BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE

IN RE:	)	
	)	
PETITION OF TENNESSEE AMERICAN WATER COMPANY TO CHANGE AND INCREASE CERTAIN RATES AND CHARGES SO AS TO PERMIT IT TO EARN A FAIR AND ADEQUATE RATE OF RETURN ON ITS PROPERTY USED AND USEFUL IN FURNISHING WATER SERVICE TO ITS CUSTOMERS	)	**Docket No. 10-00189**

CONSUMER ADVOCATE AND PROTECTION DVISION'S RESPONSES TO TENNESSEE REGULATORY AUTHORITY'S DATA REQUEST

Robert E. Cooper, Jr., Attorney General and Reporter for the State of Tennessee, by and through the Consumer Advocate and Protection Division of the Office of the Attorney General ("Consumer Advocate"), hereby submits its responses to the TRA Staff Data Request of November 12, 2010.

DISCOVERY REQUEST NO. 1:

If TAWC is granted a rate increase, please discuss the benefits provided to both ratepayers and stockholders.

RESPONSE:

The Consumer Advocate has not had a meaningful opportunity to review the Discovery Responses of Tennessee American Water Company ("TAWC", "Company") and is unable, at this time, to delineate specific benefits, if any, that would result from granting TAWC's requested rate increase or if TAWC is entitled to a rate increase at all. Generally speaking,

consumers benefit from the setting of just and reasonable rates that allow the provision of affordable, efficient and safe utility service. Hahne and Aliff, *Accounting for Public Utilities*, 3.01(3). Stockholders benefit from the setting of just and reasonable rates with the opportunity to recover a reasonable return on their investment. *Id.* The interests of consumers and a utility in some sense are in competition on questions of necessary versus imprudent expenses, the appropriate level of planned and actual improvements in plant, and the level of the authorized return stockholders seek. In rate cases, both stockholders and consumers benefit theoretically from rate cases (and thus should at a minimum share rate case expense).

However, the continuous filing of rate case after rate case by a utility does not benefit consumers as it further erodes the incentive of utilities to control costs. Public utilities are monopolies which are not subject to the natural incentive of a competitive free market to control costs. TAWC is the sole supplier of water in the Chattanooga area and has no competitors. Thus, the effect of "regulatory lag" between rate cases acts as a substitute for free market forces. Bonbright, *Principles of Public Utility Rates*, p. 96. It must be noted that the effect of regulatory lag is lessened when a public utility files contentiously for extremely large increases in rates such as the 28% increase sought here and the five rates cases filed by TAWC in the last seven years.

Given circumstances of contentious rate increase filings, larger rate case expense amounts requested and the fraction of the proposed rate increases the Authority has actually granted, consumers cannot be said to benefit from rate cases or from subsidizing the rate case expense a utility determines to expend. The economy is still struggling to recover from the worst economic downturn since the Great Depression. Consumers face job losses, plunging home values, and decreased value of investments and retirement accounts. It is especially during these

continuing difficult times that consumers need relief from unreasonable and unnecessary discretionary costs not only in the operation of a utility but in the rate case expense expedited by a utility.

DISCOVERY REQUEST NO. 2:

Please discuss the CAD's position regarding the implementation of a mechanism that would maintain the average revenue per customer by on annual basis. Specifically, a revenue per customer would be calculated for a customer class (e.g., residential by meter size) based upon the attrition year revenues and meters adopted in this proceeding. Each year, the actual revenue per customer (meter) would be compared to the benchmark revenue per customer (meter). If the revenue per customer declines, then rates would be adjusted to bring the revenue per customer back up to the benchmark. If the revenue per customer increases, then customers' rates would be adjusted to reduce the revenue per customer back to the benchmark.

RESPONSE:

The Consumer Advocate opposes this mechanism. Such mechanisms are commonly known as "decoupling mechanisms" which break the link between sales volumes and a utility's revenues. In essence, a decoupling mechanism guarantees a utility's revenues and shifts all business and economic risk to consumers to make up for any short fall in revenue for any economic reason. As a tracking mechanism that is beyond the rate the Authority will set in this proceeding, it creates a new stream of revenue for a utility without any consideration of the utility's expenses or earned profits. In short, when consumers use less water, they must pay more regardless of the profit margins of the utility.

Decoupling mechanisms for water utilities are rare. Very few states have considered it. The Connecticut Department of Public Utility Control ("Department") recently considered a decoupling mechanism for a water utility in a rate case. The mechanism, known as the WCAM, was considered for application to residential consumers only. The Department rejected the WCAM for a number of concerns while noting it was an inopportune time to consider implementing the mechanism due to the economic recession and hardships on consumers which have already provided an incentive to consumers to conserve. A copy of the order is attached for convenience. *See* pages 72-76.

At this time, the Consumer Advocate is aware of only one state, California, which utilizes a form of decoupling for water utilities. The mechanism is implemented in tandem with water conservation programs. California, in particular, contends with water shortages and many consumers in that state are subject to water rationing regulations enforced by local and state authorities. California is the tenth driest state in the nation, yet it is the most populous state. A shortage of water sources combined with a booming population has made water conservation a top priority in California for decades. The state legislature of California has authorized the promotion of water conservation through utility rate design since the 1970s although decoupling has only recently been adopted in California for water utilities.

In contrast to California, the households and businesses of Chattanooga do not face any water supply challenges or enforcement of water rationing laws and regulations. Rather, the Tennessee River provides an ample supply of water and the region surrounding Chattanooga is not beset by arid terrain. The Consumer Advocate recognizes conservation of natural resources is a very important issue. But, before considering a fundamental change in how consumers are

billed, the issue of Tennessee American Water Company's water loss should be considered. In the 2008 rate case, TAWC's water loss was roughly 20%. For every five gallons of water treated by TAWC, one gallon was lost due to leaks in the system. Based on discovery responses from TAWC in this case, it appears the leakage problem has grown. According to the Company response to TRA Staff Request 13, the trend in the amount of water lost by the Company continues to grow.

According to information contained in the Company's response to CAPD discovery request 9 in this case, water loss has since ***increased*** to 25% in the twelve months ending in September of this year. Thus, for every four gallons of water treated, one gallon is lost. This equates to 3.4 billion gallons of water that is wasted based on information contained in the Company's response to discovery request 5 of the Chattanooga Regional Manufacturers Association. The Consumer Advocate submits that placing an additional burden on consumers in the name of conservation at a time when leaks in the Company's system account for so much waste is counter-productive.

