 | 40.0 | 24.0 | | | | | | | | | | | 1602.0 |
| NON-METERED REVENUES | PVT. FIRE | PUBLIC FIRE | | TOTAL | | OTHER OPERATING | | VARIABLE REVENUES | | TOTAL NON-METERED | | | | | | | | | |
| Present | 200,319 | 0 | 2,058,665 | 2,058,665 | 177,388 | 42,183 | 2,478,554 | | | | | | | | | | | | |
| Proposed | 321,391 | 0 | 2,270,273 | 2,270,273 | 177,388 | 42,183 | 2,811,235 | | | | | | | | | | | | |
| Staff | 200,322 | 2,125 | 1,446,499 | 1,448,624 | 177,388 | 62,055 | 1,888,389 | | | | | | | | | | | | |
| TOTAL REVENUES | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | U of IL | RAW WATER | STANDBY | PUB AUTH | OTHER WATER UTILITIES | NON-METERED | TOTAL | | | | | | | | | |
| Present | 13,289,708 | 2,800,935 | 850,274 | 1,478,053 | 0 | 0 | 369,507 | 227,882 | 2,478,554 | 21,494,913 | | | | | | | | | |
| Proposed | 21,321,832 | 4,494,234 | 1,364,330 | 2,371,665 | 0 | 0 | 592,893 | 365,654 | 2,811,235 | 33,321,843 | | | | | | | | | |
| Staff | 20,407,198 | 4,229,102 | 1,439,725 | 2,575,381 | 0 | 0 | 609,509 | 390,293 | 1,888,389 | 31,539,597 | | | | | | | | | |
| PER STAFF | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | U of IL | RAW WATER | STANDBY | PUB AUTH | OTHER WATER UTILITIES | PUB. FIRE | PVT FIRE | | | | | | | | | |
| Cost of Service | 20,175,053 | 4,045,301 | 1,625,584 | 2,852,866 | 0 | 0 | 596,118 | 385,683 | 1,448,943 | 170,607 | | | | | | | | | |
| Percent Increase | 53.6 | 51.0 | 69.3 | 74.2 | 0.0 | 0.0 | 65.0 | 71.3 | (29.6) | 0.0 | | | | | | | | | |
| Percent Cost of Service | 101.2 | 104.5 | 88.6 | 90.3 | 0.0 | 0.0 | 102.2 | 101.2 | 100.0 | 117.4 | | | | | | | | | |

ILLINOIS COMMERCE COMMISSION
Cost of Service Study
"Demand Factors"

| DEMAND FACTORS | | |
|----------------------|---------|----------|
| Customer Class | Max Day | Max Hour |
| Residential | 2.2 | 6.0 |
| Commercial | 1.5 | 4.3 |
| Industrial | 1.7 | 3.0 |
| U OF I | 1.3 | 1.5 |
| Raw Water | 1.3 | 1.5 |
| Standby | 0.0 | 0.0 |
| Public Authority | 1.4 | 2.8 |
| Other Water Utilties | 1.3 | 2.0 |
| Fire Protection | 0.63 | 5.04 |
| Gallons Per Minute | 3,500 | |
| Hours of Protection | 3 | |

| MGD PUMPAGE | |
|---|--------|
| Average Daily Rate | 21.490 |
| Max. Daily Rate | 33.320 |
| Max. Hourly Pumpage Rate | 33.350 |
| Max. Hourly Consumption Rate (Pumpage plus Storage Drawdown) | 38.039 |

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 | 64.50% | 35.50% | | | | | |
| Base-Max Hr. | 3 | 56.49% | | 43.51% | | | | |
| Max Hour | 4 | | | 100.00% | | | | |
| Commercial | 5 | | | | 100.00% | | | |
| Meters | 6 | | | | | 100.00% | | |
| Services | 7 | | | | | | 100.00% | |
| Hydrants | 8 | | | | | | | 100.00% |
| Plant | 9 | 59.96% | 33.01% | 9.51% | 0.00% | -2.89% | -0.25% | 0.67% |
| Adm. and Gen | 10 | 36.92% | 19.67% | 3.26% | 14.83% | 15.17% | 5.69% | 4.47% |
| Labor B'fits | 11 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Base/Max Day/ Max Hour | 12 | 56.49% | 31.10% | 12.41% | | | | |

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 | Depreciation Reserve | Net Cost | Base Cost | Extra Capacity | | Customer Costs | | | Fire Service | Alloc. Code |
|----------|---|---------------|----------------------|------------|------------|----------------|-----------|----------------|-------------|-----------|--------------|-------------|
| | | | | | | Max Day | Max Hour | Billing | Meter | Services | | |
| | GENERAL PLANT | 5,147,539 | | | | | | | | | | |
| 303 | Land and land rights | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 304 | Structures and improvements | 282,881 | 201,514 | 81,367 | 48,787 | 26,857 | 7,734 | 0 | (2,351) | (207) | 546 | 9 |
| 340 | Office furniture | 1,482,995 | 2,294,850 | (811,855) | (486,786) | (267,969) | (77,169) | 0 | 23,457 | 2,062 | (5,450) | 9 |
| 341 | Transportation | 1,370,045 | 541,547 | 828,498 | 496,765 | 273,462 | 78,751 | 0 | (23,937) | (2,104) | 5,562 | 9 |
| 342 | Stores | 11,044 | 15,740 | (4,696) | (2,816) | (1,550) | (446) | 0 | 136 | 12 | (32) | 9 |
| 343 | Tools etc | 780,759 | 105,742 | 675,017 | 404,738 | 222,803 | 64,162 | 0 | (19,503) | (1,714) | 4,531 | 9 |
| 344 | Laboratory | 107,269 | 67,306 | 39,963 | 23,962 | 13,191 | 3,799 | 0 | (1,155) | (101) | 268 | 9 |
| 345 | Power operated | 304,958 | 220,784 | 84,174 | 50,470 | 27,783 | 8,001 | 0 | (2,432) | (214) | 565 | 9 |
| 346 | Communications | 754,988 | 229,405 | 525,583 | 315,138 | 173,479 | 49,958 | 0 | (15,185) | (1,335) | 3,528 | 9 |
| 347 | Miscellaneous | 52,600 | (10,744) | 63,344 | 37,981 | 20,908 | 6,021 | 0 | (1,830) | (161) | 425 | 9 |
| 348 | Other Tangible Plant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 399 | RECONCILIATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | TOTAL PLANT IN SERVICE | 109,440,337 | 46,296,641 | 63,143,696 | 37,995,696 | 20,730,597 | 5,969,928 | 0 | (1,814,647) | (159,490) | 421,612 | |
| | Allocation Code 9 | Cross check = | | 63,143,696 | 59.96% | 33.01% | 9.51% | 0.00% | -2.89% | -0.25% | 0.67% | |
| | Calculation | | | | | | | | | | | |
| | | | | Total | Base Cost | Max Day | Max Hour | | | | | |
| | Small Main Plant in Service | | | 16,252,424 | 9,181,750 | 5,054,449 | 2,016,225 | | | | | |
| | Small Main CIAC | | | 7,068,851 | 3,993,523 | 2,198,389 | 876,940 | | | | | |
| | Total Plant CIAC | | | 7,592,195 | 4,289,184 | 2,361,147 | 941,864 | | | | | |
| | Allocated Total Plant less General | | | | 37,107,456 | 20,241,634 | 5,829,118 | | | | | |
| | % Small Main to Allocated Total Plant | | | | 24.74% | 24.97% | 34.59% | | | | | |
| | Small Main with General Plant Allocated | | | | 9,401,533 | 5,176,546 | 2,064,930 | | | | | |
| | Small Main with General Plant Allocated less CIAC | | | | 5,408,011 | 2,978,157 | 1,187,990 | | | | | |
| | Allocated Total Plant less CIAC | | | | 33,706,512 | 18,369,450 | 5,028,063 | | | | | |
| | % Small Main less CIAC to Allocated Total Plant less CIAC | | | | 16.04% | 16.21% | 23.63% | | | | | |

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 | 396,785 | | | | | | | | | | |
| 601 | Salaries and Wages | 86,159 | 0 | 86,159 | 55,569 | 30,590 | | | | | | 2 |
| 610 | Purchased water | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 615 | Purchased Power | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 616 | Fuel for Power Prod. | 310,626 | 0 | 310,626 | 310,626 | | | | | | | 1 |
| 618 | Chemicals | 0 | 0 | 0 | 0 | | | | | | | 1 |
| | SOURCE OF SUPPLY | 139,918 | | | | | | | | | | |
| 620 | Materials and Supplies | 2,894 | 0 | 2,894 | 1,867 | 1,027 | | | | | | 2 |
| 631 | Contractual Serv. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 635 | Contractual Serv. - Testing | (16,687) | 0 | (16,687) | (10,762) | (5,925) | | | | | | 2 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 641 | Rental of Property | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 642 | Rental of Equipment | 688 | 0 | 688 | 444 | 244 | | | | | | 2 |
| 650 | Transportation Exp. | 1,110 | 0 | 1,110 | 716 | 394 | | | | | | 2 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 668 | Water Res. Conserv. Exp. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 675 | Misc. Expenses | 151,913 | 0 | 151,913 | 97,978 | 53,935 | | | | | | 2 |
| | PUMPING EXPENSES | 1,607,465 | | | | | | | | | | |
| 601 | Salaries and Wages | 286,086 | 0 | 286,086 | 161,623 | 88,972 | 35,491 | | | | | 12 |
| 615 | Purchased Power | 1,319,999 | 0 | 1,319,999 | 1,319,999 | | | | | | | 1 |
| 616 | Fuel for power production | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 620 | Materials and Supplies | 1,380 | 0 | 1,380 | 780 | 429 | 171 | | | | | 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 | 119,639 | | | | | | | | | | |
| 642 | Rental of Equipment | 45,985 | 0 | 45,985 | 25,979 | 14,301 | 5,705 | | | | | 12 |
| 650 | Transportation Expenses | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 675 | Misc. Expenses | 73,654 | 0 | 73,654 | 41,611 | 22,906 | 9,137 | | | | | 12 |
| | WATER TREATMENT EXPENSE | 2,005,104 | | | | | | | | | | |
| 601 | Salaries and Wages | 743,256 | 0 | 743,256 | 479,369 | 263,887 | | | | | | 2 |
| 615 | Purchased Power | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 616 | Fuel for power production | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 618 | Chemicals | 1,261,339 | 0 | 1,261,339 | 1,261,339 | | | | | | | 1 |
| 620 | Materials and Supplies | 509 | 0 | 509 | 328 | 181 | | | | | | 2 |

