

**ILLINOIS COMMERCE COMMISSION**

**DOCKET 09-0319**

**IADC EXHIBIT 8.00R1 (Revised)**

**REBUTTAL TESTIMONY (REVISED) OF  
PAULINE M. AHERN**

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**ILLINOIS-AMERICAN WATER COMPANY**

**December 4, 2009**

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27 Flow Model (“DCF”) and a Risk Premium or Capital Asset Pricing Model  
28 (“CAPM”). I have two concerns with Mr. McNally’s common equity cost rate  
29 determination. First, in his DCF analysis, Mr. McNally relied upon an implied 20-  
30 year forward U.S. Treasury yield in ten years as proxy for growth in Gross  
31 Domestic Product (“GDP”) in the second and third stages of his multi-stage DCF,  
32 rather than an actual projection of GDP growth. Second, in his CAPM analysis,  
33 Mr. McNally relied upon an historical spot 30-year U.S. Treasury bond yield as  
34 the risk-free rate, rather than an actual projection of the 30-year U.S. Treasury  
35 bond yield. In addition his analysis does not include a business and financial risk  
36 adjustment as I discuss in my direct testimony.

37 **IV. DISCOUNTED CASH FLOW ANALYSIS**

38 **Q6. Please discuss Mr. McNally’s implied third-stage DCF growth rate**

39 **A.** Rather than using readily available forecasts of GDP growth, Mr. McNally  
40 calculated an long-term third stage growth rate based upon recent spot yields  
41 (September 2, 2009) on 10-year and 30-year U.S. Treasury bonds and converted  
42 them into an implied 20-year forward U.S. Treasury rate in ten years of 4.54% as  
43 discussed in ICC Staff Exhibit 4.0, lines 168 – 178 on pages 8 and 9. There are  
44 two concerns with this methodology.

45 First, Mr. McNally’s use of recent spot yields on U.S. Treasury securities is  
46 inconsistent with the prospective nature of both the cost of capital and  
47 ratemaking as well as the Efficient Market Hypothesis (“EMH”). Because  
48 forecasts of U.S. Treasury security yields are readily available, their use is not  
49 only consistent with the prospective nature of the cost of capital and ratemaking,  
50 but also consistent with the EMH which, as stated on lines 118 - 120, on pages 5

51 and 6 of IAWC Exhibit 8.00, is the foundation of modern investment theory  
52 (namely that an efficient market is one in which security prices reflect all relevant  
53 information all the time). Investors are aware of all publicly-available information,  
54 including analysts' forecasts of such data as interest rates and earnings per  
55 share ("EPS") growth rates. As shown on Schedule 8.01R1, the September 1,  
56 2009 Blue Chip Financial Forecasts ("Blue Chip") shows that the consensus  
57 expected yields on 10-year and 30-year U.S. Treasury notes (the equivalent to  
58 10-year and 30-year U.S. Treasury bonds) for the fourth calendar quarter 2010  
59 are 4.4% and 5.0%, respectively. Using the formula provided by Mr. McNally on  
60 line 175, page 9 of ICC Staff Exhibit 4.0, an implied 20-year forward U.S.  
61 Treasury rate in ten years based upon the Blue Chip forecasts is 5.70%.

62 Second, Mr. McNally does not utilize readily available GDP growth  
63 forecasts, instead relying upon an "implied" growth rate. As shown on Schedule  
64 8.02R1, the Energy Information Administration ("EIA") forecasts GDP yearly in its  
65 Annual Energy Outlook as of April 2009. In April 2009, it updated its 2009  
66 Outlook to reflect the provisions of the American Recovery and Reinvestment Act  
67 and recent changes in the economic outlook. Schedule 8.02R1 shows third-  
68 stage nominal GDP growth, for year 11 (eleven) onward of 4.92% based he April  
69 2009 EIA update.

70 Both an implied 20-year forward U.S. Treasury rate in ten years of 5.70%  
71 and nominal GDP growth of 4.92% for year eleven onward are significantly  
72 greater than the 4.54% as the third-stage growth rate by Mr. McNally. Utilizing  
73 Mr. McNally's application of the three-stage DCF and the 5.70% growth rate

74 results in DCF estimates of 10.19% and 11.55% for Mr. McNally's Water Group  
75 and Utility Group, respectively. Using the 4.92% growth rate, the DCF estimates  
76 would be 9.59% and 10.99% for the two groups, respectively. All of these DCF  
77 estimates contrast significantly from Mr. McNally's DCF estimates of 9.30% for  
78 his Water Group and 10.72% for the Utility Group.