Moreover, consumers have taken notice of the waste of water in this docket. For example, see the letter of September 22, 2010, by Mr. W. Bradley Weeks filed in this docket on October 5, 2010. In the letter, Mr. Weeks describes in detail the meek initial response of the Company in August of this year and the nearly week-long period taken to repair a break in a water main as hundreds of gallons were lost an hour. The Consumer Advocate respectfully submits that before the Authority considers requiring the households and businesses of Chattanooga to act as an insurer of TAWC's revenues and profits in the name of water

conservation, TAWC should first demonstrate over a period of years a commitment to maintaining its system to curtail the waste of water.

The Authority must also consider whether it has the statutory authority to implement such a mechanism. While the Authority has implemented a modified and experimental decoupling mechanism for one natural gas utility, Chattanooga Gas Company, the Authority acted under a legislative mandate by the General Assembly to implement a general policy for energy conservation for natural gas and electric utilities that authorizes changes in how consumers are billed to encourage energy conservation. *See* Tenn. Code Ann. § 65-4-126. No such water conservation policy for regulated water utilities has been issued by the General Assembly.

Of additional significance is the consideration of what kind of price signal such a mechanism sends to consumers. If consumers are rewarded for their conservation efforts by automatic rate increases, the consumer's incentive to conserve is naturally weakened if not outright destroyed.

Moreover, a view that because a natural gas utility has been granted a decoupling mechanism thus a water utility should be given the same ignores the fundamental differences in the two utilities. For natural gas consumers, the actual cost of natural gas, known as the commodity cost, is passed through to consumers without a markup. The commodity cost constitutes 50% to 70% of a consumer's natural gas bill, depending on the market price of the commodity. The commodity cost is not subject to a decoupling mechanism. While a natural gas consumer can at a minimum save some money on the commodity cost of natural gas when using less, under a decoupling regime water consumers will see no benefit whatsoever.

Moreover, it should be noted that the households and commercial businesses of Chattanooga are already subject to natural gas decoupling and are the only consumers in all of Tennessee to be subject to a decoupling regime. If the Authority approved decoupling for TAWC, the households and businesses of Chattanooga will have been further singled out for decoupling for not only natural gas, but also for water.

DISCOVERY REQUEST NO. 3:

Discuss which classes that such a mechanism should apply and whether a WNA would be necessary under this approach?

RESPONSE:

Consistent with the Consumer Advocate's response to Request 2, the Consumer Advocate believes no customer class should be subject to such a mechanism. The issue of whether a weather normalization adjustment ("WNA") is appropriate greatly depends on what kind of WNA the question addresses. The Consumer Advocate opposes the proposed WNA of TAWC. The Consumer Advocate supports the methodology utilized by the TRA in Docket 08-00039, TAWC's last rate case. This same methodology of using trends in revenues from previous years is also referred to as a "WNA" by the Department of Public Utility Control in Connecticut to normalize revenues. See page 49 of the attached order.

In previous natural gas rate cases, the Consumer Advocate has supported using the specific natural gas industry WNA, even in conjunction with a decoupling mechanism, as the natural gas WNA is useful in determining what portion of the decoupling rate increases are

attributable to weather and what portion are attributable to other causes such as price elasticity or energy conservation. However, the WNA for natural gas companies is a fundamentally different animal from normalizing revenues in a water utility rate case. The WNA for natural gas companies is used to adjust bills automatically based on temperature and subject to TRA audit annually, while the Company's proposed WNA for water utilities is a "best guess" at what revenues will be in the future that is incorporated into rates regardless of what weather actually occurs. Regardless of whether a mechanism is put in place or not, revenues should be normalized based on usage and revenues trends of a recent period of years which allows for considerations of all factors affecting usage, including weather.

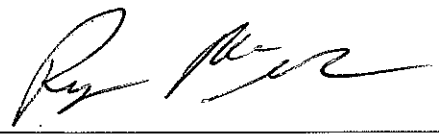
DISCOVERY REQUEST NO. 4:

Discuss whether approval of the aforementioned mechanism should include a reduction to the Company's approved return on equity to reflect any associated reduced risk. If so, quantify the reduction to the approved return on equity.

RESPONSE:

To the extent that this mechanism insulates the Company from any risk due to changes in customer water consumption for any reason, the Company's required rate of return on equity must be reduced. The Consumer Advocate has not completed an analysis quantifying this reduction in risk for the purposes of granting an approved return on equity at this time. The Consumer Advocate will seek to supplement this response.

RESPECTFULLY SUBMITTED,



Ryan L. McGehee, BPR #025559
Assistant Attorney General
Office of the Attorney General and Reporter
Consumer Advocate and Protection Division
(615) 532-5512
P.O. Box 20207
Nashville, TN 37202-0207

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served via U.S. Mail or electronic mail upon:

R. Dale Grimes
Bass, Berry & Sims PLC
150 Third Avenue South, Suite 2800
Nashville, TN 37201

David C. Higney
Grant, Konvalinka & Harrison, P.C.
Ninth Floor, Republic Centre
633 Chestnut St.
Chattanooga, TN 37450-0900

Scott H. Strauss
Katharine M. Mapes, Esq.
Spiegel & McDiarmid, LLP
1333 New Hampshire Ave., N.W.
Washington, DC 20036

Frederick L. Hitchcock
1000 Tallan Building
Two Union Square
Chattanooga, TN 37402

Henry Walker
Bradley Arant Boult Cummings, LLP
1600 Division St., Suite 700
Nashville, TN 37203

Mark Brooks
521 Central Avenue
Nashville, TN 37211

Donald L. Scholes
Branstetter, Stranch & Jennings, PLLC
227 Second Avenue, North
Fourth Floor
Nashville, TN 37219

on this the 6 day of December, 2010.

Ryan L. McGehee

Westlaw
283 P.U.R.4th 217, 2010 WL 2801007 (Conn.D.P.U.C.)

Re Connecticut Water Company
Docket No. 09-12-11

Connecticut Department of Public Utility Control
July 14, 2010

ORDER authorizing a multi-division water utility to increase its rates by $8.035 million, approximately 12.73%, reflecting an allowed return on equity (ROE) of 9.75% and an overall return on rate base of 7.32%. In establishing ROE, the department relies on the results of cost of capital models, primarily the discounted cash flow model.

As a result of acquisitions of water systems, the utility has multiple rate divisions with unique rates. In its last rate case, the utility performed a utility-wide cost of service study (COSS) to support a rate design that allocated the revenue increase in a manner that narrowed the gap between rate divisions and moved toward single-tariff pricing. However, in this case, the revenue increase is, with some exceptions, spread across-the-board to all customers classes, thereby widening the gap between rate divisions and moving away from the concept of single-tariff pricing. The utility is directed to propose, in its next rate case filing, a rate structure that considers a COSS which moves toward single tariff pricing and rate equalization amongst all of its divisions.