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 | | |
| | WATER TREATMENT EXPENSE | 396,555 | | | | | | | | | | |
| 631 | Contractual Serv. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 635 | Contractual Serv. - Testing | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 641 | Rental of Property | 507 | 0 | 507 | 327 | 180 | | | | | | 2 |
| 642 | Rental of Equipment | 87,120 | 0 | 87,120 | 56,189 | 30,931 | | | | | | 2 |
| 650 | Transportation Exp. | (41) | 0 | (41) | (26) | (15) | | | | | | 2 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 675 | Misc. Expenses | 308,969 | 0 | 308,969 | 199,272 | 109,697 | | | | | | 2 |
| | TRANSMISSION/DISTRIBUTION | 1,154,202 | | | | | | | | | | |
| 601 | Salaries and Wages | 193,076 | 0 | 193,076 | 47,325 | 23,113 | 9,220 | 0 | 67,915 | 25,471 | 20,032 | 13 |
| 661 | Storage Facilities | 0 | 0 | 0 | | | 0 | | | | | 4 |
| 662 | Mains | 441,818 | 0 | 441,818 | 249,604 | 137,404 | 54,811 | | | | | 12 |
| 663 | Meters | 377,666 | 0 | 377,666 | | | | 377,666 | | | | 6 |
| 664 | Services | 141,642 | 0 | 141,642 | | | | | | 141,642 | | 7 |
| 615 | Purchased Power | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 616 | Fuel for Power Prod. | 0 | 0 | 0 | 0 | | | | | | | 1 |
| | TRANSMISSION/DISTRIBUTION | 664,622 | | | | | | | | | | |
| 618 | Chemicals | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 620 | Materials and Supplies | 20,850 | 0 | 20,850 | 5,111 | 2,496 | 996 | 0 | 7,334 | 2,751 | 2,163 | 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 | 29,687 | 0 | 29,687 | 29,687 | | | | | | | 1 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 641 | Rental of Property | 400 | 0 | 400 | 98 | 48 | 19 | 0 | 141 | 53 | 41 | 13 |
| 677 | Hydrants | 111,392 | 0 | 111,392 | | | | | | | 111,392 | 8 |
| 642 | Rental of Equipment | 2,964 | 0 | 2,964 | 727 | 355 | 142 | 0 | 1,043 | 391 | 308 | 13 |
| 650 | Transportation Exp. | (28,542) | 0 | (28,542) | (16,125) | (8,876) | (3,541) | | | | | 12 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 675 | Misc. Expenses | 527,871 | 0 | 527,871 | 129,387 | 63,191 | 25,207 | 0 | 185,681 | 69,639 | 54,766 | 13 |
| | CUSTOMER ACCOUNTS EXPENSE | 549,051 | | | | | | | | | | |
| 601 | Salaries and Wages | 317,788 | 0 | 317,788 | | | | 317,788 | | | | 5 |
| 615 | Purchased Power | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 616 | Fuel for Power Prod. | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 670 | Bad Debt Expense | 231,268 | (10,018) | 221,250 | 81,681 | 43,512 | 7,205 | 32,804 | 33,561 | 12,587 | 9,899 | 10 |
| 620 | Materials and Supplies | (5) | 0 | (5) | | | | (5) | | | | 5 |
| | CUSTOMER ACCOUNTS EXPENSE | 307,566 | | | | | | | | | | |
| 631 | Contractual Serv. | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 635 | Contractual Serv. - Testing | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 641 | Meter Reading | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 642 | Rental of Equipment | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 650 | Transportation Exp. | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 658 | Insurance | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 675 | Misc. Expenses | 307,566 | 0 | 307,566 | | | | 307,566 | | | | 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 | 209,515 | 118,365 | 65,158 | 25,992 | |
| Small mains with overhac | 355,304 | 200,728 | 110,498 | 44,078 | |
| Total Expense less Adm. & General anc less Pro Forma Adjustments | | 10,576,040 | 2,796,424 | 463,079 | |
| % Small Mains to Total Expense | | 1.90% | 3.95% | 9.52% | |
| Small Mains with Adm. & General anc Pro Forma Adjustments* Allocatcc | | 251,027 | 166,284 | 66,331 | |
| Depreciation | | 292,903 | 162,928 | 54,222 | |
| Other Taxes | | 164,895 | 91,724 | 38,495 | |
| Income Taxes | | (120,488) | (67,022) | (28,128) | Total |
| Utility Operating Income | | (49,892) | (27,753) | (11,647) | |
| TOTAL REVENUES ALLOCATED TO SMALL MAINS | | 538,444 | 326,160 | 119,272 | 983,877 |

* excluding Fuel & Power, Chemical and Waste Disposa

| Revenue Requirement from Small Mains | Residential | Commercial | Industrial | Raw Water | Class 7 | Class 8 | Pub Auth | Sales for Resale | Total |
|---|-------------|------------|------------|-----------|---------|---------|----------|------------------|---------|
| Remove From | 603,849 | 148,489 | 74,831 | 117,831 | 0 | 0 | 22,689 | 16,188 | 983,877 |
| Reallocate to Blocks | 802,038 | 163,601 | 6,154 | 267 | 0 | 0 | 10,893 | 923 | 983,877 |
| Net Adjustment | 198,189 | 15,113 | (68,677) | (117,564) | 0 | 0 | (11,796) | (15,265) | (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 | 4,580,563 | 9.387 | 50.30% | 220% | 20.651 | 11.264 | 72.23% | 600% | 56.322 | 46.935 | 68.39% | 607,940 | 91.33% | 636,811 | 85.47% | 614,210 | 91.63% |
| Commercial | 1,572,507 | 3.223 | 17.27% | 150% | 4.834 | 1.611 | 10.33% | 430% | 13.857 | 10.634 | 15.49% | 39,642 | 5.96% | 85,975 | 11.54% | 49,185 | 7.34% |
| Industrial | 761,485 | 1.561 | 8.36% | 170% | 2.653 | 1.092 | 7.00% | 300% | 4.682 | 3.121 | 4.55% | 740 | 0.11% | 7,277 | 0.98% | 1,703 | 0.25% |
| U OF IL | 1,621,522 | 3.323 | 17.81% | 125% | 4.154 | 0.831 | 5.33% | 150% | 4.985 | 1.662 | 2.42% | 60 | 0.01% | 3,780 | 0.51% | 318 | 0.05% |
| Raw Water | 0 | 0.000 | 0.00% | 125% | 0.000 | 0.000 | 0.00% | 150% | 0.000 | 0.000 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Standby | 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% |
| Pub. Authority | 269,249 | 0.552 | 2.96% | 140% | 0.772 | 0.221 | 1.42% | 280% | 1.545 | 0.993 | 1.45% | 3,284 | 0.49% | 9,962 | 1.34% | 4,708 | 0.70% |
| Other Water Utilities | 210,811 | 0.432 | 2.32% | 130% | 0.562 | 0.130 | 0.83% | 200% | 0.864 | 0.432 | 0.63% | 60 | 0.01% | 1,290 | 0.17% | 197 | 0.03% |
| SUBTOTAL | 9,016,137 | 18.477 | 99.01% | | 33.626 | 15.149 | 97.14% | | 82.254 | 63.777 | 92.93% | 651,726 | 97.91% | 745,094 | 100.00% | 670,320 | 100.00% |
| Fire Prot. | 90,161 | 0.185 | 0.99% | | 0.630 | 0.445 | 2.86% | | 5.040 | 4.855 | 7.07% | 13,945 | 2.09% | ----- | ----- | ----- | ----- |
| TOTAL | 9,106,298 | 18.662 | 100.00% | | 34.256 | 15.594 | 100.00% | | 87.294 | 68.633 | 100.00% | 665,671 | 100.00% | 745,094 | 100.00% | 670,320 | 100.00% |

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

| DESCRIPTION | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | U OF IL | RAW WATER | STANDBY | PUBLIC AUTHORITY | OTHER WATER UTILITIES | FIRE PROTECTION | TOTAL |
|------------------|-------------|------------|------------|---------|-----------|---------|------------------|-----------------------|-----------------|---------|
| Base | 50.30% | 17.27% | 8.36% | 17.81% | 0.00% | 0.00% | 2.96% | 2.32% | 0.99% | 100.00% |
| Maximum Day | 72.23% | 10.33% | 7.00% | 5.33% | 0.00% | 0.00% | 1.42% | 0.83% | 2.86% | 100.00% |
| Maximum Hour | 68.39% | 15.49% | 4.55% | 2.42% | 0.00% | 0.00% | 1.45% | 0.63% | 7.07% | 100.00% |
| Commercial | 91.33% | 5.96% | 0.11% | 0.01% | 0.00% | 0.00% | 0.49% | 0.01% | 2.09% | 100.00% |
| Meters | 85.47% | 11.54% | 0.98% | 0.51% | 0.00% | 0.00% | 1.34% | 0.17% | ----- | 100.00% |
| Services | 91.63% | 7.34% | 0.25% | 0.05% | 0.00% | 0.00% | 0.70% | 0.03% | ----- | 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 | U OF IL | RAW WATER | STANDBY | PUBLIC AUTHORITY | OTHER WATER UTILITIES | FIRE PROTECTION | TOTAL |
|-----------------------|-------------|------------|------------|-----------|-----------|---------|------------------|-----------------------|-----------------|------------|
| Base | 7,554,011 | 2,593,291 | 1,255,799 | 2,674,124 | 0 | 0 | 444,031 | 347,658 | 148,689 | 15,017,602 |
| Maximum Day | 3,752,062 | 536,701 | 363,856 | 276,715 | 0 | 0 | 73,516 | 43,170 | 148,302 | 5,194,322 |
| Maximum Hour | 629,790 | 142,697 | 41,879 | 22,295 | 0 | 0 | 13,327 | 5,797 | 65,149 | 920,933 |
| Commercial | 2,897,480 | 188,937 | 3,528 | 286 | 0 | 0 | 15,650 | 286 | 66,462 | 3,172,630 |
| Meters | 3,195,555 | 431,429 | 36,514 | 18,968 | 0 | 0 | 49,988 | 6,473 | ----- | 3,738,928 |
| Services | 2,102,961 | 168,402 | 5,829 | 1,089 | 0 | 0 | 16,118 | 674 | ----- | 2,295,073 |
| Fire Service-Hyd | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | 1,200,108 | 1,200,108 |
| Adjustments * | (154,994) | (31,269) | (13,145) | (23,047) | 0 | 0 | (4,717) | (3,111) | (9,160) | (239,443) |
| Small Main Adjustment | 198,189 | 15,113 | (68,677) | (117,564) | 0 | 0 | (11,796) | (15,265) | ----- | (0) |
| TOTAL COST OF SERVICE | 20,175,053 | 4,045,301 | 1,625,584 | 2,852,866 | 0 | 0 | 596,118 | 385,683 | 1,619,550 | 31,300,154 |
| Percent of COSS | 64.46% | 12.92% | 5.19% | 9.11% | 0.00% | 0.00% | 1.90% | 1.23% | 5.17% | 100.00% |