79 **V. RISK PREMIUM ANALYSIS**

80 **Q7. Mr. McNally utilized a 4.13% September 2, 2009 effective yield on 30-year**  
81 **U.S. Treasury Bonds as the risk-free rate in his risk premium or CAPM**  
82 **analysis. Please comment.**

83 **A.** Just as with Mr. McNally's use of spot, or historical, Treasury Bond (note) yields  
84 to derive an implied forward looking long-term growth rate in his multi-stage DCF  
85 analysis, his use of a spot 30-year U.S. Treasury Bond yield is inconsistent with  
86 both the prospective nature of the cost of capital and ratemaking as well as the  
87 EMH as discussed above. As discussed above, forecast 30-year U.S. Treasury  
88 Bond (note) yields are readily available from the September 1, 2009 Blue Chip  
89 Financial Forecasts shown in Schedule 8.01R1. From this, a forecast 30-year  
90 U.S. Treasury Bond (note) yield of 4.67% can be derived, based upon the  
91 consensus forecast of about 50 economists of the expected yield on 30-year U.S.  
92 Treasury Bonds (notes) for the six calendar quarters ending with the fourth  
93 calendar quarter of 2010 [as shown in note 1 on Schedule 8.04R1]. Utilizing Mr.  
94 McNally's average betas for his Water Group and Utility Group of 0.68 and 0.69,  
95 respectively, as well as the forecasted 4.67% 30-year U.S. Treasury Bond (note)  
96 yield as the risk-free rate, CAPM cost rates are 10.19% and 10.21% respectively  
97 as shown on Schedule 8.04R1.

98 **Q8. What would Mr. McNally's recommended common equity cost rate be if he**  
99 **were to have used the forecasted GDP growth rates of 5.70% and 4.92% as**  
100 **well as the forecasted yield on 30-year U.S. Treasury Bonds (notes) of**  
101 **4.67% discussed above?**

102 **A.** Relying exclusively upon the DCF and CAPM results for his Utility Group as Mr.  
103 McNally has done in arriving at his 10.38% recommended cost rate of common  
104 equity (lines 569 – 570 on page 29 of ICC Staff Exhibit 4.0), common equity cost  
105 rates of 11.55% based upon the 5.70% implied third stage growth rate and  
106 10.99% based upon the 4.92% third stage GDP growth rate are derived as show  
107 on Schedule 8.03R1. Averaging each of these cost rates with the 10.21% risk  
108 premium ("CAPM") cost rate derived on Schedule 8.01R1, results in an average  
109 Utility Group common equity cost rate of: (1) 10.88% ( $10.88\% = (11.55\% +$   
110  $10.21\%) / 2$ ) using the DCF cost rate based upon the 5.70% implied third stage  
111 growth rate; and (2) 10.60% ( $10.60\% = (10.99\% + 10.21\%) / 2$ ) using the 4.92%  
112 third stage GDP growth rate. These common equity cost rates, 10.88% and  
113 10.60%, are applicable to the less business and financial risky Utility Group.  
114 Since Mr. McNally did not reflect IAWC's greater relative business and financial  
115 risks (which were discussed in detail in IAWC Exhibit 8.00, pages 15 – 20, 23, 41  
116 and 42) which will be discussed in detail below, common equity cost rates of  
117 10.88% and 10.60% must be adjusted upward to reflect the IAWC's greater  
118 relative business and financial risk.

119 **Q9. Is there a way to quantify a business risk adjustment due to IAWC's great**  
120 **business risk relative to Mr. McNally's Utility Group?**