Department rejects a proposed three-year rate plan, finding that the claimed benefits to customers are unproven. Moreover, the department finds that with the current state of the economy, now is not the appropriate time for the utility to propose a new ratemaking mechanism. In addition, the department notes that an existing water infrastructure and conservation adjustment program provides the utility with an opportunity to recoup plant investment between rate cases.

Department rejects a proposed water conservation adjustment mechanism (WCAM) designed to decouple revenues from water consumption. The utility contended that the proposed WCAM would align its financial interests with water conservation, enabling it to aggressively promote conservation. The department finds that utility failed to provide empirical data as to the cause and effect relationship between conservation programs and reduced consumption. As such, the department finds the record evidence is insufficient for it to discern whether the undisputed trend toward lower water usage is driven by affirmative conservation campaigns, or is merely a natural response to a sluggish economy. Given the economic hardships faced by many of the utility's customers, the department concludes that it is not the time to institute revenue decoupling.

P.U.R. Headnote and Classification

1.
WATER

s1
Ct.D.P.U.C. 2010
[CONN.] Utility infrastructure projects - Cost recovery between rate cases - Water infrastructure and conservation adjustment program surcharge - Statutory considerations.

Re Connecticut Water Company

P.U.R. Headnote and Classification

2.
RATES

s2
Ct.D.P.U.C. 2010
[CONN.] Jurisdiction and powers - State commission - Infrastructure projects - Cost recovery between rate cases - Water infrastructure and conservation adjustment surcharge - Statutory considerations.

Re Connecticut Water Company

P.U.R. Headnote and Classification

3.
RATES

s35

Ct.D.P.U.C. 2010
[CONN.] Initiation of rate changes - Cost recovery between rate cases - Water infrastructure and conservation adjustment surcharge - Statutory considerations.

Re Connecticut Water Company

P.U.R. Headnote and Classification

4.
RATES

s97
Ct.D.P.U.C. 2010
[CONN.] Water utilities - Special factors - Infrastructure improvement projects - Cost recovery between rate cases - Water infrastructure and conservation adjustment surcharge - Statutory considerations.

Re Connecticut Water Company

P.U.R. Headnote and Classification

5.
RATES

s20.1
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Test period - Historical test year - *Pro forma* and prospective adjustments - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

6.
RATES

s35
Ct.D.P.U.C. 2010
[CONN.] Initiation of rate changes - Proposed multi-year water rate plan - Grounds for rejection - Claimed benefits unproven - Economic conditions - Existing opportunity to recoup plant investment between rate cases.

Re Connecticut Water Company

P.U.R. Headnote and Classification

7.
RATES

s40
Ct.D.P.U.C. 2010
[CONN.] Practice and procedure - Proposed multi-year water rate plan - Grounds for rejection - Claimed benefits unproven - Economic conditions - Existing opportunity to recoup plant investment between rate cases.

Re Connecticut Water Company

P.U.R. Headnote and Classification

8.
RATES

s95
Ct.D.P.U.C. 2010
[CONN.] Water utility - Proposed multi-year rate plan - Grounds for rejection - Claimed benefits unproven - Economic conditions - Existing opportunity to recoup plant investment between rate cases.

Re Connecticut Water Company

P.U.R. Headnote and Classification

9.
SERVICE

s73
Ct.D.P.U.C. 2010
[CONN.] Water utility - Equipment and facilities - Engineering issues - Current status of multiple systems.

Re Connecticut Water Company

P.U.R. Headnote and Classification

10.
WATER

s1
Ct.D.P.U.C. 2010
[CONN.] Utility infrastructure - Engineering issues -

Current status of multiple systems.

Re Connecticut Water Company

P.U.R. Headnote and Classification

11.
WATER

s2
Ct.D.P.U.C. 2010
[CONN.] Utility infrastructure - Engineering issues - Water infrastructure and conservation adjustment program projects.

Re Connecticut Water Company

P.U.R. Headnote and Classification

12.
VALUATION

s23
Ct.D.P.U.C. 2010
[CONN.] Unfinished projects - Water infrastructure and conservation adjustment program projects - Grounds for disallowance - Not used and useful.

Re Connecticut Water Company

P.U.R. Headnote and Classification

13.
VALUATION

s86
Ct.D.P.U.C. 2010
[CONN.] Water utility - Water infrastructure and conservation adjustment program projects - Unfinished projects - Grounds for disallowance - Not used and useful.

Re Connecticut Water Company

P.U.R. Headnote and Classification

14.
EXPENSES

s44
Ct.D.P.U.C. 2010
[CONN.] Water utility - Infrastructure improvement projects - Cost recovery between rate cases - Unfinished projects - Grounds for disallowance - Not used and useful.

Re Connecticut Water Company

P.U.R. Headnote and Classification

15.
SERVICE

s80
Ct.D.P.U.C. 2010
[CONN.] Water utility - Compliance with quality standards - Radon and uranium removal - High sodium content - Reporting requirements.

Re Connecticut Water Company

P.U.R. Headnote and Classification

16.
SERVICE

s84
Ct.D.P.U.C. 2010
[CONN.] Periodic meter testing - Extension of interval period - Statutory considerations - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

17.
WATER

s2
Ct.D.P.U.C. 2010
[CONN.] Utility equipment - Vehicles - Investigation of apparently excessive fleet size - Reporting require- ments.

Re Connecticut Water Company

P.U.R. Headnote and Classification

18.
DEPRECIATION

s1
Ct.D.P.U.C. 2010
[CONN.] Water utility practices - Adherence to guidelines of the National Association of Regulatory Commissioners.

Re Connecticut Water Company

P.U.R. Headnote and Classification

19.
EXPENSES

s9
Ct.D.P.U.C. 2010
[CONN.] Depreciation - Disallowance of expense related to plant not in service - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

20.
VALUATION

s86
Ct.D.P.U.C. 2010
[CONN.] Water utility - Five-year capital spending plan - Deviation from schedules - Need for better planning tools - Discussion.

Re Connecticut Water Company

P.U.R. Headnote and Classification

21.
VALUATION

s86
Ct.D.P.U.C. 2010
[CONN.] Water utility - Test-year plant in service - Post-test-year additions - Need for decrease in spending during difficult economic times.

Re Connecticut Water Company

P.U.R. Headnote and Classification

22.
VALUATION

s93
Ct.D.P.U.C. 2010
[CONN.] Property included in rate base - Used and useful plant in service as of close of hearing - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

23.
VALUATION

s86
Ct.D.P.U.C. 2010
[CONN.] Water utility - Property included in rate base - Plant in service used and useful as of close of hearing.

