

ILLINOIS COMMERCE COMMISSION

DOCKET 09-0319

IAWC EXHIBIT 8.00R1

**REBUTTAL TESTIMONY OF
PAULINE M. AHERN**

ILLINOIS-AMERICAN WATER COMPANY

OCTOBER 21, 2009

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1 REBUTTAL TESTIMONY
2 OF
3 PAULINE M. AHERN
4
5

6 I. WITNESS INTRODUCTION

7 **Q1. Please state your name and business address.**

8 **A.** My name is Pauline M. Ahern and I am a Principal of AUS Consultants. My
9 business address is 155 Gaither Drive, Suite A, Mt. Laurel, New Jersey 08054.

10 **Q2. Are you the same Pauline M. Ahern who previously filed testimony in this**
11 **proceeding?**

12 **A.** Yes I am.

13 II. PURPOSE OF REBUTTAL TESTIMONY

14 **Q3. What is the purpose of your rebuttal testimony?**

15 **A.** The purpose of my Rebuttal Testimony is to respond to the Direct Testimony
16 submitted in this proceeding by ICC Staff Witness Michael McNally. I will also
17 respond to Mr. McNally's response to IAWC Exhibit 8.000, my direct testimony.

18 **Q4. Have you prepared schedules which support your recommended common**
19 **equity cost rate?**

20 **A.** Yes, I have. They have been marked for identification as Schedules 8.01R1
21 through 8.09R1.

22 III. GENERAL RESPONSE TO DIRECT TESTIMONY OF MR. MCNALLY

23 **Q5. Please comment on the Direct Testimony of Staff witness McNally.**

24 **A.** In ICC Staff Exhibit 4.0, his direct testimony, Mr. McNally recommends a
25 common equity cost rate of 10.38% for Illinois American Water Company
26 ("IAWC" or the Company) based upon the use of a multi-stage Discounted Cash

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 5.62%.

62 Second, Mr. McNally's 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 5.62%
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 5.62% and 4.92%

74 growth rates result in DCF estimates of 10.13% and 11.49% for Mr. McNally's
75 Water Group and Utility Group, respectively, which contrast significantly from Mr.
76 McNally's DCF estimates of 9.30% for his Water Group and 10.72% for the Utility
77 Group.

78 V. RISK PREMIUM ANALYSIS

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

82 **A.** Just as with Mr. McNally's use of spot, or historical, Treasury Bond (note) yields
83 to derive an implied forward looking long-term growth rate in his multi-stage DCF
84 analysis, his use of a spot 30-year U.S. Treasury Bond yield is inconsistent with
85 both the prospective nature of the cost of capital and ratemaking as well as the
86 EMH as discussed above. As discussed above, forecast 30-year U.S. Treasury
87 Bond (note) yields are readily available from the September 1, 2009 Blue Chip
88 Financial Forecasts shown in Schedule 8.01R1. From this, a forecast 30-year
89 U.S. Treasury Bond (note) yield of 4.67% can be derived, based upon the
90 consensus forecast of about 50 economists of the expected yield on 30-year U.S.
91 Treasury Bonds (notes) for the six calendar quarters ending with the fourth
92 calendar quarter of 2010 [as shown in note 1 on Schedule 8.04R1]. Utilizing Mr.
93 McNally's average betas for his Water Group and Utility Group of 0.68 and 0.69,
94 respectively, as well as the forecasted 4.67% 30-year U.S. Treasury Bond (note)
95 yield as the risk-free rate, CAPM cost rates are 10.13% and 10.21% respectively
96 as shown on Schedule 8.04R1.

97 **Q8. What would Mr. McNally's recommended common equity cost rate be if he**
98 **were to have used the forecasted GDP growth rates of 5.49% and 4.92% as**
99 **well as the forecasted yield on 30-year U.S. Treasury Bonds (notes) of**
100 **4.67% discussed above?**