* for Other and for Unbilled

| | |
|--------------------------|------------|
| Special Tariff Revenues | 0 |
| Other Operating Revenues | 177,388 |
| Unbilled Revenues | 62,055 |
| Total Revenues | 31,539,597 |

| | Equiv. Conn. |
|---|-----------------|
| FIRE PROTECTION | |
| Public, monthly | 49,992 |
| Private, monthly | 11,687 |
| Total Equiv. Connections | 61,679 |
| | |
| Total Fire Protection per Cost of Service Study | 1,619,550 |
| Less Billing Costs | 66,462 |
| Less Hydrant Costs | 1,200,108 |
| Total Non-hydrant Fire Protection Costs | 352,980 |
| Total Non-hydrant Fire Protection Costs Per Equiv. Connection, monthly | 5.72 |
| Public Fire Protection Connection Costs | 286,098 |
| Plus Hydrant Costs | 1,162,845 |
| Total Public Fire Protection Costs | 1,448,943 |
| Total Private Fire Protection Connection Costs | 66,882 |
| Plus Billing Costs | 66,462 |
| Plus Hydrant Costs | 37,263 |
| Total Private Fire Protection Costs | 170,607 |

ILLINOIS COMMERCE COMMISSION
Cost of Service Study
"Private Fire Protection Rates"

| Private Fire Prot. | Ratio # | Monthly COSS Rates | Monthly Staff Rates |
|--------------------|---------|-----------------------|------------------------|
| less than 3" | 0.056 | 5.08 | 5.00 |
| 3 | 0.162 | 5.69 | 6.00 |
| 4 | 0.344 | 6.74 | 7.00 |
| 6 | 1.000 | 10.49 | 10.00 |
| 8 | 2.131 | 16.96 | 17.00 |
| 10 | 3.832 | 26.70 | 27.00 |
| 12 | 6.190 | 40.19 | 40.00 |
| 16 | 13.192 | 80.26 | 80.00 |

- ratio based on capacity

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

| Per Hydrant Cost Customer | \$347.80 Hydrants | Total Cost | Municipal Paid | Customer Surcharge | MONTHLY BILLS | | | | Fire Prot Bills | Equiv. Fire Prot Bills | Monthly Rates | | | | Actual Surcharge Connections Revenues Per Hydrant |
|------------------------------|----------------------|---------------|-------------------|-----------------------|---------------|--------|--------|--------|--------------------|------------------------------|---------------|------|------|--------|---|
| | | | | | 5/8" | 3/4" | 1" | 1 1/2" | | | 5/8" | 3/4" | 1" | 1 1/2" | |
| Total | 4,166 | 1,448,943 | 2,125 | 1,446,818 | 525,486 | 10,598 | 13,080 | 9,630 | 558,793 | 622,232 | | | | | 1,446,499 |
| Outside | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| City of Champaign | 2,446 | 850,724 | 0 | 850,724 | 303,833 | 6,617 | 8,620 | 6,142 | 325,213 | 366,021 | 2.32 | 3.48 | 5.80 | 11.60 | 849,169 11.08 |
| City of Urbana | 1,092 | 379,800 | 0 | 379,800 | 146,026 | 1,855 | 3,087 | 2,691 | 153,659 | 169,980 | 2.23 | 3.35 | 5.58 | 11.15 | 379,079 11.73 |
| Savoy FD | 195 | 67,821 | 60 | 67,761 | 23,907 | 440 | 845 | 577 | 25,769 | 29,566 | 2.29 | 3.44 | 5.73 | 11.45 | 67,712 11.01 |
| Bondville FD | 0 | 0 | 511 | (511) | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Edge-Scott FD | 35 | 12,173 | 20 | 12,153 | 10,406 | 26 | 12 | 71 | 10,514 | 10,829 | 1.12 | 1.68 | 2.80 | 5.60 | 12,128 25.03 |
| Windsor Park FD | 23 | 7,999 | 0 | 7,999 | 2,059 | 178 | 30 | 0 | 2,267 | 2,401 | 3.33 | 5.00 | 8.33 | 16.65 | 7,998 8.21 |
| Carrol FD | 50 | 17,390 | 0 | 17,390 | 9,078 | 189 | 91 | 24 | 9,383 | 9,709 | 1.79 | 2.69 | 4.48 | 8.95 | 17,380 15.64 |
| Cherry Hills FD | 0 | 0 | 511 | (511) | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Eastern Prairie FD | 0 | 0 | 511 | (511) | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Rolling Acres FD | 14 | 4,869 | 0 | 4,869 | 1,803 | 60 | 0 | 0 | 1,863 | 1,894 | 2.57 | 3.86 | 6.43 | 12.85 | 4,867 11.09 |
| Lincolnshire Fields | 98 | 34,085 | 0 | 34,085 | 7,960 | 1,161 | 291 | 0 | 9,411 | 10,428 | 3.27 | 4.91 | 8.18 | 16.35 | 34,106 8.00 |
| St. Joseph-Stantor | 213 | 74,082 | 0 | 74,082 | 20,414 | 71 | 104 | 125 | 20,714 | 21,405 | 3.46 | 5.19 | 8.65 | 17.30 | 74,060 8.10 |
| Tolono FD | 0 | 0 | 511 | (511) | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Pesotum FPD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| J | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| K | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| O | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| R | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| T | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| V | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| AA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| BB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| CC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

Total cost per fire protection customer based on number of Hydrant

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

| ITEM | METER RATIO | SERVICE RATIO | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | U OF I | RAW WATER | STANDBY | PUB AUTH. | OTHER WATER UTILITIES | TOTAL |
|----------------|-------------|---------------|-------------|------------|------------|--------|-----------|---------|-----------|-----------------------|--------|
| METER SIZE | | | | | | | | | | | |
| 5/8" disk | 1.0 | 1.0 | 588297 | 23592 | 50 | 0 | 0 | 0 | 1421 | 0 | 613360 |
| 3/4" disk | 1.5 | 1.1 | 9621 | 2997 | 25 | 0 | 0 | 0 | 317 | 0 | 12961 |
| 1" disk | 2.5 | 1.4 | 7537 | 6879 | 126 | 0 | 0 | 0 | 676 | 12 | 15229 |
| 1 1/2" disk | 5.0 | 1.8 | 2236 | 4420 | 126 | 0 | 0 | 0 | 290 | 0 | 7071 |
| 2" disk | 8.0 | 2.5 | 180 | 1409 | 264 | 0 | 0 | 0 | 538 | 0 | 2390 |
| 3" disk | 15.0 | 3.0 | 14 | 235 | 88 | 0 | 0 | 0 | 41 | 24 | 402 |
| 4" disk | 25.0 | 4.0 | 14 | 69 | 13 | 0 | 0 | 0 | 0 | 12 | 107 |
| 6" disk | 50.0 | 5.0 | 41 | 41 | 50 | 48 | 0 | 0 | 0 | 12 | 193 |
| 8" disk | 80.0 | 6.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10" disk | 115.0 | 6.5 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 12 |
| 12" disk | 168.0 | 7.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3" turbine | 17.5 | 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4" turbine | 30.0 | 4.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6" turbine | 62.5 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8" turbine | 90.0 | 6.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10" turbine | 145.0 | 6.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parallel | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Equiv Meters | | | 636811 | 85975 | 7277 | 3780 | 0 | 0 | 9962 | 1290 | 745094 |
| Equiv Services | | | 614210 | 49185 | 1703 | 318 | 0 | 0 | 4708 | 197 | 670320 |