Re Connecticut Water Company

P.U.R. Headnote and Classification

24.
VALUATION

s86
Ct.D.P.U.C. 2010
[CONN.] Water utility - Five-year capital spending plan - Budget, including water infrastructure and conservation adjustment-eligible projects - Need to balance needs of customer when making infrastructure investment decisions.

Re Connecticut Water Company

P.U.R. Headnote and Classification

25.
VALUATION

s86
Ct.D.P.U.C. 2010
[CONN.] Water utility - Rate base adjustments - Accu-

mulated depreciation - Deferred income taxes - Other deductions - Working capital - Capitalization of employee salaries.

Re Connecticut Water Company

P.U.R. Headnote and Classification

26.
VALUATION

s1
Ct.D.P.U.C. 2010
[CONN.] Accumulated depreciation - Adjustment to rate base - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

27.
VALUATION

s92.1
Ct.D.P.U.C. 2010
[CONN.] Deferred income taxes - Reduction to rate base - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

28.
VALUATION

s19
Ct.D.P.U.C. 2010
[CONN.] Working capital allowance - Adjustment to rate base - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

29.
VALUATION

s41
Ct.D.P.U.C. 2010
[CONN.] Capitalized employee salaries - Adjustment to rate base - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

30.
EXPENSES

s5
Ct.D.P.U.C. 2010
[CONN.] Salaries and wages - Allowance for vacant positions - Factors considered - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

31.
EXPENSES

s5
Ct.D.P.U.C. 2010
[CONN.] Salaries and wages - Annual increases - Allowance for 3% escalation - Denial of proposed 4% escalation as excessive in current economic climate - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

32.
EXPENSES

s05
Ct.D.P.U.C. 2010
[CONN.] Merit and employee awards - Grounds for disallowance - Concern over increasing payroll in current economic climate - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

33.
EXPENSES

s09
Ct.D.P.U.C. 2010
[CONN.] Payroll tax - Adjustment for reduction to proposed increases to salaries and wages - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

34.
EXPENSES

s05
Ct.D.P.U.C. 2010
[CONN.] Employee benefits - Medical and dental insurance - Estimated rate year costs - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

35.
EXPENSES

s9
Ct.D.P.U.C. 2010
[CONN.] Pensions - Allowance based on actuarial estimate for rate year - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

36.
EXPENSES

s9
Ct.D.P.U.C. 2010
[CONN.] Post retirement medical expense - Allowance based on actuarial estimate for rate year - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

37.
EXPENSES

s2
Ct.D.P.U.C. 2010
[CONN.] Directors and officers liability insurance - Calculation of allowance - 50% disallowance to capture shareholder benefit - Reduction for unregulated entity portion based on MASS formula - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

38.
EXPENSES

s44
Ct.D.P.U.C. 2010
[CONN.] Water utility - Treatment chemicals - Method of determination - Allowance based on 10% increase from actual 2009 expense.

Re Connecticut Water Company

P.U.R. Headnote and Classification

39.
EXPENSES

s44
Ct.D.P.U.C. 2010
[CONN.] Water utility - Purchased water - Method of determination - Actual 2009 expense used as proxy for rate year expense.

Re Connecticut Water Company

P.U.R. Headnote and Classification

40.
EXPENSES

s44
Ct.D.P.U.C. 2010
[CONN.] Water utility - Fuel or power purchased for pumping - Method of determination - Actual 2009 expense used as proxy for rate year expense.

Re Connecticut Water Company

P.U.R. Headnote and Classification

41.
EXPENSES

s0
Ct.D.P.U.C. 2010
[CONN.] Inflation adjustment - Method of determination - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

42.
EXPENSES

s47
Ct.D.P.U.C. 2010
[CONN.] Water utility - Non-revenue water - Lost and unaccounted for water - Disallowance of costs in excess of 15% standard established by the National Association of Regulatory Commissioners.

Re Connecticut Water Company

P.U.R. Headnote and Classification

43.
EXPENSES

s44
Ct.D.P.U.C. 2010
[CONN.] Water utility - Tank painting amortization and maintenance expense - Method of determination.

Re Connecticut Water Company

P.U.R. Headnote and Classification

44.
EXPENSES

s3
Ct.D.P.U.C. 2010
[CONN.] Corporate and other shared expenses - Allocation among regulated and non-regulated subsidiaries - Use of MASS formula - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

45.
EXPENSES

s2
Ct.D.P.U.C. 2010
[CONN.] Corporate and other shared expenses - Allocation among regulated and non-regulated subsidiaries - Use of MASS formula - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

46.
APPORTIONMENT

s3
Ct.D.P.U.C. 2010
[CONN.] Corporate and other shared expenses - Allocation among regulated and non-regulated subsidiaries - Use of MASS formula - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

47.
REVENUES

s
Ct.D.P.U.C. 2010
[CONN.] Forecast - *Pro forma* revenues and department adjustments - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

48.
REVENUES

s
Ct.D.P.U.C. 2010
[CONN.] Forecast - Annualization adjustments - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

49.
REVENUES

s
Ct.D.P.U.C. 2010
[CONN.] Forecast - Weather normalization adjustment - Multi-year average approach - Rejection of proposed base load approach - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

50.
REVENUES

s
Ct.D.P.U.C. 2010
[CONN.] Forecast - Customer growth adjustment - Modified multi-year average - Based on annual consumption and year-end customer count - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

51.
CONSERVATION

s
Ct.D.P.U.C. 2010
[CONN.] Water utility - Revenue decoupling proposal - Conservation revenue adjustment mechanism - Grounds for denial.

Re Connecticut Water Company

P.U.R. Headnote and Classification

52.
WATER

s1
Ct.D.P.U.C. 2010
[CONN.] Water utility - Fostering conservation - Revenue decoupling proposal - Water conservation adjustment mechanism - Grounds for denial.

Re Connecticut Water Company

P.U.R. Headnote and Classification

53.
REVENUES

s
Ct.D.P.U.C. 2010
[CONN.] Water utility - Decoupling proposal - Water conservation adjustment mechanism - Grounds for denial.

Re Connecticut Water Company

P.U.R. Headnote and Classification

54.
RATES

s97
Ct.D.P.U.C. 2010
[CONN.] Water utility - Special factors - Declining consumption - Decoupling proposal - Water conservation adjustment mechanism - Grounds for denial.