101 **A.** Relying exclusively upon the DCF and CAPM results for his Utility Group as Mr.
102 McNally has done in arriving at his 10.38% recommended cost rate of common
103 equity (lines 569 – 570 on page 29 of ICC Staff Exhibit 4.0), common equity cost
104 rates of 11.49% based upon the 5.62% implied third stage growth rate and
105 10.99% based upon the 4.92% third stage GDP growth rate are derived as show
106 on Schedule 8.03R1. Averaging each of these cost rates with the 10.21% risk
107 premium ("CAPM") cost rate derived on Schedule 8.01R1, results in an average
108 Utility Group common equity cost rate of: (1) 10.85% ($10.85\% = (11.49\% +$
109 $10.21\%) / 2$) using the DCF cost rate based upon the 5.62% implied third stage
110 growth rate; and (2) 10.60% ($10.60\% = (10.99\% + 10.21\%) / 2$) using the 4.92%
111 third stage GDP growth rate. These common equity cost rates, 10.85% and
112 10.60%, are applicable to the less business and financial risky Utility Group.
113 Since Mr. McNally did not reflect IAWC's greater relative business and financial
114 risks (which were discussed in detail in IAWC Exhibit 8.00, pages 15 – 20, 23, 41
115 and 42) which will be discussed in detail below, common equity cost rates of
116 10.85% and 10.60% must be adjusted upward to reflect the IAWC's greater
117 relative business and financial risk.

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

120 A. Although there is no direct way to quantify a business risk adjustment for due to
121 IAWC's greater relative business risk (which is due to regulatory risks specific to
122 Illinois, the availability and quality of IAWC's water supply, IAWC's concentration
123 of sales for resale customers as well as its smaller relative size as discussed in
124 detail at pages 15 - 20 of IAWC Exhibit 8.00), an indication of the magnitude of
125 such an adjustment for business risk can be derived based upon data contained
126 in Chapter 7, "Firm Size and Return," from the Ibbotson SBBI 2009 Valuation
127 Yearbook – Market results for Stocks, Bonds, Bills, and Inflation – 1926 – 2008
128 ("SBBI"). The determinations are based on the size premia for decile portfolios of
129 New York Stock Exchange ("NYSE"), American Stock Exchange ("AMEX") and
130 NASDAQ listed companies for the 1926-2008 period and related data shown on
131 pages 3 through 12 of Schedule 8.05R1. The average size premium for the
132 deciles between which Mr. McNally's Utility Group falls has been compared with
133 the average size premium for the 9th decile in which IAWC would fall if its stock
134 were traded and sold at the average market/book ratio of 119.9% of Mr.
135 McNally's Utility Group, derived on page 2 of Schedule 8.05R1. As shown on
136 page 1, the size premium spread between IAWC and Mr. McNally's Utility Group
137 is 2.03%. Consequently, a business risk adjustment of 2.03% is indicated for Mr.
138 McNally's Utility Group. However, assuming the extremely conservative business
139 risk adjustment of just 0.15% (15 basis points), which I utilized in IAWC Exhibit
140 8.00 to reflect IAWC's greater business risk, business risk adjusted common
141 equity cost rates of 11.00% and 10.75% result.¹

¹ (11.00% = 10.85% + 0.15%) and (10.75% = 10.60% + 0.15%)

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

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

² 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. $0.32\% = (0.34\% + 0.29\%) / 2$.

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

175 Nevertheless, adding a 21 basis points (0.21%) financial risk adjustment
176 to the business risk adjusted common equity cost rates of 11.00% and 10.75%
177 as corrected above, yields business and financial risk adjusted common equity
178 cost rates of 11.21% and 10.96%, with a midpoint of 11.08%.

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

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

182 **A.** At line 607, page 31 through 647, page 33 of ICC Staff Exhibit 4.0, Mr. McNally
183 criticizes my inclusion of a constant growth DCF because it is his opinion that the
184 growth rate used in my application of the constant growth DCF, analysts' EPS
185 forecasted growth, is not appropriate for cost of capital purposes. As discussed
186 at line 782, page 30 through line 785, page 31 of IAWC Exhibit 8.00, I gave
187 weight to the results of the quarterly DCF model, as well as multi-stage DCF

188 models because of the stability and maturity of the water industry and the
189 regulated utility industry at large. In addition, in my experience, a single-stage
190 constant growth DCF model is the most widely utilized version of the DCF used
191 in public utility rate regulation. In my opinion, it is widely utilized because utilities
192 are generally in the mature stage of their lifecycles and not transitioning from one
193 growth stage to another. This is especially true for water utilities.