| Act. No. | Account | Utility Depreciator | 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 | 0 | 0 | | | | | | | 1 |
| 302 | Franchises | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 339 | Miscellaneous | 0 | 0 | 0 | 0 | | | | | | | 1 |
| | SOURCE OF SUPPLY PLANT | 152,710 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 2,792 | 0 | 2,792 | 1,801 | 991 | 0 | 0 | 0 | 0 | 0 | 13 |
| 305 | Collecting reservoir: | 17 | 0 | 17 | 17 | | | | | | | 1 |
| 306 | Intakes | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 307 | Wells | 74,985 | 0 | 74,985 | 48,362 | 26,623 | | | | | | 2 |
| 308 | Infiltration Gallerie: | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 309 | Supply mains | 74,916 | 0 | 74,916 | 48,318 | 26,598 | | | | | | 2 |
| 339 | Other plant | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| | PUMPING PLANT | 294,926 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 24,608 | 0 | 24,608 | 13,902 | 7,653 | 3,053 | 0 | 0 | 0 | 0 | 13 |
| 310 | Power Generation Equip | 11,489 | 0 | 11,489 | 6,491 | 3,573 | 1,425 | | | | | 12 |
| 310 | Other power producer | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 311 | Steam pumping | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 311 | Electrical Pumping | 245,001 | 0 | 245,001 | 138,412 | 76,194 | 30,394 | | | | | 12 |
| 311 | Diesel Pumping | 13,763 | 0 | 13,763 | 7,775 | 4,280 | 1,707 | | | | | 12 |
| 339 | OtherPlant & Misc. Equip | 65 | 0 | 65 | 37 | 20 | 8 | | | | | 12 |
| | WATER TREATMENT PLANT | 1,163,304 | | | | | | | | | | |
| 302 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 220,685 | 0 | 220,685 | 142,333 | 78,352 | 0 | 0 | 0 | 0 | 0 | 13 |
| 320 | Water treatment | 935,074 | 0 | 935,074 | 603,083 | 331,991 | | | | | | 2 |
| 339 | Other Plant & Misc. Equip | 7,545 | 0 | 7,545 | 4,866 | 2,679 | | | | | | 2 |
| | TRANSMISSION/DISTRIBUTION | 2,600,105 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 25,503 | 0 | 25,503 | 5,517 | 3,037 | 1,587 | 0 | 4,166 | 9,135 | 2,061 | 13 |
| 330 | Dist. reservoirs and standpipe | 37,876 | 0 | 37,876 | | | 37,876 | | | | | 4 |
| 331 | Mains | 985,832 | 0 | 985,832 | 556,942 | 306,590 | 122,299 | | | | | 12 |
| 333 | Services | 922,231 | 0 | 922,231 | | | | | | 922,231 | | 7 |
| 334 | Meters | 225,743 | 0 | 225,743 | | | | | 225,743 | | | 6 |
| 334 | Meter installations | 194,843 | 0 | 194,843 | | | | | 194,843 | | | 6 |
| 335 | Hydrants | 208,081 | 0 | 208,081 | | | | | | | 208,081 | 8 |
| 336 | Backflow Prevention Device: | 0 | 0 | 0 | | | | | | 0 | | 7 |
| 339 | OtherPlant & Misc. Equip | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | GENERAL PLANT | 724,925 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 304 | Structures and improvement: | 15,011 | 0 | 15,011 | 5,625 | 3,096 | 707 | 0 | 1,514 | 3,320 | 749 | 9 |
| 340 | Office furniture | 513,512 | 0 | 513,512 | 192,410 | 105,918 | 24,188 | 0 | 51,796 | 113,574 | 25,626 | 9 |
| 341 | Transportator | 72,138 | 0 | 72,138 | 27,030 | 14,879 | 3,398 | 0 | 7,276 | 15,955 | 3,600 | 9 |
| 342 | Stores | 656 | 0 | 656 | 246 | 135 | 31 | 0 | 66 | 145 | 33 | 9 |
| 343 | Tools etc | 22,424 | 0 | 22,424 | 8,402 | 4,625 | 1,056 | 0 | 2,262 | 4,960 | 1,119 | 9 |
| 344 | Laboratory | 6,735 | 0 | 6,735 | 2,524 | 1,389 | 317 | 0 | 679 | 1,490 | 336 | 9 |
| 345 | Power operatec | 33,910 | 0 | 33,910 | 12,706 | 6,994 | 1,597 | 0 | 3,420 | 7,500 | 1,692 | 9 |
| 346 | Communications | 59,492 | 0 | 59,492 | 22,291 | 12,271 | 2,802 | 0 | 6,001 | 13,158 | 2,969 | 9 |
| 347 | Miscellaneous | 1,051 | 0 | 1,051 | 394 | 217 | 50 | 0 | 106 | 232 | 52 | 9 |
| 348 | Other Tangible Plan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 399 | RECONCILIATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | TOTAL DEPRECIATION | 4,935,978 | 0 | 4,935,978 | 1,849,483 | 1,018,108 | 232,495 | 0 | 497,873 | 1,091,700 | 246,318 | |
| | Allocation Code 9 Calculator | Cross check = | | 4,935,978 | 37.47% | 20.63% | 4.71% | 0.00% | 10.09% | 22.12% | 4.99% | 100.00% |

ILLINOIS COMMERCE COMMISSION
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 17 of this Schedule.
- 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.

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

| ITEM | PRESENT RATES | PROPOSED RATES | STAFF RATES | RESIDENTIAL | | COMMERCIAL | | INDUSTRIAL | | LARGE COM. - LAKE | | CLASS 7 | | CLASS 8 | | PUB. AUTH. | | SALES FOR RES | | TOTAL | |
|-------------------------------|------------------|----------------|---------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | | |
| CUS CHARGES, MONTHLY | | | | | | | | | | | | | | | | | | | | | |
| 5/8" disk | 9.25 | 10.08 | 9.25 | 473,713 | 0 | 22,631 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 | 0 | 0 | 496,704 |
| 3/4" disk | 12.25 | 13.35 | 12.25 | 49,115 | 0 | 2,385 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 86 | 0 | 0 | 0 | 0 | 51,610 |
| 1" disk | 18.25 | 19.89 | 18.25 | 3,147 | 0 | 509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 473 | 0 | 0 | 0 | 0 | 4,128 |
| 1 1/2" disk | 33.00 | 35.96 | 33.00 | 411 | 0 | 213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 0 | 0 | 0 | 0 | 879 |
| 2" disk | 51.00 | 55.58 | 51.00 | 425 | 0 | 315 | 0 | 13 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 387 | 0 | 0 | 0 | 0 | 1,165 |
| 3" disk | 93.00 | 101.35 | 93.00 | 539 | 0 | 71 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 681 |
| 4" disk | 152.00 | 165.65 | 152.00 | 28 | 0 | 9 | 0 | 13 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 95 |
| 6" disk | 302.00 | 329.12 | 302.00 | 0 | 0 | 3 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 12 | 0 | 0 | 30 |
| 8" disk | 481.00 | 524.19 | 481.00 | 0 | 0 | 2 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 10" disk | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12" disk | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10" turbine | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Remove Parallel Meters: | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Bills | | | | 527,378 | 0 | 26,137 | 0 | 25 | 0 | 144 | 0 | 0 | 0 | 0 | 0 | 1,621 | 0 | 12 | 0 | 0 | 555,317 |
| TOTAL CUS CHARGE REVENUES | | | | | | | | | | | | | | | | | | | | | |
| Present | | | | 5,130,591 | 0 | 280,513 | 0 | 2,558 | 0 | 23,370 | 0 | 0 | 0 | 0 | 0 | 49,055 | 0 | 3,654 | 0 | 0 | 5,489,740 |
| Proposed | | | | 5,591,009 | 0 | 305,688 | 0 | 2,787 | 0 | 25,468 | 0 | 0 | 0 | 0 | 0 | 53,460 | 0 | 3,982 | 0 | 0 | 5,982,395 |
| Staff | | | | 5,130,591 | 0 | 280,513 | 0 | 2,558 | 0 | 23,370 | 0 | 0 | 0 | 0 | 0 | 49,055 | 0 | 3,654 | 0 | 0 | 5,489,740 |
| USAGE CHARGES | (100 cubic feet) | | 00 cubic feet | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) | (100 cubic feet) |
| Residential - Wel | 3.3957 | 3.7007 | 3.7407 | 156,193 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156,193 |
| Residential - Lake | 3.5117 | 3.8276 | 3.8685 | 3,660,273 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,660,273 |
| Moreland - Lake | 1.6544 | 1.8029 | 1.8225 | 17,354 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17,354 |
| Commercial - Well 1st bloc | 3.3957 | 3.7007 | 3.7407 | 0 | 0 | 16,760 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 257 | 0 | 0 | 0 | 0 | 17,018 |
| Commercial - Well 2nd bloc | 2.2348 | 2.4355 | 2.4619 | 0 | 0 | 14,055 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 | 0 | 0 | 0 | 0 | 14,192 |
| Commercial - Lake 1st bloc | 3.5117 | 3.8276 | 3.8685 | 0 | 0 | 281,762 | 0 | 17,401 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16,181 | 0 | 44,240 | 0 | 0 | 359,584 |
| Commercial - Lake 2nd bloc | 2.3508 | 2.5619 | 2.5896 | 0 | 0 | 440,586 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59,842 | 0 | 0 | 0 | 0 | 500,428 |
| Moreland - Com. Lake 1st bloc | 1.6544 | 1.8029 | 1.8225 | 0 | 0 | 982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 982 |
| Moreland - Com. Lake 2nd bloc | 1.1028 | 1.3191 | 1.2148 | 0 | 0 | 4,866 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,866 |
| Large Volume - Lake | 2.1913 | 2.3881 | 2.4139 | 0 | 0 | 0 | 0 | 0 | 0 | 137,205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137,205 |
| Large Volume - Wel | 2.0752 | 2.2615 | 2.2860 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Twelfth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ADJUSTMENTS | | | | | | | | | | | | | | | | | | | | | |
| First Block | 3.3957 | 3.7007 | 3.7407 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Second Block | 3.5117 | 3.8276 | 3.8685 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Third Block | 1.6544 | 1.8029 | 1.8225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fourth Block | 3.3957 | 3.7007 | 3.7407 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fifth Block | 2.2348 | 2.4355 | 2.4619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sixth Block | 3.5117 | 3.8276 | 3.8685 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seventh Block | 2.3508 | 2.5619 | 2.5896 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Eighth Block | 1.6544 | 1.8029 | 1.8225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ninth Block | 1.1028 | 1.3191 | 1.2148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tenth Block | 2.1913 | 2.3881 | 2.4139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Eleventh Block | 2.0752 | 2.2615 | 2.2860 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Twelfth Block | 0.0000 | 0.0000 | 0.0000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Usage | | | | 3,833,819 | 0 | 759,012 | 0 | 17,401 | 0 | 137,205 | 0 | 0 | 0 | 0 | 0 | 76,417 | 0 | 44,240 | 0 | 0 | 4,868,095 |