Re Connecticut Water Company

P.U.R. Headnote and Classification

55.
AUTOMATIC\ ADJUSTMENT\ CLAUSES

s5
Ct.D.P.U.C. 2010
[CONN.] Revenue requirement clauses - Decoupling proposal - Water conservation adjustment mechanism - Grounds for denial - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

56.
REVENUES

s

Ct.D.P.U.C. 2010
[CONN.] Particular items - Late payment fee - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

57.
RATES

s95
Ct.D.P.U.C. 2010
[CONN.] Water rate design - Multi-division utility - Allocation of increase - Across-the-board approach - Departure from movement toward single tariff pricing and equalization of divisional rates - Directive requiring resumption of movement toward rate equalization in next rate case.

Re Connecticut Water Company

P.U.R. Headnote and Classification

58.
RATES

s41
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Consolidation of acquired water systems - Multi-division utility - Departure from movement toward single tariff pricing and equalization of divisional rates - Directive requiring resumption of movement toward rate equalization in next rate case.

Re Connecticut Water Company

P.U.R. Headnote and Classification

59.
RATES

s71
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Uniformity - Multi-division utility - Departure from movement toward single tariff pricing and equalization of divisional rates - Directive requiring resumption of movement toward rate equalization in next rate case.

Re Connecticut Water Company

P.U.R. Headnote and Classification

60.
RATES

s24
Ct.D.P.U.C. 2010
[CONN.] Water rate design - Multi-division utility - Seasonal metered customers - Restructuring to promote fairness without violating cost causation - Equalization of commodity charge with that of year-round customers - Elimination of seasonal activation fee.

Re Connecticut Water Company

P.U.R. Headnote and Classification

61.
RATES

s24
Ct.D.P.U.C. 2010
[CONN.] Water rate design - Multi-division utility - Seasonal flat rate customers - Elimination of flat rate for all but single-unit customers.

Re Connecticut Water Company

P.U.R. Headnote and Classification

62.
RATES

s04
Ct.D.P.U.C. 2010
[CONN.] Water rate design - Multi-division utility - Schedule of special charges - Maintenance of existing rates except for elimination of seasonal activation fee.

Re Connecticut Water Company

P.U.R. Headnote and Classification

63.
RATES

s08
Ct.D.P.U.C. 2010
[CONN.] Connection and disconnection charges - Multi-division water utility - Maintenance of existing rates except for elimination of seasonal activation fee.

Re Connecticut Water Company

P.U.R. Headnote and Classification

64.
PAYMENT

s3
Ct.D.P.U.C. 2010
[CONN.] Enforcing payment - Proposed late payment penalty fee - Grounds for denial - Lack of cost breakdown - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

65.
RETURN

s4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Statutory considerations - Recovery of operating costs - Attraction of capital - Maintenance of financial integrity - Protection of relevant public interests.

Re Connecticut Water Company

P.U.R. Headnote and Classification

66.
RETURN

s6
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Overall cost of capital - Method of determination.

Re Connecticut Water Company

P.U.R. Headnote and Classification

67.
RETURN

s6.1
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Capital structure - Water utility - Department analysis.

Re Connecticut Water Company

P.U.R. Headnote and Classification

68.
RETURN

s6.2
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of long-term debt - Embedded cost rate - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

69.
RETURN

s6.1
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Capital structure - Rate base true-up - Incorporation of short-term debt equivalent - At current embedded cost rate - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

70.
RETURN

s6.2
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of short-term debt equivalent - Current embedded cost rate - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

71.
RETURN

s6.1
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Capital structure - Equity level - Exclusion of proposed future capital contribution to equity - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

72.
RETURN

s6.1
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Capital structure - Computation of short-term debt equivalent - Exclusion of unfunded rate base associated with below book acquisition - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

73.
RETURN

s6.1
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Capital structure - Computation of short-term debt equivalent - Reflection of changes to timing of rate base additions, accumulated depreciation, and deferred income taxes - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

74.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Estimation methodologies - Financial models - Proxy groups - Risk factors - Positions of the parties - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

75.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Department analysis - Factors considered - Economic and financial changes since last rate case - Survey of recently-awarded returns in Connecticut - Application of cost of capital models to financial data in record - Expert recommendations - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

76.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Department analysis - Appropriate proxy groups - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

77.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Department analysis - Risk - Proposed small company size premium - Grounds for denial - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

78.
RETURN

s4
Ct.D.P.U.C. 2010
[CONN.] Factors affecting reasonableness - Business risk - Proposed small company size premium - Grounds for denial - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

79.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Discounted cash flow model - Appropriate application - Department analysis - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

80.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Capital asset pricing model - Appropriate application - Department analysis - Water rate proceeding.

Re Connecticut Water Company

P.U.R. Headnote and Classification

81.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Estimation methodologies - Comparable earnings approach - Grounds for rejection.

Re Connecticut Water Company

P.U.R. Headnote and Classification

82.
RETURN

s6.4
Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Cost of common equity - Department analysis - Reliance on cost of capital models, primarily the discounted cash flow model - As applied to water utility and natural gas utility proxy groups - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

83.
RETURN

s15
Ct.D.P.U.C. 2010
[CONN.] Water utility - Allowed weighted cost of capital - Overall return on rate base - Reasonableness.

Re Connecticut Water Company

P.U.R. Headnote and Classification

84.
SERVICE

s72
Ct.D.P.U.C. 2010
[CONN.] Water utility - Customer services - Compliance with applicable standards and regulations.

Re Connecticut Water Company

P.U.R. Headnote and Classification

85.
RATES

s25

Ct.D.P.U.C. 2010
[CONN.] Reasonableness - Ability to pay - Financial assistance for hardship customers - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

86.
PAYMENT

s7
Ct.D.P.U.C. 2010
[CONN.] Billing and collections - Financial assistance for hardship customers - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

87.
PAYMENT

s3
Ct.D.P.U.C. 2010
[CONN.] Financial assistance for hardship customers - Pilot program - Water utility.

Re Connecticut Water Company

P.U.R. Headnote and Classification

88.
EXPENSES,

144
Ct.D.P.U.C. 2010
[CONN.] Water utility - Financial assistance for hardship customers - Pilot program costs.

Re Connecticut Water Company

P.U.R. Headnote and Classification

89.
PAYMENT

s1
Ct.D.P.U.C. 2010
[CONN.] Liability for payment - Transfer of account from tenant to landlord - Need for prior authorization from customer to whom account may be transferred - Water utility service.

Re Connecticut Water Company

P.U.R. Headnote and Classification

90.
SERVICE

s99
Ct.D.P.U.C. 2010
[CONN.] Meter location and height - Improved automated meter reading access - Revised rules and regulations - Water utility.