194 All companies, including utilities, typically go through life cycles in their
195 development, initially progressing through a growth stage, moving onto a
196 transition stage and finally assuming a steady-state or constant growth state.
197 However, the U.S. public utility industry is a long-standing industry in the U.S.,
198 dating back to approximately 1882³. The standards of rate of return regulation of
199 public utilities date back to the previously discussed principles of fair rate of
200 return established in the Hope⁴ and Bluefield⁵ decisions of 1944 and 1923,
201 respectively. Hence, the public utility industry in the U.S. is a stable and mature
202 industry characterized by the steady-state or constant-growth stage of a multi-
203 stage DCF model. The economics of the utility industry, including the water utility
204 industry, include this relative stability and demand maturity. The regulated status
205 of public utilities, more specifically that their returns on capital investment, i.e.,
206 rate base, are set through a ratemaking process and not determined in the
207 competitive markets, as well as the longevity of the public utility industry, all

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

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

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

208 contribute to the stability and maturity of the industry. Therefore it is entirely
209 appropriate to utilize the constant growth DCF model for regulatory cost of capital
210 purposes.

211 Moreover, there is a wealth of empirical and academic literature which
212 support the superiority of analysts' forecasts of EPS as measures of investor
213 growth expectations in a DCF analysis. The use of earnings growth rates, i.e.,
214 earnings expectations, in a DCF provides a better matching between investors'
215 market appreciation expectations which are implicit in market prices and the
216 growth rate component of the DCF, because they have a significant influence on
217 market prices which affect market price appreciation and hence, the "growth"
218 experienced by investors. This should be evident even to relatively
219 unsophisticated investors just by listening to financial new reports on radio, TV or
220 reading the newspapers. In fact, Dr. Morin in his book, New Regulatory Finance,
221 (2006) states on page 298⁶:

222 Because of the dominance of institutional investors and their
223 influence on individual investors, analysts' forecasts of long-run
224 growth rates provide a sound basis for estimating required returns.
225 Financial analysts exert a strong influence on the expectations of
226 many investors who do not possess the resources to make their
227 own forecasts, that is, they are a cause of g . The accuracy of these
228 forecasts in the sense of whether they turn out to be correct is not
229 at issue here, as long as they reflect widely held expectations. As
230 long as the forecasts are typical and/or influential in that they are
231 consistent with current stock price levels, they are relevant. The
232 use of analysts' forecasts in the DCF model is sometimes
233 denounced on the grounds that it is difficult to forecast earnings
234 and dividends for only one year, let alone for longer time periods.
235 This objection is unfounded, however, because it is present
236 investor expectations that are being priced; it is the consensus

⁶ Morin 298.

237 forecast that is embedded in price and therefore in required return,
238 and not the future as it will turn out to be.
239

240 * * *

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

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

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

264 Professor Gordon recognized that total return is largely affected by the
265 terminal price which is mostly affected by earnings (hence price / earnings
266 multiples). However, while EPS is the most significant factor influencing market
267 prices, it is by no means the only factor that affects market prices, a fact
268 recognized by Bonbright with regard to public utilities as discussed previously.

269 Studies performed by Cragg and Malkiel⁷ demonstrate that analysts'
270 forecasts are superior to historical growth rate extrapolations. Some question the
271 accuracy of analysts' forecast of EPS growth, however, it does not really matter
272 what the level of accuracy of those analysts' forecasts is well after the fact. What
273 is important is that they influence investors and hence the market prices they
274 pay. Moreover, there is no empirical evidence that investors, consistent with the
275 EMH, would discount or disregard analysts' estimates of growth in earnings per
276 share. The "semistrong" form of the EMH which is generally held to be true
277 indicates that all perceived risks are taken into account by investors in the prices
278 they pay for securities and investors are aware of all publicly-available
279 information, including bond ratings, discussions about companies by bond rating
280 agencies and investment analysts, as well as the many analysts' earnings growth
281 forecasts available. Investors are also aware of the accuracy of past forecasts,
282 whether for EPS or DPS growth or for interest rates levels. Investors have no
283 prior knowledge of the accuracy of any forecasts available at the time they make
284 their investment decisions, as that accuracy only becomes known after some
285 future period of time has elapsed. Therefore, consistent with the EMH (upon
286 which the cost of common equity models all witness in this proceeding utilize are
287 based), since investors have such analysts' earnings growth rate projections
288 available to them and investors are aware of the accuracy of such projections,
289 analysts earnings projections should be relied upon in a cost of common equity
290 analysis.