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

| ITEM | RESIDENTIAL | | COMMERCIAL | | INDUSTRIAL | | Lg Comm Lake | | CLASS 7 | | CLASS 8 | | PUB. AUTH. | | SALES FOR RES | | TOTAL | |
|------------------------------------|-------------|------------|-------------|--------------|------------|-----------------|--------------|-------------------|-------------|-------------------|------------------|---------|------------|---------|---------------|---------|-----------|------------|
| | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | BILL ANA. | ADJUST. | | |
| USAGE CHARGE REVENUES | Present | 13,412,874 | 0 | 2,120,508 | 0 | 61,106 | 0 | 300,657 | 0 | 0 | 0 | 0 | 0 | 198,679 | 0 | 155,359 | 0 | 16,249,184 |
| | Proposed | 14,619,370 | 0 | 2,311,656 | 0 | 66,603 | 0 | 327,659 | 0 | 0 | 0 | 0 | 0 | 216,529 | 0 | 169,335 | 0 | 17,711,152 |
| | Staff | 14,775,622 | 0 | 2,335,952 | 0 | 67,315 | 0 | 331,204 | 0 | 0 | 0 | 0 | 0 | 218,864 | 0 | 171,144 | 0 | 17,900,101 |
| OTHER ADJUSTMENTS Reconciliator | Present | (2) | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Proposed | (2) | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Staff | (2) | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| TOTAL METERED REVENUES | Present | 18,543,463 | 0 | 2,401,025 | 0 | 63,664 | 0 | 324,027 | 0 | 0 | 0 | 0 | 0 | 247,734 | 0 | 159,013 | 0 | 21,738,926 |
| | Proposed | 20,210,377 | 0 | 2,617,348 | 0 | 69,391 | 0 | 353,127 | 0 | 0 | 0 | 0 | 0 | 269,988 | 0 | 173,317 | 0 | 23,693,549 |
| | Staff | 19,906,211 | 0 | 2,616,469 | 0 | 69,872 | 0 | 354,574 | 0 | 0 | 0 | 0 | 0 | 267,920 | 0 | 174,798 | 0 | 23,389,843 |
| PVT. FIRE PROT RATES, MONTHLY | Less than | | | | | | | | | | PRIVATE HYDRANTS | | | | | | | |
| Size Connection | 3" | 3" | 4" | 6" | 8" | 10" | 12" | 16" | | | | | | | | | | |
| Present | 4.00 | 8.00 | 16.00 | 37.00 | 66.00 | 103.00 | 147.00 | 223.00 | 43.00 | | | | | | | | | |
| Proposed | 4.36 | 8.72 | 17.44 | 40.32 | 71.93 | 112.25 | 160.20 | 243.02 | 46.86 | | | | | | | | | |
| Per Cost of Service Study | 5.00 | 6.00 | 8.00 | 15.00 | 27.00 | 45.00 | 70.00 | 143.00 | 16.54 | | | | | | | | | |
| Staff | 4.00 | 8.00 | 16.00 | 37.00 | 66.00 | 103.00 | 147.00 | 223.00 | 43.00 | | | | | | | | | |
| Units (ANNUAL) | 525 | 191 | 638 | 2,050 | 1,575 | 669 | 60 | 0 | 12,942 | | | | | | | | | |
| NON-METERED REVENUES | PVT. FIRE | | PUBLIC FIRE | | | OTHER OPERATING | | VARIABLE REVENUES | | TOTAL NON-METERED | | | | | | | | |
| Present | 827,885 | | 0 | | | 2,058,665 | | 2,058,665 | | 562,726 | | 141,771 | | | | | 3,591,047 | |
| Proposed | 902,214 | | 0 | | | 2,270,273 | | 2,270,273 | | 599,795 | | 141,771 | | | | | 3,914,053 | |
| Staff | 827,885 | | 0 | | | 2,057,052 | | 2,057,052 | | 599,795 | | 151,266 | | | | | 3,635,998 | |
| TOTAL REVENUES | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | LG COMM LAKE | CLASS 7 | CLASS 8 | PUB AUTH | SALES FOR RESALE | NON-METERED | TOTAL | | | | | | | | |
| Present | 18,543,463 | 2,401,025 | 63,664 | 324,027 | 0 | 0 | 247,734 | 159,013 | 3,591,047 | 25,329,973 | | | | | | | | |
| Proposed | 20,210,377 | 2,617,348 | 69,391 | 353,127 | 0 | 0 | 269,988 | 173,317 | 3,914,053 | 27,607,602 | | | | | | | | |
| Staff | 19,906,211 | 2,616,469 | 69,872 | 354,574 | 0 | 0 | 267,920 | 174,798 | 3,635,998 | 27,025,842 | | | | | | | | |
| PER STAFF | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | LG COMM LAKE | CLASS 7 | CLASS 8 | PUB AUTH | SALES FOR RESALE | PUB. FIRE | PVT FIRE | | | | | | | | |
| Cost of Service | 20,968,793 | 1,969,812 | 37,012 | 66,514 | 0 | 0 | 164,237 | 72,678 | 2,057,488 | 331,734 | | | | | | | | |
| Percent Increase | 7.3 | 9.0 | 9.8 | 9.4 | 0.0 | 0.0 | 8.1 | 9.9 | (0.1) | 0.0 | | | | | | | | |
| Percent Cost of Service | 94.9 | 132.8 | 188.8 | 533.1 | 0.0 | 0.0 | 163.1 | 240.5 | 100.0 | 249.6 | | | | | | | | |

ILLINOIS COMMERCE COMMISSION
 Cost of Service Study
 "Demand Factors"

| DEMAND FACTORS | | |
|---------------------|---------|----------|
| Customer Class | Max Day | Max Hour |
| Residential | 2.20 | 6.00 |
| Commercial | 1.50 | 4.30 |
| Industrial | 1.70 | 3.00 |
| Raw Water | 0.00 | 0.00 |
| Class 7 | 0.00 | 0.00 |
| Class 8 | 0.00 | 0.00 |
| Public Authority | 1.40 | 2.80 |
| Resale | 1.30 | 2.00 |
| Fire Protection | 0.63 | 5.04 |
| Gallons Per Minute | 3,500 | |
| Hours of Protection | 3 | |

| MGD PUMPAGE | |
|---|--------|
| Average Daily Rate | 13.563 |
| Max. Daily Rate | 20.371 |
| Max. Hourly Pumpage Rate | 38.040 |
| Max. Hourly Consumption Rate (Pumpage plus Storage Drawdown) | 42.600 |

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 | 66.58% | 33.42% | | | | | |
| Base-Max Hr. | 3 | 31.84% | | 68.16% | | | | |
| Max Hour | 4 | | | 100.00% | | | | |
| Commercial | 5 | | | | 100.00% | | | |
| Meters | 6 | | | | | 100.00% | | |
| Services | 7 | | | | | | 100.00% | |
| Hydrants | 8 | | | | | | | 100.00% |
| Plant | 9 | 32.14% | 16.12% | 52.46% | 0.00% | -4.16% | -2.18% | 5.63% |
| Adm. and Gen | 10 | 28.01% | 13.91% | 28.05% | 20.66% | 1.22% | 1.67% | 6.49% |
| Labor B'fits | 11 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Base/Max Day/ Max Hour | 12 | 31.84% | 15.98% | 52.18% | | | | |

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 | Depreciation Reserve | Net Cost | Base Cost | Extra Capacity | | Customer Costs | | | Fire Service | Alloc. Code |
|----------|---|---------------|----------------------|-------------|------------|----------------|-------------|----------------|-------------|-------------|--------------|-------------|
| | | | | | | Max Day | Max Hour | Billing | Meter | Services | | |
| | GENERAL PLANT | 6,696,983 | | | | | | | | | | |
| 303 | Land and land rights | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 304 | Structures and improvements | 535,042 | 35,556 | 499,486 | 160,519 | 80,514 | 262,040 | 0 | (20,778) | (10,913) | 28,104 | 9 |
| 340 | Office furniture | 1,620,903 | 3,656,614 | (2,035,711) | (654,214) | (328,145) | (1,067,974) | 0 | 84,684 | 44,478 | (114,540) | 9 |
| 341 | Transportation | 2,484,006 | 961,023 | 1,522,983 | 489,439 | 245,496 | 798,987 | 0 | (63,355) | (33,275) | 85,691 | 9 |
| 342 | Stores | 13,016 | (6,002) | 19,018 | 6,112 | 3,066 | 9,977 | 0 | (791) | (416) | 1,070 | 9 |
| 343 | Tools etc | 960,813 | 255,665 | 705,148 | 226,613 | 113,666 | 369,935 | 0 | (29,334) | (15,407) | 39,676 | 9 |
| 344 | Laboratory | 132,740 | 36,619 | 96,121 | 30,890 | 15,494 | 50,427 | 0 | (3,999) | (2,100) | 5,408 | 9 |
| 345 | Power operated | 161,447 | 79,165 | 82,282 | 26,443 | 13,263 | 43,167 | 0 | (3,423) | (1,798) | 4,630 | 9 |
| 346 | Communications | 524,724 | 355,568 | 169,156 | 54,361 | 27,267 | 88,743 | 0 | (7,037) | (3,696) | 9,518 | 9 |
| 347 | Miscellaneous | 264,292 | 129,428 | 134,864 | 43,341 | 21,739 | 70,752 | 0 | (5,610) | (2,947) | 7,588 | 9 |
| 348 | Other Tangible Plant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 399 | RECONCILIATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | TOTAL PLANT IN SERVICE | 125,549,958 | 67,607,155 | 57,942,803 | 19,386,260 | 9,158,272 | 29,806,354 | 0 | (2,363,473) | (1,241,344) | 3,196,733 | |
| | Allocation Code 9 Calculation | Cross check = | | 57,942,803 | 32.14% | 16.12% | 52.46% | 0.00% | -4.16% | -2.18% | 5.63% | |
| | | | | Total | Base Cost | Max Day | Max Hour | | | | | |
| | Small Main Plant in Service | | | 17,650,730 | 5,619,644 | 2,820,802 | 9,210,284 | | | | | |
| | Small Main CIAC | | | 4,349,569 | 1,384,817 | 695,114 | 2,269,638 | | | | | |
| | Total Plant CIAC | | | 18,137,091 | 5,774,492 | 2,898,529 | 9,464,070 | | | | | |
| | Allocated Total Plant less General | | | | 19,002,756 | 8,965,912 | 29,180,301 | | | | | |
| | % Small Main to Allocated Total Plant | | | | 29.57% | 31.46% | 31.56% | | | | | |
| | Small Main with General Plant Allocat | | | | 5,733,057 | 2,881,321 | 9,407,887 | | | | | |
| | Small Main with General Plant Allocated less CIAC | | | | 4,348,240 | 2,186,207 | 7,138,249 | | | | | |
| | Allocated Total Plant less CIAC | | | | 13,611,768 | 6,259,744 | 20,342,284 | | | | | |
| | % Small Main less CIAC to Allocated Total Plant less CIAC | | | | 31.94% | 34.92% | 35.09% | | | | | |