Re Connecticut Water Company

Before Betkoski, III, Palermino and DelGobbo, commissioners.

BY THE DEPARTMENT:

1 *DECISION*

I. INTRODUCTION

A. SUMMARY

In this Decision, the proposed amended schedules of rates submitted with The Connecticut Water Company's Application dated January 6, 2010, are hereby denied.

Total annual revenues in the amount of $71,150,683 are hereby approved subject to The Connecticut Water Company complying with the Orders listed below. The total annual revenues approved herein result in an overall increase of $8,035,000, or about 12.73%, in annual revenues over adjusted *pro forma* test year revenues of $63,115,683.

The Department of Public Utility Control has determined that an allowed return on equity of 9.75% is appropriate.

B. BACKGROUND OF THE PROCEEDING

The Connecticut Water Company (CT Water or Company) is a public service company as defined in Section 16-1 of the General Statutes of Connecticut (Conn. Gen. Stat'). CT Water currently provides water services to approximately 88,000 customer connections in 54 towns across Connecticut:

Ashford, Avon, Beacon Falls, Bethany, Bolton, Brooklyn, Burlington, Canton, Chester, Clinton, Colchester, Columbia, Coventry, Deep River, East Granby, East Haddam, East Hampton, East Windsor, Ellington, Enfield, Essex, Farmington, Griswold, Guilford, Hebron, Killingly, Lebanon, Madison, Manchester, Mansfield, Marlborough, Middlebury, Naugatuck, Old Lyme, Old Saybrook, Plainfield, Plymouth, Portland, Prospect, Somers, South Windsor, Stafford, Stonington (Masons Island), Suffield, Thomaston, Thompson, Tolland, Vernon, Voluntown, Waterbury, Westbrook, Willington, Woodstock and Windsor Locks.

Eric W. Thornburg Pre-filed Testimony (Thornburg PFT).

The Company provides fire protection service to the majority of those communities.

CT Water's prior rate case application was filed on July 18, 2006, in Docket No. 06-07-08,*Application of The Connecticut Water Company to Amend Rate Schedules.*

By Decision dated January 16, 2007, in Docket No. 06-07-08 (2007 CT Water Rate Case Decision), the Department of Public Utility Control (Department) adopted an amended settlement agreement by and between CT Water and the Office of Consumer Counsel (OCC) dated December 20, 2006 (Settlement Agreement). The Settlement Agreement allowed CT Water a total of $10,940,821 in additional revenue to be phased-in in two phases over a 15-month period. For Phase 1 (in the 2007 CT Water Rate Case Decision), the Department authorized amended rate schedules that would generate $7,117,772. For Phase 2, by Decision dated March 28, 2008, in Docket No. 06-07-08PH02,*Application of The Connecticut Water Company to Amend Rate Schedules - Adjustment to Annual Revenues* (2008 CT Water Rate Case Decision), the Department approved amended rate schedules that would generate $6,712,108 in additional revenues. That $6,712,108 amount reflects: (a) the remaining $3,823,049 in additional revenues previously allowed under the Settlement Agreement (of the allowed $10,940,821); (b) the amortization of the regulatory asset created by the deferral of the $3,823,049; (c) the increases in rate base related to additional plant funded by the Company and placed in-service by year-end 2007; and (d) increased depreciation and property tax expense associated with that additional plant.

***2** Since the filing of its application in Docket No. 06-07-08, CT Water has added a number of water systems, including systems from the former South Coventry Water Company, The Ellington Acres Company, the Avery Heights Water Association, and the Eastern Division of Birmingham Utilities, Inc.

[1-4] Since the last rate case, Public Act 07-139, *An Act Concerning Water Company Infrastructure Projects* (PA 07-139), became Connecticut law with the intended purpose of accelerating the rate of replacement and/or rehabilitation of existing water system infrastructure. The resulting Water Infrastructure and Conservation Adjustment (WICA) program allows a water utility to recover, in between rate cases, the costs of WICA-eligible projects that have been completed and in service for the benefit of the water company's customers. Accordingly, CT Water has invested and included in its revenue requirements a total of $10,015,468 in infrastructure investment, and has been authorized by the Department to impose a 2.10% WICA surcharge (designed to increase revenues by $1,346,192) on its customers' bills as of January 1, 2010. [FN1]

By Letter of Intent dated December 2, 2009, and pursuant to Section 16-1-22(b) of the Regulations of Connecticut State Agencies (Conn. Agencies Regs '), CT Water gave formal notice of its intent to file amended water service rate schedules on or after January 4, 2010.

By application filed on January 6, 2010 (Application), submitted pursuant to Conn. Gen. Stat. §16-19 and Conn. Agencies Regs. §§16-1-53 *et seq.*, CT Water requested the approval of the Department to amend its existing rate schedules by way of one of two proposed three-year rate plans, the Standard Rate Plan and the Al-

ternative Rate Plan.

Under both plans, the combined amount of the revenue increases over the three-year period equates to $19,081,882, or approximately 30.97%, over adjusted test year revenues of $61,616,754. David C. Benoit PFT (Benoit PFT), pp. 2-4; Schedule C-1.0. Under the Standard Rate Plan, CT Water seeks additional revenues of approximately $16.28 million over adjusted test year revenues for the first rate year, $1.4 million for the second rate year and $1.399 million for the third rate year. Under the Alternative Rate Plan, each rate year would result in additional revenues of approximately $6.36 million. Application, Cover Letter, p. 1.

C. CONDUCT OF THE PROCEEDING

By Notice of Audit dated February 9, 2010, the Department conducted an audit of CT Water's books and records at its offices, 93 West Main Street, Clinton, Connecticut, commencing February 17, 2010. By Notice of Inspection dated February 4, 2010, the Department conducted an inspection of the plant and facilities that comprise CT Water, commencing February 23, 2010.

By Notice of Hearing dated February 11, 2010, and Corrected Notice of Hearing dated February 16, 2010, pursuant to Conn. Gen. Stat. §16-19, the Department conducted evening hearing sessions for the purpose of taking public comment, on the following dates and locations: March 8, 2010, at the Clinton Town Hall, 54 East Main Street, Clinton, Connecticut; March 9, 2010, at the Killingly High School, 79 Westfield Avenue, Danielson, Connecticut; March 15, 2010, at the Naugatuck Town Hall, 229 Church Street, Naugatuck, Connecticut; March 16, 2010, at the Farmington Community Center, 321 New Britain Avenue, Unionville, Connecticut; March 17, 2010, at the Enfield Town Hall, 820 Enfield Street, Enfield, Connecticut; March 31, 2010, at the South Windsor Town Hall, 1540 Sullivan Avenue, South Windsor, Connecticut. A second evening hearing session at the Clinton Town Hall was held on April 8, 2010.