121 A. Although there is no direct way to quantify a business risk adjustment for due to  
122 IAWC's greater relative business risk (which is due to regulatory risks specific to  
123 Illinois, the availability and quality of IAWC's water supply, IAWC's concentration  
124 of sales for resale customers as well as its smaller relative size as discussed in  
125 detail at pages 15 - 20 of IAWC Exhibit 8.00), an indication of the magnitude of  
126 such an adjustment for business risk can be derived based upon data contained  
127 in Chapter 7, "Firm Size and Return," from the Ibbotson SBBI 2009 Valuation  
128 Yearbook – Market results for Stocks, Bonds, Bills, and Inflation – 1926 – 2008  
129 ("SBBI"). The determinations are based on the size premia for decile portfolios of  
130 New York Stock Exchange ("NYSE"), American Stock Exchange ("AMEX") and  
131 NASDAQ listed companies for the 1926-2008 period and related data shown on  
132 pages 3 through 12 of Schedule 8.05R1. The average size premium for the  
133 deciles between which Mr. McNally's Utility Group falls has been compared with  
134 the average size premium for the 9<sup>th</sup> decile in which IAWC would fall if its stock  
135 were traded and sold at the average market/book ratio of 119.9% of Mr.  
136 McNally's Utility Group, derived on page 2 of Schedule 8.05R1. As shown on  
137 page 1, the size premium spread between IAWC and Mr. McNally's Utility Group  
138 is 2.03%. Consequently, a business risk adjustment of 2.03% is indicated for  
139 Mr. McNally's Utility Group. However, assuming the extremely conservative  
140 business risk adjustment of just 0.15% (15 basis points), which I utilized in IAWC  
141 Exhibit 8.00 to reflect IAWC's greater business risk, business risk adjusted  
142 common equity cost rates of 11.03% and 10.75% result.<sup>1</sup>

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<sup>1</sup> (11.03% = 10.88% + 0.15%) and (10.75% = 10.60% + 0.15%)

143 **Q10. Is there a way to quantify a financial risk adjustment due to IAWC's greater**  
144 **financial risk relative to Mr. McNally's Utility Group?**

145 **A.** Yes. As discussed in IAWC Exhibit 8.00 at lines 596 – 601 on page 23 and  
146 again at lines 1085 – 1089 on pages 41 and 42, were IAWC to have long-term  
147 debt that was rated by either Standard & Poor's ("S&P") or Moody's, in my  
148 opinion its debt would be rated at the bottom of the BBB / Baa or top of the BB /  
149 Ba bond rating categories. Similarly, in my opinion, IAWC's likely S&P credit  
150 rating would also be at the bottom of the BBB or top of the BB credit rating  
151 category. In contrast, as shown on page 1 of Schedule 8.06R1, the average  
152 S&P and Moody's bond and / or credit ratings of Mr. McNally's Utility Group are  
153 BBB+ and Baa1, at least two notches or more above IAWC's likely bond / credit  
154 ratings. Therefore, IAWC has greater financial / credit risk than the average  
155 company in Mr. McNally's Utility Group. Based upon the basic financial principle  
156 of risk and return, namely, that investors require a greater return for bearing  
157 greater risk, an upward adjustment is required in order for the common equity  
158 cost rate based upon the market data of Mr. McNally's Utility Group to be  
159 reflective of IAWC's greater financial risk. An indication of the required financial  
160 risk adjustment is the bond yield differential between Moody's A and Baa rated  
161 public utility bonds. Because recent yield differentials between Moody's A and  
162 Baa rated public utility bond yields are high by historical standards, it is more  
163 appropriate to rely upon the "normalized" yields differential of approximately 32  
164 basis points  $(0.32\%)^2$  over the most recent twenty-year historical period as

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<sup>2</sup> The midpoint of the average and median yield spreads between Moody's A and Baa public utility bonds, of 0.34% and 0.29%, respectively.  $0.32\% = (0.34\% + 0.29\%) / 2$ .

165 shown on Schedule 8.07R1. Because Mr. McNally's Utility Group has a Moody's  
166 bond rating of Baa1 and an S&P bond rating of BBB+, an adjustment of 21 basis  
167 points (0.21%) two-thirds (2/3) of the 32 basis point spread is warranted to reflect  
168 a Baa3 / BBB- (bottom of the Baa / BBB bond rating category). In addition, an  
169 adjustment of 21 basis points is conservative for two reasons. First, it is based  
170 upon an historical twenty-year period and not upon the most recent monthly yield  
171 differentials. Second, it is based upon the yield differential between the middle of  
172 the A and Baa bond rating categories while it is my opinion that IAWC's bonds  
173 would likely have a low Baa or high Ba bond rating if they were rated by Moody's,  
174 and there is no meaningful data for the yield differential between Baa and Ba  
175 rated public utility bonds.

176 Nevertheless, adding a 21 basis points (0.21%) financial risk  
177 adjustment to the business risk adjusted common equity cost rates of 11.03%  
178 and 10.75% as corrected above, yields business and financial risk adjusted  
179 common equity cost rates of 11.24% and 10.96%, with a midpoint of 11.10%.  
180 In my expert opinion, a common equity cost rate of 11.10% is reasonable,  
181 given current capital market conditions and is therefore appropriately  
182 applicable to IAWC.