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 | | | 1,007 | | | | | | | | |
| 601 | Salaries and Wages | 655 | 0 | 655 | 436 | 219 | | | | | | 2 |
| 610 | Purchased water | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 615 | Purchased Power | 352 | 0 | 352 | 352 | | | | | | | 1 |
| 616 | Fuel for Power Prod. | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 618 | Chemicals | 0 | 0 | 0 | 0 | | | | | | | 1 |
| | SOURCE OF SUPPLY | | | 164,450 | | | | | | | | |
| 620 | Materials and Supplies | 6,565 | 0 | 6,565 | 4,371 | 2,194 | | | | | | 2 |
| 631 | Contractual Serv. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 635 | Contractual Serv. - Testing | (5,766) | 0 | (5,766) | (3,839) | (1,927) | | | | | | 2 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 641 | Rental of Property | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 642 | Rental of Equipment | 403 | 0 | 403 | 268 | 135 | | | | | | 2 |
| 650 | Transportation Exp. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 668 | Water Res. Conserv. Exp. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 675 | Misc. Expenses | 163,248 | 0 | 163,248 | 108,690 | 54,558 | | | | | | 2 |
| | PUMPING EXPENSES | | | 1,155,327 | | | | | | | | |
| 601 | Salaries and Wages | 765,274 | 0 | 765,274 | 243,648 | 122,300 | | 399,326 | | | | 12 |
| 615 | Purchased Power | 390,068 | 0 | 390,068 | 390,068 | | | | | | | 1 |
| 616 | Fuel for power production | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 620 | Materials and Supplies | (15) | 0 | (15) | (5) | (2) | | (8) | | | | 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 | | | 13,674 | | | | | | | | |
| 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 | 13,674 | 0 | 13,674 | 4,354 | 2,185 | | 7,135 | | | | 12 |
| | WATER TREATMENT EXPENSE | | | 399,052 | | | | | | | | |
| 601 | Salaries and Wages | 380,189 | 0 | 380,189 | 253,130 | 127,059 | | | | | | 2 |
| 615 | Purchased Power | 0 | 0 | 0 | 0 | 0 | | 0 | | | | 2 |
| 616 | Fuel for power production | 0 | 0 | 0 | 0 | 0 | | 0 | | | | 2 |
| 618 | Chemicals | 18,657 | 0 | 18,657 | 18,657 | | | | | | | 1 |
| 620 | Materials and Supplies | 206 | 0 | 206 | 137 | 69 | | | | | | 2 |

ICC Staff Ex. 5.0
Schedule 5.1 - CMW

"Revenue Requirement Allocation"

| Act. No. | Account | Utility Cost | Staff Adjust. | Net Cost | Base Cost | Extra Capacity Max Day | Max Hour | Customer Costs | | | Fire Service | Alloc. Code |
|---------------------------|---------------------------------|--------------|---------------|----------|-----------|---------------------------|----------|----------------|--------|----------|--------------|-------------|
| | | | | | | | | Billing | Meter | Services | | |
| WATER TREATMENT EXPENSE | | 196,862 | | | | | | | | | | |
| 631 | Contractual Serv. | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 635 | Contractual Serv. - Testing | 3,141 | 0 | 3,141 | 2,091 | 1,050 | | | | | | 2 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 641 | Rental of Property | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 642 | Rental of Equipment | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 650 | Transportation Exp. | 68,084 | 0 | 68,084 | 45,330 | 22,754 | | | | | | 2 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| 675 | Misc. Expenses | 125,637 | 0 | 125,637 | 83,649 | 41,988 | | | | | | 2 |
| TRANSMISSION/DISTRIBUTION | | 1,649,823 | | | | | | | | | | |
| 601 | Salaries and Wages | 761,709 | 0 | 761,709 | 197,221 | 96,530 | 315,185 | 0 | 19,859 | 27,139 | 105,775 | 13 |
| 661 | Storage Facilities | 0 | 0 | 0 | | | 0 | | | | | 4 |
| 662 | Mains | 823,759 | 0 | 823,759 | 262,269 | 131,647 | 429,844 | | | | | 12 |
| 663 | Meters | 27,193 | 0 | 27,193 | | | | | 27,193 | | | 6 |
| 664 | Services | 37,162 | 0 | 37,162 | | | | | | | 37,162 | 7 |
| 615 | Purchased Power | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 616 | Fuel for Power Prod. | 0 | 0 | 0 | 0 | | | | | | | 1 |
| TRANSMISSION/DISTRIBUTION | | 531,723 | | | | | | | | | | |
| 618 | Chemicals | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 620 | Materials and Supplies | 67,058 | 0 | 67,058 | 17,363 | 8,498 | 27,748 | 0 | 1,748 | 2,389 | 9,312 | 13 |
| 672 | Dist. reservoirs and standpipes | 0 | 0 | 0 | | | 0 | | | | | 4 |
| 631 | Contractual Serv. | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 13 |
| 635 | Contractual Serv. - Testing | 6,725 | 0 | 6,725 | 6,725 | | | | | | | 1 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 13 |
| 641 | Rental of Property | 4,786 | 0 | 4,786 | 1,239 | 607 | 1,980 | 0 | 125 | 171 | 665 | 13 |
| 677 | Hydrants | 144,840 | 0 | 144,840 | | | | | | | 144,840 | 8 |
| 642 | Rental of Equipment | 395 | 0 | 395 | 102 | 50 | 163 | 0 | 10 | 14 | 55 | 13 |
| 650 | Transportation Exp. | 3,342 | 0 | 3,342 | 1,064 | 534 | 1,744 | | | | | 12 |
| 658 | Insurance | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 675 | Misc. Expenses | 304,577 | 0 | 304,577 | 78,861 | 38,599 | 126,030 | 0 | 7,941 | 10,852 | 42,295 | 13 |
| CUSTOMER ACCOUNTS EXPENSE | | 1,211,979 | | | | | | | | | | |
| 601 | Salaries and Wages | 788,664 | 0 | 788,664 | | | | 788,664 | | | | 5 |
| 615 | Purchased Power | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 616 | Fuel for Power Prod. | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 670 | Bad Debt Expense | 423,285 | (1,518) | 421,767 | 118,125 | 58,655 | 118,309 | 87,136 | 5,140 | 7,024 | 27,377 | 10 |
| 620 | Materials and Supplies | 30 | 0 | 30 | | | | 30 | | | | 5 |
| CUSTOMER ACCOUNTS EXPENSE | | 175,510 | | | | | | | | | | |
| 631 | Contractual Serv. | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 635 | Contractual Serv. - Testing | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 636 | Contractual Serv. - Other | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 641 | Meter Reading | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 642 | Rental of Equipment | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 650 | Transportation Exp. | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 658 | Insurance | 0 | 0 | 0 | | | | 0 | | | | 5 |
| 675 | Misc. Expenses | 175,510 | 0 | 175,510 | | | | 175,510 | | | | 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 | 276,147 | 87,920 | 44,132 | 144,096 | |
| Small mains with overheac | 583,209 | 185,682 | 93,204 | 304,323 | |
| Total Expense less Adm. & General anc less Pro Forma Adjustments | | 2,312,326 | 918,024 | 1,851,685 | |
| % Small Mains to Total Expense | | 8.03% | 10.15% | 16.43% | |
| Small Mains with Adm. & General anc Pro Forma Adjustments* Allocated | | 326,761 | 181,774 | 593,515 | |
| Depreciation | | 312,544 | 170,389 | 512,895 | |
| Other Taxes | | 174,503 | 95,694 | 312,922 | |
| Income Taxes | | 131,862 | 72,311 | 236,458 | Total |
| Utility Operating Income | | 537,720 | 294,875 | 964,251 | |
| TOTAL REVENUES ALLOCATED TO SMALL MAINS | | 1,483,390 | 815,042 | 2,620,042 | 4,918,475 |

* excluding Fuel & Power, Chemical and Waste Disposa

| Revenue Requirement from Small Mains | Residential | Commercial | Industrial | Raw Water | Class 7 | Class 8 | Pub Auth | Sales for Resale | Total |
|---|-------------|------------|------------|-----------|---------|---------|----------|------------------|-----------|
| Remove From | 4,242,439 | 596,104 | 11,520 | 2,456 | 0 | 0 | 44,938 | 21,017 | 4,918,475 |
| Reallocate to Blocks | 4,918,475 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,918,475 |
| Net Adjustment | 676,036 | (596,104) | (11,520) | (2,456) | 0 | 0 | (44,938) | (21,017) | (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 | 3,833,819 | 7.857 | 77.97% | 220% | 17.285 | 9.428 | 89.20% | 600% | 47.140 | 39.284 | 79.33% | 527,378 | 94.00% | 569,499 | 92.71% | 535,677 | 94.56% |
| Commercial | 759,012 | 1.555 | 15.44% | 150% | 2.333 | 0.778 | 7.36% | 430% | 6.688 | 5.133 | 10.37% | 26,137 | 4.66% | 32,623 | 5.31% | 27,410 | 4.84% |
| Industrial | 17,401 | 0.036 | 0.35% | 170% | 0.061 | 0.025 | 0.24% | 300% | 0.107 | 0.071 | 0.14% | 25 | 0.00% | 416 | 0.07% | 82 | 0.01% |
| Raw Water | 137,205 | 0.281 | 2.79% | 0% | 0.000 | -0.281 | -2.66% | 0% | 0.000 | -0.281 | -0.57% | 144 | 0.03% | 3,838 | 0.62% | 482 | 0.09% |
| Class 7 | 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% |
| Class 8 | 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% |
| Pub. Authority | 76,417 | 0.157 | 1.55% | 140% | 0.219 | 0.063 | 0.59% | 280% | 0.438 | 0.282 | 0.57% | 1,621 | 0.29% | 7,330 | 1.19% | 2,764 | 0.49% |
| Sales for Resale | 44,240 | 0.091 | 0.90% | 130% | 0.118 | 0.027 | 0.26% | 200% | 0.181 | 0.091 | 0.18% | 12 | 0.00% | 605 | 0.10% | 61 | 0.01% |
| SUBTOTAL | 4,868,095 | 9.976 | 99.01% | | 20.016 | 10.039 | 94.98% | | 54.555 | 44.579 | 90.02% | 555,317 | 98.98% | 614,309 | 100.00% | 566,475 | 100.00% |
| Fire Prot. | 48,681 | 0.100 | 0.99% | | 0.630 | 0.530 | 5.02% | | 5.040 | 4.940 | 9.98% | 5,707 | 1.02% | ----- | ----- | ----- | ----- |
| TOTAL | 4,916,776 | 10.076 | 100.00% | | 20.646 | 10.570 | 100.00% | | 59.595 | 49.519 | 100.00% | 561,024 | 100.00% | 614,309 | 100.00% | 566,475 | 100.00% |