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

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

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

309
310 Further confirmation that Professor Malkiel's view is correct can be found
311 in the steps taken by the U.S. Securities and Exchange Commission ("SEC") to
312 remove any conflict of interest regarding security analysts' EPS forecasts. In her
313 speech given on May 8, 2002, Lori Richards, Director, Office of Compliance
314 Inspections and Examinations noted that:

315 . . . the SEC approved rule changes proposed by the National
316 Association of Securities Dealers, Inc. and the New York Stock
317 Exchange, Inc. regarding analyst conflicts of interest. These rules
318 reflect a dramatic change in the way analysts are regulated.

319 The new rules include:

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

329

330 Ms. Richards concluded her speech with:

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

339

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

343 The settlements include important structural requirements designed
344 to insulate research analysts from pressures by investment
345 banking...

346

347 Considering that April 2003 was more than six years ago, investors have
348 been fully aware since then of the steps that have been taken to eliminate and
349 prevent analysts' conflict of interest. In view of the foregoing, it is apparent that
350 analysts' forecasts of earnings remain the best predictor of growth for use in the
351 DCF model

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

355 **A.** Mr. McNally's criticism is based upon a comparison of analysts' EPS growth
356 forecasts with expected growth in the economy, as measured by GDP, of
357 approximately 4.5% as stated on lines 130 -132 on page 7 of ICC Staff Exhibit
358 4.0. However, the average growth in the U.S. economy is just that, an average.
359 Some companies will grow faster and some will grow more slowly. That the
360 growth in nominal GDP is an average is demonstrated on Schedule 8.08R1
361 which shows the nominal GDP for the years 1998-2007 (the latest available) as a
362 whole and by industry. From 2006-2007, nominal GDP grew 4.90% and 5.23%
363 on average for the ten years ending 2007. Clearly, then, there is no evidence
364 from GDP growth rate data that going forward the growth in each individual
365 component of GDP can be expected to converge toward GDP growth as a whole.

366 In addition, implied in Mr. McNally's criticism that analysts' EPS growth
367 forecasts are above average is the presumption that a DCF analysis utilizing
368 analysts' EPS growth estimates as the growth rate would be biased upward.
369 Eugene G. Fama and Kenneth R. French have concluded, based upon a review
370 of average stock returns from 1951 to 2000 relative to expected returns using the
371 DCF model including earnings growth rates, that the results from the earnings
372 growth based DCF model are actually biased downward.⁸ They state on pages
373 643 and 658 (pages 8 and 23 of Schedule 8.09R1):

⁸ Eugene F. Fama & Kenneth R. French, "The Equity Premium", *The Journal of Finance*, Vol. 57, No. 2

374 The 1951 to 2000 estimates of the expected stock return and the
375 equity premium from the earnings growth model, 6.51 percent and
376 4.32 percent, are higher than for the dividend growth model. But
377 they are well below the estimates from the average return, 9.62
378 percent and 7.43 percent. . . .If we are interested in the
379 unconditional expected annual simple return, the estimates for
380 1951 to 2000 from fundamentals are downward biased. The bias is
381 rather large when the average growth rate of dividends is used to
382 estimate the expected rate of capital gain, but it is small for the
383 average growth rate of earnings.

384
385 In view of all the foregoing, analyst's forecasts of EPS growth should
386 receive substantial weight when estimating today's market cost of capital, which
387 is why it is entirely appropriate to include a constant growth DCF model when
388 estimating the cost of common equity for IAWC.

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

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

(Apr., 2002), pp. 637 – 659.

402 based upon the market-to-book ratios of the companies in my two proxy groups
403 is entirely appropriate since it is the market data of those companies upon which
404 my recommended common equity cost rate is based before adjustment for
405 IAWC's unique business and financial risks. In other words, if the market prices
406 of the proxy groups are appropriate for cost of capital estimation, those same
407 market prices are appropriate for estimating IAWC's market capitalization if its
408 common stock were publicly traded.