183 **VI. RESPONSE TO CRITIQUES OF MS. AHERN'S DIRECT TESTIMONY**

184 **Q11. Mr. McNally criticizes your inclusion of a constant growth DCF in your**  
185 **analysis. Please comment.**

186 **A.** At line 607, page 31 through 647, page 33 of ICC Staff Exhibit 4.0, Mr. McNally  
187 criticizes my inclusion of a constant growth DCF because it is his opinion that the  
188 growth rate used in my application of the constant growth DCF, analysts' EPS

189 forecasted growth, is not appropriate for cost of capital purposes. As discussed  
190 at line 782, page 30 through line 785, page 31 of IAWC Exhibit 8.00, I gave  
191 weight to the results of the quarterly DCF model, as well as multi-stage DCF  
192 models because of the stability and maturity of the water industry and the  
193 regulated utility industry at large. In addition, in my experience, a single-stage  
194 constant growth DCF model is the most widely utilized version of the DCF used  
195 in public utility rate regulation. In my opinion, it is widely utilized because utilities  
196 are generally in the mature stage of their lifecycles and not transitioning from one  
197 growth stage to another. This is especially true for water utilities.

198 All companies, including utilities, typically go through life cycles in their  
199 development, initially progressing through a growth stage, moving onto a  
200 transition stage and finally assuming a steady-state or constant growth state.  
201 However, the U.S. public utility industry is a long-standing industry in the U.S.,  
202 dating back to approximately 1882<sup>3</sup>. The standards of rate of return regulation of  
203 public utilities date back to the previously discussed principles of fair rate of  
204 return established in the Hope<sup>4</sup> and Bluefield<sup>5</sup> decisions of 1944 and 1923,  
205 respectively. Hence, the public utility industry in the U.S. is a stable and mature  
206 industry characterized by the steady-state or constant-growth stage of a multi-  
207 stage DCF model. The economics of the utility industry, including the water utility  
208 industry, include this relative stability and demand maturity. The regulated status

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<sup>3</sup> James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates, 1988, Public Utilities Reports, Inc., Arlington, VA, p. 334.

<sup>4</sup> Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

<sup>5</sup> Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1923).

209 of public utilities, more specifically that their returns on capital investment, i.e.,  
210 rate base, are set through a ratemaking process and not determined in the  
211 competitive markets, as well as the longevity of the public utility industry, all  
212 contribute to the stability and maturity of the industry. Therefore it is entirely  
213 appropriate to utilize the constant growth DCF model for regulatory cost of capital  
214 purposes.

215 Moreover, there is a wealth of empirical and academic literature which  
216 support the superiority of analysts' forecasts of EPS as measures of investor  
217 growth expectations in a DCF analysis. The use of earnings growth rates, i.e.,  
218 earnings expectations, in a DCF provides a better matching between investors'  
219 market appreciation expectations which are implicit in market prices and the  
220 growth rate component of the DCF, because they have a significant influence on  
221 market prices which affect market price appreciation and hence, the "growth"  
222 experienced by investors. This should be evident even to relatively  
223 unsophisticated investors just by listening to financial new reports on radio, TV or  
224 reading the newspapers. In fact, Dr. Morin in his book, New Regulatory Finance,  
225 (2006) states on page 298<sup>6</sup>:

226 Because of the dominance of institutional investors and their  
227 influence on individual investors, analysts' forecasts of long-run  
228 growth rates provide a sound basis for estimating required returns.  
229 Financial analysts exert a strong influence on the expectations of  
230 many investors who do not possess the resources to make their  
231 own forecasts, that is, they are a cause of  $g$ . The accuracy of these  
232 forecasts in the sense of whether they turn out to be correct is not  
233 at issue here, as long as they reflect widely held expectations. As  
234 long as the forecasts are typical and/or influential in that they are  
235 consistent with current stock price levels, they are relevant. The

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<sup>6</sup> Morin 298.

236 use of analysts' forecasts in the DCF model is sometimes  
237 denounced on the grounds that it is difficult to forecast earnings  
238 and dividends for only one year, let alone for longer time periods.  
239 This objection is unfounded, however, because it is present  
240 investor expectations that are being priced; it is the consensus  
241 forecast that is embedded in price and therefore in required return,  
242 and not the future as it will turn out to be.  
243

244 \* \* \*

245 Published studies in the academic literature demonstrate that  
246 growth forecasts made by security analysts represent an  
247 appropriate source of DCF growth rates, are reasonable indicators  
248 of investor expectations and are more accurate than forecasts  
249 based on historical growth. These studies show that investors rely  
250 on analysts' forecasts to a greater extent than on historic data only.  
251