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

| DESCRIPTION | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | LARGE COMM | CLASS 7 | CLASS 8 | PUBLIC AUTHORITY | SALES FOR RESALE | FIRE PROTECTION | TOTAL |
|------------------|-------------|------------|------------|------------|---------|---------|------------------|------------------|-----------------|---------|
| Base | 77.97% | 15.44% | 0.35% | 2.79% | 0.00% | 0.00% | 1.55% | 0.90% | 0.99% | 100.00% |
| Maximum Day | 89.20% | 7.36% | 0.24% | -2.66% | 0.00% | 0.00% | 0.59% | 0.26% | 5.02% | 100.00% |
| Maximum Hour | 79.33% | 10.37% | 0.14% | -0.57% | 0.00% | 0.00% | 0.57% | 0.18% | 9.98% | 100.00% |
| Commercial | 94.00% | 4.66% | 0.00% | 0.03% | 0.00% | 0.00% | 0.29% | 0.00% | 1.02% | 100.00% |
| Meters | 92.71% | 5.31% | 0.07% | 0.62% | 0.00% | 0.00% | 1.19% | 0.10% | ----- | 100.00% |
| Services | 94.56% | 4.84% | 0.01% | 0.09% | 0.00% | 0.00% | 0.49% | 0.01% | ----- | 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 | LARGE COMM | CLASS 7 | CLASS 8 | PUBLIC AUTHORITY | SALES FOR RESALE | FIRE PROTECTION | TOTAL |
|-----------------------|-------------|------------|------------|------------|---------|---------|------------------|------------------|-----------------|------------|
| Base | 5,996,160 | 1,187,108 | 27,215 | 214,591 | 0 | 0 | 119,518 | 69,193 | 76,138 | 7,689,922 |
| Maximum Day | 3,214,418 | 265,160 | 8,510 | (95,865) | 0 | 0 | 21,357 | 9,273 | 180,780 | 3,603,634 |
| Maximum Hour | 7,446,197 | 972,961 | 13,519 | (53,297) | 0 | 0 | 53,431 | 17,185 | 936,423 | 9,386,419 |
| Commercial | 2,500,261 | 123,914 | 119 | 682 | 0 | 0 | 7,684 | 57 | 27,058 | 2,659,775 |
| Meters | 569,434 | 32,619 | 416 | 3,837 | 0 | 0 | 7,329 | 605 | ----- | 614,239 |
| Services | 1,161,726 | 59,443 | 178 | 1,045 | 0 | 0 | 5,994 | 131 | ----- | 1,228,518 |
| Fire Service-Hyd | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | 1,843,469 | 1,843,469 |
| Adjustments * | (595,439) | (75,290) | (1,424) | (2,024) | 0 | 0 | (6,138) | (2,749) | (67,997) | (751,061) |
| Small Main Adjustment | 676,036 | (596,104) | (11,520) | (2,456) | 0 | 0 | (44,938) | (21,017) | ----- | (0) |
| TOTAL COST OF SERVICE | 20,968,793 | 1,969,812 | 37,012 | 66,514 | 0 | 0 | 164,237 | 72,678 | 2,995,870 | 26,274,917 |
| Percent of COSS | 79.81% | 7.50% | 0.14% | 0.25% | 0.00% | 0.00% | 0.63% | 0.28% | 11.40% | 100.00% |

* for Other and for Unbilled

| | |
|--------------------------|------------|
| Special Tariff Revenues | 0 |
| Other Operating Revenues | 599,795 |
| Unbilled Revenues | 151,266 |
| Total Revenues | 27,025,978 |

| | |
|---|-----------------|
| FIRE PROTECTION | Equiv. Conn. |
| Public, monthly | 98,496 |
| Private, monthly | 8,622 |
| Total Equiv. Connections | 107,118 |
| | |
| Total Fire Protection per Cost of Service Study | 2,995,870 |
| Less Billing Costs | 27,058 |
| Less Hydrant Costs | 1,843,469 |
| Total Non-hydrant Fire Protection Costs | 1,125,344 |
| Total Non-hydrant Fire Protection Costs Per Equiv. Connection, monthly | 10.51 |
| Public Fire Protection Connection Costs | 1,034,766 |
| Plus Hydrant Costs | 1,629,371 |
| Total Public Fire Protection Costs | 2,057,488 |
| Total Private Fire Protection Connection Costs | 90,578 |
| Plus Billing Costs | 27,058 |
| Plus Hydrant Costs | 214,098 |
| Total Private Fire Protection Costs | 331,734 |

ILLINOIS COMMERCE COMMISSION
Cost of Service Study
"Private Fire Protection Rates"

| Private Fire Prot. | Ratio # | Monthly COSS Rates | Monthly Staff Rates |
|--------------------|---------|-----------------------|------------------------|
| less than 3" | 0.056 | 5.33 | 5.00 |
| 3 | 0.162 | 6.44 | 6.00 |
| 4 | 0.344 | 8.36 | 8.00 |
| 6 | 1.000 | 15.25 | 15.00 |
| 8 | 2.131 | 27.13 | 27.00 |
| 10 | 3.832 | 45.00 | 45.00 |
| 12 | 6.190 | 69.77 | 70.00 |
| 16 | 13.192 | 143.33 | 143.00 |

- ratio based on capacity

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

| Per Hydrant Cost Customer | \$250.67 Hydrants | Total Cost | Municipal Paid | Customer Surcharge | MONTHLY BILLS | | | | Fire Prot Bills | Equiv. Fire Prot Bills | Monthly Rates | | | | Actual Surcharge Connections Revenues Per Hydrant |
|------------------------------|----------------------|---------------|-------------------|-----------------------|---------------|------|----|--------|--------------------|------------------------------|---------------|------|------|--------|---|
| | | | | | 5/8" | 3/4" | 1" | 1 1/2" | | | 5/8" | 3/4" | 1" | 1 1/2" | |
| Total | 8,208 | 2,057,488 | 0 | 2,057,488 | 465,396 | 0 | 0 | 0 | 465,396 | 465,396 | | | | | 2,057,052 |
| Outside | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| All Districts | 8,208 | 2,057,488 | 0 | 2,057,488 | 465,396 | 0 | 0 | 0 | 465,396 | 465,396 | 4.42 | 0.00 | 0.00 | 0.00 | 2,057,052 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| H | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| J | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| K | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| O | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| R | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| S | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| T | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| V | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| AA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| BB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| CC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

Total cost per fire protection customer based on number of Hydrant

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

| ITEM | METER RATIO | SERVICE RATIO | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | RAW WATER | PUB AUTH | RESALE | CLASS 7 | CLASS 8 | TOTAL |
|----------------|-------------|---------------|-------------|------------|------------|-----------|----------|--------|---------|---------|--------|
| METER SIZE | | | | | | | | | | | |
| 5/8" disk | 1.0 | 1.0 | 473713 | 22631 | 0 | 12 | 0 | 0 | 348 | 0 | 496704 |
| 3/4" disk | 1.5 | 1.1 | 49115 | 2385 | 0 | 24 | 0 | 0 | 86 | 0 | 51610 |
| 1" disk | 2.5 | 1.4 | 3147 | 509 | 0 | 0 | 0 | 0 | 473 | 0 | 4128 |
| 1 1/2" disk | 5.0 | 1.8 | 411 | 213 | 0 | 0 | 0 | 0 | 254 | 0 | 879 |
| 2" disk | 8.0 | 2.5 | 425 | 315 | 13 | 24 | 0 | 0 | 387 | 0 | 1165 |
| 3" disk | 15.0 | 3.0 | 539 | 71 | 0 | 12 | 0 | 0 | 60 | 0 | 681 |
| 4" disk | 25.0 | 4.0 | 28 | 9 | 13 | 36 | 0 | 0 | 9 | 0 | 95 |
| 6" disk | 50.0 | 5.0 | 0 | 3 | 0 | 12 | 0 | 0 | 4 | 12 | 30 |
| 8" disk | 80.0 | 6.0 | 0 | 2 | 0 | 24 | 0 | 0 | 0 | 0 | 26 |
| 10" disk | 115.0 | 6.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12" disk | 168.0 | 7.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3" turbine | 17.5 | 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4" turbine | 30.0 | 4.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6" turbine | 62.5 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8" turbine | 90.0 | 6.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10" turbine | 145.0 | 6.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parallel | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Equiv Meters | | | 569499 | 32623 | 416 | 3838 | 0 | 0 | 7330 | 605 | 614309 |
| Equiv Services | | | 535677 | 27410 | 82 | 482 | 0 | 0 | 2764 | 61 | 566475 |