*3 Pursuant to these notices, the Department commenced the evidentiary portion of the hearing in this proceeding on March 8, 2010, at its offices, Ten Franklin Square, New Britain, Connecticut. The Department held further evidentiary hearing sessions on March 12, 15, 17, 18, 19, 25, 29, and April 9 and 13, 2010.

By its filing of Late Filed Exhibit No. 69 on April 16, 2010, CT Water submitted its final set of updated schedules and exhibits to reflect various adjustments, corrections and revisions to a number of components contained in its original Application based on facts made clear in the record as the case unfolded. Thereafter, the Department closed the record on this matter by Notice of Close of Hearing dated April 30, 2010.

On June 11, 2010, the Department issued a draft Decision in this matter. All Parties and Intervenors were provided the opportunity to submit written exceptions to and to present oral arguments on the draft Decision.

By letter dated June 24, 2010, CT Water waived the 180-day requirement imposed by Conn. Gen. Stat. §16-19 in order to allow the Department until July 14, 2010, to render this Decision.

D. PARTIES AND INTERVENORS

The Department designated The Connecticut Water Company, 93 West Main Street, Clinton, Connecticut 06413; and the Office of Consumer Counsel (OCC), Ten Franklin Square, New Britain, Connecticut 06051, as Parties to this proceeding.

The Department granted Intervenor status to the following entities: the Office of the Attorney General (AG), the Borough of Naugatuck, and the South Lyme Property Owners Association.

E. PUBLIC COMMENT

As previously noted, the Department held a total of seven evening sessions of the public hearing throughout CT Water's service territory in Connecticut for the purpose of taking public comment concerning the Application.

Over the course of these evening sessions, many CT

Water customers spoke out against the Company's rate increase proposal. Among the local elected officials who commented on the rate proposal were State Representative William Aman and Mayor John Pelkey of South Windsor, and Mayor Bob Mezzo of Naugatuck. Mayor Pelkey stated his objection to CT Water spreading the costs of acquiring smaller water companies across ratepayers, especially in light of the recent economic downturn. Tr. 3/31/10, pp. 1464 and 1465. Representative Aman voiced his disappointment with the amount of the requested rate increase, while noting that the Metropolitan District Water Company (MDC), a local municipal water utility, charges rates three times less than CT Water. He expressed optimism that the Department and CT Water could achieve a fair agreement. *Ibid.*, pp. 1543-1548.Mayor Mezzo stated that Naugatuck, as a municipality, is a client of CT Water and had some concern with the Company's proposed mitigation plan which is intended to assist municipalities in absorbing rate increases over time. He urged the Department to be diligent in its review of the Application, and cautioned the Company against using the mitigation plan as a vehicle to further spread costs to ratepayer residents.*Ibid.*, pp. 643-646.

***4** The concerns expressed on the record by CT Water customers fell into several common categories: disparity in rates between seasonal and year-round customers, executive compensation, and costs associated with acquiring and improving small water companies.

The Department received over 110 letters and e-mails regarding the Application. All individual customer communications expressed opposition to CT Water's rate proposal. Many of those commenting noted the overall poor state of the economy and the resulting effect on the ability of homeowners and businesses to pay higher water rates. Many of those corresponding with the Department echoed the public comment testimony regarding the apparent disparity between seasonal and year-round rates.

Official town representatives from Brooklyn, Essex, Westbrook, Prospect, Thomaston, Windsor Locks and Farmington supported aspects of the proposal, in particular the possibility of a three-year rate phase-in, and proposal to limit the rate increase to public fire protection charges at 2%. Those representatives also noted that the proposed rate design would provide grants and incentives to schools, government buildings and hardship customers for retrofit conservation fixtures.

II. DEPARTMENT ANALYSIS AND EVALUATION OF EVIDENCE

A. TEST YEAR

[5] It is the practice of this Department in rate cases to establish rates prospectively on the basis of a historical test year, utilizing the most recent 12 months for which adequate records are available to reflect the actual operating results and experience during such period. Generally, the test year, adjusted for *pro forma* purposes, sets the boundaries within which the factors of ratemaking can be determined and used. The Department may make certain prospective adjustments deemed necessary to ensure that a regulated utility has reasonable opportunity to achieve a fair rate of return.

The Department has analyzed the operating experience of CT Water for the 12 months ended December 31, 2008, and finds that this period is a reasonable test year period on which to predicate this Application.

B. PROPOSED MULTI-YEAR RATE PLAN

[6-8] The Company has proposed a three-year rate plan in its filing. Specifically, the Company seeks to adjust rates in subsequent years for plant additions and certain expense items. The Company acknowledges that this form of rate plan has never been applied to a Department-regulated water utility, even though other public service companies have used this approach. Thornburg PFT, pp. 7 and 8. The Company claims that the multi-year approach, combined with other innovations in the Application, opens the door to avoiding large one-year increases that impose a large burden on customers. By spreading the needed revenue increase over multiple years, customers see a smoother pattern of rates that should be easier for them to manage.*Ibid.*, p. 8.

The benefits of a multi year approach in terms of limiting customer increases are largely unproven by the Company. The Department is familiar with the Company's argument as it is similar to the supposed benefits of the WICA program. Under WICA, the Company extolled the benefits of smaller overall rate increases due to that program providing incremental increases. As the Company is aware, these benefits have not transpired during the Company's first rate application following the start of the WICA program. The fact is that prior to WICA, the Company received an increase of 14.5% on January 16, 2007, and 11.95% on March 28, 2008. Now that the Company is participating in the WICA program, this Application seeks an overall 30% increase. Application, Cover Letter, p. 4.

***5** As stated, the Department finds that the Company's claimed benefits to customers of a multi-year approach is unproven. Additionally, the WICA program that CT Water currently participates in provides it with an opportunity to recoup plant investment in between rate cases, providing a significant benefit to the Company. Finally, with the current state of the economy, now is not the appropriate time for the Company to propose implementing a new ratemaking mechanism. The Department rejects the Company's three-year rate plan and this Decision will reflect the Department's traditional ratemaking methodology of used and useful plant at the close of hearings and known and measurable costs for the rate year.*C. ENGINEERING ISSUES*

1. Current Status of CT Water

[9, 10] CT Water is a specially chartered Connecticut corporation. It is a public service company and a water company, as those terms are defined in Conn. Gen. Stat. §16-1. CT Water is Connecticut's second largest investor-owned water system, serving approximately 88,500 residential, commercial, industrial and municipal customers in 54 towns through 62 separate, noncontiguous water systems across Connecticut. Application, Exhibit A. 3, p. 3; Response to Interrogatory WA-179.