252 In addition, Myron Gordon, the "father" of the standard regulatory version  
253 of the DCF model widely utilized throughout the United States in rate of return  
254 regulation has recognized the significance of analysts' forecasts of growth in EPS  
255 in a speech he gave in March 1990 before the Institute for Quantitative Research  
256 and Finance. He said:

257 We have seen that earnings and growth estimates by security  
258 analysts were found by Malkiel and Cragg to be superior to data  
259 obtained from financial statements for the explanation of variation in  
260 price among common stocks. . . estimates by security analysts  
261 available from sources such as IBES are far superior to the data  
262 available to Malkiel and Cragg. Eq (7) is not as elegant as Eq (4),  
263 but it has a good deal more intuitive appeal. It says that investors  
264 buy earnings, but what they will pay for a dollar of earnings  
265 increases with the extent to which the earnings are reflected in the  
266 dividend or in appreciation through growth.  
267

268 Professor Gordon recognized that total return is largely affected by the  
269 terminal price which is mostly affected by earnings (hence price / earnings  
270 multiples). However, while EPS is the most significant factor influencing market

271 prices, it is by no means the only factor that affects market prices, a fact  
272 recognized by Bonbright with regard to public utilities as discussed previously.

273 Studies performed by Cragg and Malkiel<sup>7</sup> demonstrate that analysts'  
274 forecasts are superior to historical growth rate extrapolations. Some question the  
275 accuracy of analysts' forecast of EPS growth, however, it does not really matter  
276 what the level of accuracy of those analysts' forecasts is well after the fact. What  
277 is important is that they influence investors and hence the market prices they  
278 pay. Moreover, there is no empirical evidence that investors, consistent with the  
279 EMH, would discount or disregard analysts' estimates of growth in earnings per  
280 share. The "semistrong" form of the EMH which is generally held to be true  
281 indicates that all perceived risks are taken into account by investors in the prices  
282 they pay for securities and investors are aware of all publicly-available  
283 information, including bond ratings, discussions about companies by bond rating  
284 agencies and investment analysts, as well as the many analysts' earnings growth  
285 forecasts available. Investors are also aware of the accuracy of past forecasts,  
286 whether for EPS or DPS growth or for interest rates levels. Investors have no  
287 prior knowledge of the accuracy of any forecasts available at the time they make  
288 their investment decisions, as that accuracy only becomes known after some  
289 future period of time has elapsed. Therefore, consistent with the EMH (upon  
290 which the cost of common equity models all witness in this proceeding utilize are  
291 based), since investors have such analysts' earnings growth rate projections  
292 available to them and investors are aware of the accuracy of such projections,

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<sup>7</sup> John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

293 analysts earnings projections should be relied upon in a cost of common equity  
294 analysis.

295 In addition to the empirical and academic support discussed previously  
296 regarding the superiority of analysts' EPS growth forecasts, in response to  
297 concern about the use of analysts' forecasts, Dr. Burton G. Malkiel, the  
298 Chemical Bank Chairman's Professor of Economics at Princeton University and  
299 author of the widely read national bestseller book on investing entitled, "A  
300 Random Walk Down Wall Street," before the Public Service Commission of  
301 South Carolina, in November 2002 affirmed his belief in the superiority of  
302 analysts' earnings forecasts when he testified:

303 With all the publicity given to tainted analysts' forecasts and  
304 investigations instituted by the New York Attorney General, the  
305 National Association of Securities Dealers, and the Securities &  
306 Exchange Commission, I believe the upward bias that existed in the  
307 late 1990s has indeed diminished. In summary, I believe that  
308 current analysts' forecasts are more reliable than they were during  
309 the late 1990s. Therefore, analysts' forecasts remain the proper  
310 tool to use in performing a Gordon Model DCF analysis. (Rebuttal  
311 testimony, South Carolina Electric and Gas Co., pp. 16-17, Docket  
312 No. 2002-223-E)

313

314 Further confirmation that Professor Malkiel's view is correct can be found  
315 in the steps taken by the U.S. Securities and Exchange Commission ("SEC") to  
316 remove any conflict of interest regarding security analysts' EPS forecasts. In her  
317 speech given on May 8, 2002, Lori Richards, Director, Office of Compliance  
318 Inspections and Examinations noted that:

319 . . . the SEC approved rule changes proposed by the National  
320 Association of Securities Dealers, Inc. and the new York Stock

321 Exchange, Inc. regarding analyst conflicts of interest. These rules  
322 reflect a dramatic change in the way analysts are regulated.