| Act. No. | Account | Utility Depreciator | 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 | 0 | 0 | | | | | | | 1 |
| 302 | Franchises | 0 | 0 | 0 | 0 | | | | | | | 1 |
| 339 | Miscellaneous | 0 | 0 | 0 | 0 | | | | | | | 1 |
| | SOURCE OF SUPPLY PLANT | 199,875 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 143,725 | 0 | 143,725 | 96,031 | 47,694 | 0 | 0 | 0 | 0 | 0 | 13 |
| 305 | Collecting reservoir: | 4,445 | 0 | 4,445 | 4,445 | | | | | | | 1 |
| 306 | Intakes | 11,432 | 0 | 11,432 | 7,611 | 3,821 | | | | | | 2 |
| 307 | Wells | 34,314 | 0 | 34,314 | 22,846 | 11,468 | | | | | | 2 |
| 308 | Infiltration Gallerie: | 158 | 0 | 158 | 105 | 53 | | | | | | 2 |
| 309 | Supply mains | 5,801 | 0 | 5,801 | 3,862 | 1,939 | | | | | | 2 |
| 339 | Other plant | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| | PUMPING PLANT | 428,732 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 148,291 | 0 | 148,291 | 47,213 | 23,699 | 77,379 | 0 | 0 | 0 | 0 | 13 |
| 310 | Power Generation Equip | 11,365 | 0 | 11,365 | 3,618 | 1,816 | 5,930 | | | | | 12 |
| 310 | Other power producer | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 311 | Steam pumping | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| 311 | Electrical Pumping | 106,493 | 0 | 106,493 | 33,905 | 17,019 | 55,569 | | | | | 12 |
| 311 | Diesel Pumping | 162,583 | 0 | 162,583 | 51,763 | 25,983 | 84,837 | | | | | 12 |
| 339 | OtherPlant & Misc. Equip | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 12 |
| | WATER TREATMENT PLANT | 123,030 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 45,729 | 0 | 45,729 | 30,446 | 15,283 | 0 | 0 | 0 | 0 | 0 | 13 |
| 320 | Water treatmen | 77,301 | 0 | 77,301 | 51,467 | 25,834 | | | | | | 2 |
| 339 | Other Plant & Misc. Equip | 0 | 0 | 0 | 0 | 0 | | | | | | 2 |
| | TRANSMISSION/DISTRIBUTION | 3,879,075 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 304 | Structures and improvement: | 18,626 | 0 | 18,626 | 2,283 | 1,146 | 4,871 | 0 | 3,252 | 4,856 | 2,218 | 13 |
| 330 | Dist. reservoirs and standpipe | 234,007 | 0 | 234,007 | | | 234,007 | | | | | 4 |
| 331 | Mains | 1,486,430 | 0 | 1,486,430 | 473,250 | 237,550 | 775,630 | | | | | 12 |
| 333 | Services | 1,006,435 | 0 | 1,006,435 | | | | | | 1,006,435 | | 7 |
| 334 | Meters | 559,517 | 0 | 559,517 | | | | 559,517 | | | | 6 |
| 334 | Meter installations | 114,430 | 0 | 114,430 | | | | 114,430 | | | | 6 |
| 335 | Hydrants | 459,630 | 0 | 459,630 | | | | | | | 459,630 | 8 |
| 336 | Backflow Prevention Device: | 0 | 0 | 0 | | | | | | 0 | | 7 |
| 339 | OtherPlant & Misc. Equip | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | GENERAL PLANT | 877,815 | | | | | | | | | | |
| 303 | Land and land right: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 304 | Structures and improvement: | 21,744 | 0 | 21,744 | 3,892 | 1,941 | 5,814 | 0 | 3,180 | 4,749 | 2,169 | 9 |
| 340 | Office furniture | 597,768 | 0 | 597,768 | 106,994 | 53,352 | 159,840 | 0 | 87,418 | 130,545 | 59,619 | 9 |
| 341 | Transportator | 142,143 | 0 | 142,143 | 25,442 | 12,687 | 38,008 | 0 | 20,787 | 31,042 | 14,177 | 9 |
| 342 | Stores | 172 | 0 | 172 | 31 | 15 | 46 | 0 | 25 | 38 | 17 | 9 |
| 343 | Tools etc | 30,899 | 0 | 30,899 | 5,531 | 2,758 | 8,262 | 0 | 4,519 | 6,748 | 3,082 | 9 |
| 344 | Laboratory | 6,520 | 0 | 6,520 | 1,167 | 582 | 1,743 | 0 | 953 | 1,424 | 650 | 9 |
| 345 | Power operatec | 15,519 | 0 | 15,519 | 2,778 | 1,385 | 4,150 | 0 | 2,270 | 3,389 | 1,548 | 9 |
| 346 | Communications | 53,168 | 0 | 53,168 | 9,516 | 4,745 | 14,217 | 0 | 7,775 | 11,611 | 5,303 | 9 |
| 347 | Miscellaneous | 9,882 | 0 | 9,882 | 1,769 | 882 | 2,642 | 0 | 1,445 | 2,158 | 986 | 9 |
| 348 | Other Tangible Plan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 399 | RECONCILIATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | TOTAL DEPRECIATION | 5,508,527 | 0 | 5,508,527 | 985,967 | 491,650 | 1,472,947 | 0 | 805,571 | 1,202,995 | 549,397 | |
| | Allocation Code 9 Calculator | Cross check = | | 5,508,527 | 17.90% | 8.93% | 26.74% | 0.00% | 14.62% | 21.84% | 9.97% | 100.00% |

ILLINOIS COMMERCE COMMISSION
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 17 of this Schedule.
- 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.

IAWC
Docket No. 07-0507
ICC Staff Exhibit 5.0
ICC Schedule 5.2

Transmission/Distribution from Revenue Requirement p. 8 COSS

| | Champaign | Chicago Water | |
|------------------------|-----------|---------------|------------------------------|
| 601 Salaries and Wages | 193,076 | 761,709 | << New adjusted number |
| Mains | 376,820 | 270,921 | |
| Meters | 360,145 | - | |
| Services | 107,659 | 13,531 | |
| Hydrants | 72,365 | 105,932 | |
| Subtotal | 916,989 | 390,384 | |
| Total from 1st DR | 1,110,065 | 1,152,093 | |
| | | | |
| 675 Miscellaneous Exp. | 527,871 | 304,577 | << New adjusted number |
| Mains | 64,998 | 552,838 | |
| Meters | 17,521 | 27,193 | |
| Services | 33,983 | 23,631 | |
| Hydrants | 39,027 | 38,908 | |
| Subtotal | 155,529 | 642,570 | |
| Total from 1st DR | 683,400 | 947,147 | |
| | | | |
| 601&675 Mains | 441,818 | 823,759 | |
| Meters | 377,666 | 27,193 | |
| Services | 141,642 | 37,162 | |
| Hydrants | 111,392 | 144,840 | |

APPENDIX A

Description of COS Study Methodology

Summary

In general, the objectives of a cost of service (“COS”) study are to functionalize a utility's revenue requirement into basic categories and allocate those costs across rate classes to determine each class' cost of service. Rates can then be designed to recover the cost to serve each customer class. In the water industry, embedded cost studies are utilized as the main guide to designing rates unique to each utility.

The development of water rates, in general, involves the following procedures, described in the American Water Works Association ("AWWA"), "Water Rates," Manual M1, p. vii (Fourth Edition, 1991):

- Determination of the total annual revenue requirements for the period in which the rates are to be effective.
- Allocation of the total annual revenue requirements to the basic functional cost components.
- Distribution of the component costs to the various customer classes in accordance with their requirements for service.
- Design of water rates that will recover from each class of customers, within practical limits, the cost to serve that class of customers.

The following report describes the procedures employed in performing the embedded cost of service study for the Company.

Explanation and Definitions

Staff's COS Study uses the Base-Extra Capacity method described in detail in AWWA's “Water Rates”, Manual M1, (Fourth Edition, 1991) pages 11-16. This procedure is a generally accepted and often used method of determining the cost to serve water customers and thus provides the basis of designing rates for a water utility.

The basic breakdown of cost is the functionalization into operational components. For a water utility, the three basic types of costs are: (1) operation and

maintenance ("O&M") expense, (2) depreciation expense, and (3) return on capital investment. This information is normally readily available from the utility's accounting records.

After the costs are functionalized, they are allocated to the following four main components: (1) base costs, (2) extra capacity costs, (3) customer costs, and (4) direct fire protection costs.

- **Base costs** are those costs that tend to vary with the total quantity of water used. These costs also include O&M expenses and capital costs associated with serving customers under average load conditions.
- **Extra capacity costs**, and their associated O&M and capital costs, are costs correlated with meeting usage in excess of average usage. These costs can be further subdivided into costs associated with maximum-day extra usage and maximum-hour extra usage.
- **Customer costs** encompass those expenditures related to serving a customer regardless of that customer's water usage or rate of usage. These contain costs associated with meters, services and other customer related costs.
- **Direct fire protection costs** are directly applicable to the fire protection function.

After costs are properly allocated between cost components, the cost of service for each meter size is determined. The fixed customer cost of service per meter has three basic components:

- **Equivalent meter costs** include those customer costs associated with meters.
- **Equivalent service costs** include those customer costs associated with the service line extended to the customer's meter from the water main that supplies the customers in the area.
- **Other customer costs** are those costs attributed directly to customers, divided by the number of bills to obtain a customer charge per bill. Other customer costs are non-meter size sensitive with each meter size being allocated the same per unit charge, regardless of class (i.e. residential, commercial, industrial etc.). Examples are costs to own and maintain office buildings, billing systems, and other information systems, employees who complete

customer information-related tasks, and insurance on office buildings and employees in those buildings.

Equivalent meters and services is a method of assigning costs based on the size of the meter. Distribution of customer costs by equivalent meter and service ratios recognizes that meter and service costs vary, depending on considerations such as size of service pipe, materials used, locations of meters, and other local characteristics for various sized meters as compared to $\frac{5}{8}$ " meters and services. The number of equivalent meters and services (*i.e.* which is based on meter ratios) assists in allocating costs assigned for recovery in the customer charges. This is necessary to adjust the units of service for each customer class as indexed against the smallest meter size. Therefore, customers are allocated a charge that reflects the costs associated with their particular meter size. Actual cost differentials are taken from the AWWA Water Meters-Selection, Installation, Testing, and Maintenance Manual (M6) (1972), pages 32-33.