409 Second, at lines 653 – 655 on page 33 of ICC Staff Exhibit, he states: “A
410 size-based risk premium for a utility is contrary to financial theory and
411 unsupported by empirical studies.” This is also incorrect as theoretical financial
412 support can be found in Brigham⁹ who states:

413 A number of researchers have observed that portfolios of small-
414 firms have earned consistently higher average returns than those of
415 large-firms stocks; this is called “small-firm effect.” On the surface,
416 it would seem to be advantageous to the small firms to provide
417 average returns in a stock market that are higher than those of
418 larger firms. In reality, it is bad news for the small firm; what *the*
419 *small-firm effect means is that the capital market demands higher*
420 *returns on stocks of small firms than on otherwise similar stocks of*
421 *the large firms.* (italics added)
422

423 In addition, supporting empirical studies are discussed at line 1049, page
424 40 through line 1079, page 41 and Schedule 8.01, pages 5 – 17 of IAWC Exhibit
425 8.00.

426 Finally, Mr. McNally states at lines 679 – 681 on page 34: “Likewise,
427 IAWC is also a wholly-owned subsidiary within a much larger organization.

⁹ Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989) 623.

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

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

449 The risk of investment in IAWC's rate base is independent of the
450 ownership or loaners of the capital used to finance that rate base. As previously

451 stated, it is a basic financial principle that it is the use of the funds invested which
452 gives rise to the risk of the investment, not the source of the funds. As Richard A.
453 Brealey and Stewart C. Myers state in Principles of Corporate Finance¹⁰:

454 *The true cost of capital depends on the use to which the capital is*
455 *put.*

456 * * *

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

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

469 For example, if one were to inherit money, free of charge, and then invest
470 it in a given utility's common stock, one would require a rate of return on that
471 stock commensurate with the risks to which that common stock investment is
472 exposed. It would be illogical to require a zero return on one's investment in the
473 utility's common stock just because there was zero cost in acquiring the capital,
474 i.e., inherited money, which was the source of the investment. Even the Internal

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

475 Revenue Service places the cost basis of an inheritor, on the market value of the
476 inherited common stock on the date of death of the person who willed the stock
477 to the inheritor and not on zero cost to the inheritor. As Bluefield¹¹ so clearly
478 states:

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

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

493 In addition, Mr. McNally notes that the SBBI study upon which the
494 business risk adjustment of 0.15% (15 basis points) was based “did not consider
495 any other alleged risk factors.” As stated in IAWC Exhibit 8.00 at line 456 on
496 page 17 through line 457 on page 18, all else equal, size has a bearing on risk.
497 Assuming that all else is equal or at least similar between IAWC and the proxy
498 groups, IAWC’s smaller size is a risk factor which must be reflected in any
499 common equity cost rate based upon the market data of the much larger, less
500 business risky proxy groups. To reiterate, the SBBI study was used as an

¹¹ Bluefield Water Works Improvement Co. v. Public Serv. Comm’n, 252 U.S. 679 (1922).

501 indication of a business risk adjustment to reflect IAWC's greater business risk
502 relative to the proxy groups for not only it's smaller size, but the unique risks it
503 experiences as detailed at line 392 on page 15 through line 449 on page 17
504 because "there is no direct way to quantify a business risk adjustment due to
505 regulatory risks specific to Illinois, the availability and quality of IAWC's water
506 supply, IAWC's concentration of sales for resale customers." Therefore, contrary
507 to Mr. McNally's assertions, the business risk adjustment does not exclusively
508 reflect IAWC's smaller size relative to the proxy groups. Consequently, Mr.
509 McNally is also incorrect when he states that it "is already reflected in the 30
510 basis point 'financial risk' adjustment" on lines 691 – 692 on page 35 of ICC Staff
511 Exhibit 4.0. Moreover, my opinion that IAWC's bonds, if rated by Moody's or
512 S&P, would be at the bottom of the Baa / BBB category or possibly at the top of
513 the Ba / BB category as discussed at line 595 – 601 of IAWC Exhibit 8.00, is
514 based upon the financial metrics of IAWC alone and therefore, does not reflect
515 IAWC's smaller size relative to the proxy groups.

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

517 **A.** Yes, it does.

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