323 The new rules include:

- 324 1) Limitations on the Relationships and Communications Between  
325 Investment Banking and Research Analysts.
- 326 2) Analyst Compensation Prohibitions.
- 327 3) Firm Compensation.
- 328 4) Promises of Favorable Research are Prohibited.
- 329 5) Restrictions on Personal Trading by Analysts.
- 330 6) Disclosures of Financial Interests in Covered Companies.
- 331 7) Disclosures in Research Reports Regarding the Firm's Ratings.
- 332 8) Disclosures During Public Appearances by Analysts.

333

334 Ms. Richards concluded her speech with:

335 This is a time of change for research analysts. In some quarters,  
336 they have been vilified. It's important to remember that they  
337 perform an important service - - - and they need to do their work in  
338 an environment free from conflicts and biases. Investor trust is too  
339 critical to their work to allow them to be compromised. The new  
340 SRO rules approved by the SEC today, and the other steps we are  
341 taking, go a long way to helping analysts regain their  
342 independence.

343

344 Additionally, on April 28, 2003, the U.S. Securities & Exchange  
345 Commission issued the following: "Statement Regarding Global Settlement  
346 Related to Analyst Conflicts of Interest", which stated, in part:

347 The settlements include important structural requirements designed  
348 to insulate research analysts from pressures by investment  
349 banking...

350

351 Considering that April 2003 was more than six years ago, investors have  
352 been fully aware since then of the steps that have been taken to eliminate and  
353 prevent analysts' conflict of interest. In view of the foregoing, it is apparent that

354 analysts' forecasts of earnings remain the best predictor of growth for use in the  
355 DCF model

356 **Q12. Mr. McNally also criticizes analysts' EPS growth forecasts as being**  
357 **unsustainable and above average growth on lines 621 – 622 of page 32 and**  
358 **on lines 129 – 143 on page 7 of ICC Staff Exhibit 4.0. Please comment.**

359 **A.** Mr. McNally's criticism is based upon a comparison of analysts' EPS growth  
360 forecasts with expected growth in the economy, as measured by GDP, of  
361 approximately 4.5% as stated on lines 130 -132 on page 7 of ICC Staff Exhibit  
362 4.0. However, the average growth in the U.S. economy is just that, an average.  
363 Some companies will grow faster and some will grow more slowly. That the  
364 growth in nominal GDP is an average is demonstrated on Schedule 8.08R1  
365 which shows the nominal GDP for the years 1998-2007 (the latest available) as a  
366 whole and by industry. From 2006-2007, nominal GDP grew 4.90% and 5.23%  
367 on average for the ten years ending 2007. Clearly, then, there is no evidence  
368 from GDP growth rate data that going forward the growth in each individual  
369 component of GDP can be expected to converge toward GDP growth as a whole.

370 In addition, implied in Mr. McNally's criticism that analysts' EPS growth  
371 forecasts are above average is the presumption that a DCF analysis utilizing  
372 analysts' EPS growth estimates as the growth rate would be biased upward.  
373 Eugene G. Fama and Kenneth R. French have concluded, based upon a review  
374 of average stock returns from 1951 to 2000 relative to expected returns using the  
375 DCF model including earnings growth rates, that the results from the earnings

376 growth based DCF model are actually biased downward.<sup>8</sup> They state on pages  
377 643 and 658 (pages 8 and 23 of Schedule 8.09R1):

378 The 1951 to 2000 estimates of the expected stock return and the  
379 equity premium from the earnings growth model, 6.51 percent and  
380 4.32 percent, are higher than for the dividend growth model. But  
381 they are well below the estimates from the average return, 9.62  
382 percent and 7.43 percent. . . .If we are interested in the  
383 unconditional expected annual simple return, the estimates for  
384 1951 to 2000 from fundamentals are downward biased. The bias is  
385 rather large when the average growth rate of dividends is used to  
386 estimate the expected rate of capital gain, but it is small for the  
387 average growth rate of earnings.

388  
389 In view of all the foregoing, analyst's forecasts of EPS growth should  
390 receive substantial weight when estimating today's market cost of capital, which  
391 is why it is entirely appropriate to include a constant growth DCF model when  
392 estimating the cost of common equity for IAWC.

393 **Q13. Mr. McNally also criticizes your business risk adjustment and tacitly**  
394 **criticizes your financial risk adjustment. Please comment.**

395 **A.** Mr. McNally mischaracterizes my direct testimony in several respects. First, on  
396 page 33 of ICC Staff Exhibit 4.0, at lines 651 – 653 Mr. McNally states: “Ms.  
397 Ahern’s business risk adjustment is based on the difference in size between the  
398 market values of her proxy groups and a hypothetical estimate of what IAWC’s  
399 market value ‘would’ allegedly be if it were traded.” It is clear from IAWC Exhibit  
400 8.00, at lines 1070 -1079 on page 41, that my 0.15% (15 basis points) business  
401 risk adjustment reflects “IAWC’s greater business risk due to not only its small  
402 size but also due to the regulatory risk associated with operating in Illinois, the

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<sup>8</sup> Eugene F. Fama & Kenneth R. French, “The Equity Premium”, *The Journal of Finance*, Vol. 57, No. 2 (Apr., 2002), pp. 637 – 659.

403 availability and quality of its water supply, and its concentration of sales for resale  
404 customers, coupled with its need to replace ongoing infrastructure.” Moreover,  
405 estimating IAWC’s market capitalization if its common stock were publicly traded  
406 based upon the market-to-book ratios of the companies in my two proxy groups  
407 is entirely appropriate since it is the market data of those companies upon which  
408 my recommended common equity cost rate is based before adjustment for  
409 IAWC’s unique business and financial risks. In other words, if the market prices  
410 of the proxy groups are appropriate for cost of capital estimation, those same  
411 market prices are appropriate for estimating IAWC’s market capitalization if its  
412 common stock were publicly traded.

413 Second, at lines 653 – 655 on page 33 of ICC Staff Exhibit, he states: “A  
414 size-based risk premium for a utility is contrary to financial theory and  
415 unsupported by empirical studies.” This is also incorrect as theoretical financial  
416 support can be found in Brigham<sup>9</sup> who states:

417 A number of researchers have observed that portfolios of small-  
418 firms have earned consistently higher average returns than those of  
419 large-firms stocks; this is called “small-firm effect.” On the surface,  
420 it would seem to be advantageous to the small firms to provide  
421 average returns in a stock market that are higher than those of  
422 larger firms. In reality, it is bad news for the small firm; what *the*  
423 *small-firm effect means is that the capital market demands higher*  
424 *returns on stocks of small firms than on otherwise similar stocks of*  
425 *the large firms.* (italics added)  
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<sup>9</sup> Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989) 623.

427                   In addition, supporting empirical studies are discussed at line 1049, page  
428 40 through line 1079, page 41 and Schedule 8.01, pages 5 – 17 of IAWC Exhibit  
429 8.00.

430                   Finally, Mr. McNally states at lines 679 – 681 on page 34: “Likewise,  
431 IAWC is also a wholly-owned subsidiary within a much larger organization.  
432 Therefore, Ms. Ahern’s inclusion of [a] business risk adjustment based on the  
433 size of IAWC is unwarranted.” This, too, is incorrect. IAWC’s position as a  
434 “wholly-owned subsidiary within a much larger organization” is irrelevant to the  
435 determination of the cost of common equity for IAWC, which must reflect the risk  
436 of investing in the common stock of IAWC. The cost of common equity and the  
437 authorized rate of return on common equity based thereon must reflect the risks  
438 which the shareholder / shareholders in the regulated utility bear and thus require  
439 in order to invest in that utility. One of those risks is that of small size as  
440 discussed in detail at lines 392 - 518 on pages 15 - 20 of IAWC Exhibit 8.00.  
441 What Mr. McNally appears to ignore is that it is the use of the funds, and not the  
442 source of the funds, which gives rise to risk and the risk-appropriate rate of  
443 return.

444                   It is the rate base of IAWC, and IAWC alone, to which the overall rate of  
445 return set in this proceeding will be applied. Hence, IAWC should be evaluated  
446 as a stand alone utility. To do otherwise would be discriminatory and  
447 confiscatory. It is a generally-accepted financial principle that the risk of any  
448 investment is directly related to the assets in which the capital is invested. Just  
449 as with any other utility under its jurisdiction, the Commission must focus on the

450 risk and return on the common equity investment in IAWC's jurisdictional rate  
451 base because it is IAWC's rates alone which will be set in this proceeding and it  
452 is IAWC's rate base alone which serves its ratepayers.

453 The risk of investment in IAWC's rate base is independent of the  
454 ownership or loaners of the capital used to finance that rate base. As previously  
455 stated, it is a basic financial principle that it is the use of the funds invested which  
456 gives rise to the risk of the investment, not the source of the funds. As Richard A.  
457 Brealey and Stewart C. Myers state in Principles of Corporate Finance<sup>10</sup>:

458 *The true cost of capital depends on the use to which the capital is*  
459 *put.*

\* \* \*

460 ***Each project should be evaluated at its own opportunity cost***  
461 ***of capital; the true cost of capital depends on the use to which***  
462 ***the capital is put.*** (italics and bold in original)  
463  
464

465 Hence, IAWC must be viewed on its own merits, regardless of the source  
466 of its equity capital, i.e., its parent, American Water Works Company, Inc..  
467 Therefore, the specific risk of investment in IAWC, including its small size as well  
468 as the other unique risks to IAWC discussed in IAWC Exhibit 8.00, and its  
469 greater financial risk, relative to the proxy water and utility companies utilized to  
470 estimate the cost rate of common equity capital by all witnesses in this  
471 proceeding, is most important in order to establish an appropriate common equity  
472 cost rate.

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<sup>10</sup> Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, McGraw-Hill Book Company, 1988, pp. 173 and 198.

473 For example, if one were to inherit money, free of charge, and then invest  
474 it in a given utility's common stock, one would require a rate of return on that  
475 stock commensurate with the risks to which that common stock investment is  
476 exposed. It would be illogical to require a zero return on one's investment in the  
477 utility's common stock just because there was zero cost in acquiring the capital,  
478 i.e., inherited money, which was the source of the investment. Even the Internal  
479 Revenue Service places the cost basis of an inheritor, on the market value of the  
480 inherited common stock on the date of death of the person who willed the stock  
481 to the inheritor and not on zero cost to the inheritor. As Bluefield<sup>11</sup> so clearly  
482 states:

483 A public utility is entitled to such rates as will permit it to earn a  
484 return on the value of the property which it employs for the  
485 convenience of the public equal to that generally being made at the  
486 same time and in the same general part of the country on  
487 investments in other business undertakings which are attended by  
488 corresponding risks and uncertainties; . . .

489 Bluefield is clear then, that it is the "risks and uncertainties" surrounding  
490 the property employed for the "convenience of the public" which determines the  
491 appropriate level of rates and not the source of the capital financing that property.  
492 In this proceeding, the property employed "for the convenience of the public" is  
493 the rate base of IAWC. Therefore, it is the total investment risk of IAWC and its  
494 rate base that is relevant to the determination of a cost rate of common equity to  
495 be applied to the common equity financed portion of that rate base.  
496

497 In addition, Mr. McNally notes that the SBBI study upon which the  
498 business risk adjustment of 0.15% (15 basis points) was based "did not consider

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<sup>11</sup> Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 252 U.S. 679 (1922).

499 any other alleged risk factors.” As stated in IAWC Exhibit 8.00 at line 456 on  
500 page 17 through line 457 on page 18, all else equal, size has a bearing on risk.  
501 Assuming that all else is equal or at least similar between IAWC and the proxy  
502 groups, IAWC’s smaller size is a risk factor which must be reflected in any  
503 common equity cost rate based upon the market data of the much larger, less  
504 business risky proxy groups. To reiterate, the SBBI study was used as an  
505 indication of a business risk adjustment to reflect IAWC’s greater business risk  
506 relative to the proxy groups for not only it’s smaller size, but the unique risks it  
507 experiences as detailed at line 392 on page 15 through line 449 on page 17  
508 because “there is no direct way to quantify a business risk adjustment due to ....  
509 regulatory risks specific to Illinois, the availability and quality of IAWC’s water  
510 supply, IAWC’s concentration of sales for resale customers.” Therefore, contrary  
511 to Mr. McNally’s assertions, the business risk adjustment does not exclusively  
512 reflect IAWC’s smaller size relative to the proxy groups. Consequently, Mr.  
513 McNally is also incorrect when he states that it “is already reflected in the 30  
514 basis point ‘financial risk’ adjustment” on lines 691 – 692 on page 35 of ICC Staff  
515 Exhibit 4.0. Moreover, my opinion that IAWC’s bonds, if rated by Moody’s or  
516 S&P, would be at the bottom of the Baa / BBB category or possibly at the top of  
517 the Ba / BB category as discussed at line 595 – 601 of IAWC Exhibit 8.00, is  
518 based upon the financial metrics of IAWC alone and therefore, does not reflect  
519 IAWC’s smaller size relative to the proxy groups.

520 **Q14. Does this conclude your rebuttal testimony?**

521 **A.** Yes, it does.