Since 2006, CT Water has acquired 36 water systems serving a total of approximately 3,285 customers. In 2007, CT Water acquired the Avery Heights Water Association and the Hilldale Park Homeowners Association, which serve 216 customers and 55 customers, respectively. In 2008, the Company acquired the Birmingham Utilities' Eastern Division (now identified as the Mansfield Division), which serves approximately 2,300 customers, and in 2009, the Ellington Acres Company, which serves 712 customers. Response to Interrogatory WA-179. These recently acquired subsidiaries represent about 3.7% of the Company's customer base.*Ibid.*

The Company owns approximately 1,560 miles of transmission and distribution mains with 53 distribution system pumping stations, 19 reservoirs and 209 active wells with a combined safe yield of 51.15 million gallons per day (mgd), and 64 storage tanks with a combined 7 billion gallons in storage. Response to Interrogatory WA-178; Tr. 3/17/10, p. 757. The water production in 2008 was 8.117 billion gallons, including 521.7 million gallons of purchased water. Response to Interrogatory WA-95. Approximately 35% of this amount came from surface supplies, 60% from well supplies and 5% from interconnections with neighboring utilities. Application, Exhibit A.3, p.3. The Company maintains a corporate office in Clinton with satellite offices in Naugatuck, East Windsor, Mansfield, Unionville and Danielson. These offices operate as headquarters for their respective regions. Each region contains multiple water systems, as presented in the table below.

Region	Headquarters	Systems
Shoreline	Clinton	Guilford, Chester, Soundview, Chester Village West, Mason's Island, Point O'Woods and Le-

		gend Hill
Naugatuck	Naugatuck	Central, Terryville, Thomaston, Hillcrest Fire District and Middlebury-Heritage
Northern	East Windsor	Western, Stafford, South Coventry, Reservoir Heights, Nathan Hale, Lakeview/Lakewood, Llynwood and Crescent Lake
Unionville	Unionville	Unionville, Collinsville
Crystal	Danielson	Crystal, Thompson, Plainfield, Gallup, Country Mobile Estates, SDC, Bay Mountain, Cornfield Point and Woodstock Greens
Mansfield	Mansfield	Amston Lake, Ashford Elderly, Ashford Park, Baker Hill, Banner Village, Birchwood Heights, Christ Lutheran Church, Columbia Heights, Coventry Hills, Crystal Springs, Forest Homes, General Water, Hebron Center, Lake Hayward, Lebanon Elderly, London Park, Marlborough Gardens, MASH, Mill at Stonecroft, Pilgrim Hills, Pinewoods Lane, Ponemah Village, Redwood Farms, Rivercrest, Riversedge, Sachem Village, Spice Hill, Westchester East and Westchester Village

*6 Detailed descriptions of these systems are provided in the Company's response to Interrogatory WA-86. Hydraulic profile diagrams of the Company's water systems were submitted under protective order, as Exhibits TPO-2A through TPO-2F, and Exhibits TPO-3A

through TPO-BM to the Company Application. Certain hydraulic profile diagrams are outdated due to acquisitions and new construction. As a result, all systems impacted by these changes need to be corrected. The Company is ordered to update all hydraulic profile diagrams to reflect current configurations of its water systems. Upon completion of updating the hydraulic profile diagrams, the Company must inform the Department of completion and have updated diagrams available for Department inspection.

2. WICA Projects

[11-14] In its current and projected plant balances, the Company included 67 WICA projects which were approved in the Company's Infrastructure Assessment Report (IAR). Of the 67 projects, 33 have been approved by the Department and were included in the Company's WICA surcharge as of the date of this proceeding. The 33 approved projects total $10,015,468 and consist of 32 main replacement projects and the purchase of leak detection equipment. These items were approved by Decision dated June 17, 2009, in Docket No. 08-10-15WI02,*Application of The Connecticut Water Company for a Water Infrastructure and Conservation Adjustment - Semi-Annual Filing Report Dated April 24, 2009* (CT Water 1st SAFR Decision), or by Decision dated December 23, 2009, in Docket No. 08-10-15WI03,*Application of The Connecticut Water Company for a Water Infrastructure and Conservation Adjustment-Semi-Annual Filing Report Dated October 28, 2009* (CT Water 2nd SAFR Decision). The table below summarizes all IAR and Semi-Annual Filing Report (SAFR) WICA activities in 2008 and 2009.

SAFR Docket Number	No. of Projects	Leak Detection Project	Authorized cost for projects in service but not 100% complete in DN 08-10-15WI02	Total Cost
DN 08-10-15WI02	16	1		$4,705,842
DN 08-10-15WI03	17			$5,212,136
			$97,490	$97,490
Total	33	1	$97,490	$10,015,468

In Company Late Filed Exhibit No. 13, CT Water divided the WICA projects into the following categories: a. Projects completed and funded under an SAFR, with cost of $8,757,549 in 2009; b. Projects completed under an SAFR, with cost of $1,257,919 paid in 2008 but with no cost incurred in 2009; c. WICA-eligible projects ap-

proved in the IAR, but not approved in SAFR that will be in service by December 31, 2010, with $4,340,420 in cost incurred in 2009; d. WICA-eligible projects approved in the IAR, but not approved in SAFR that will not be in service by December 31, 2010, with $232,547 in cost incurred in 2009; and e. WICA eligible projects approved in the IAR, but not approved in SAFR, under design with $228,881 in cost incurred in 2009.

*7 The combined cost for projects in the first two categories is $10,015,468. For the last three categories, the combined cost is $4,801,848 [$4,340,420 + $232,547 + $228,881]. This $4,801,848 represents the combined 2009 accrued cost of 34 WICA-eligible projects that were not approved under an SAFR. As of April 12, 2010, these projects were neither completed nor close to completion. Seven of these projects are scheduled for completion by December 31, 2010. The remaining 27 projects will not be completed until after 2010. Accordingly, because these 34 projects are not yet used and useful, the Department disallows the combined cost of $4,801,848. The WICA projects are listed in Appendix B of this Decision.

The OCC recommended that the Company submit cost data for the WICA-eligible projects included in this Decision, to ensure that projects already allowed in rates do not become part of a future WICA surcharge. OCC Brief, pp. 46 and 47. Since this Decision has disallowed the $4,801,848 spent on unfinished projects, no such submission will be ordered.

3. Water Quality

[15] The Company's compliance record for water quality requirements is reported each year in the annual Water Quality Report. The Department of Public Health (DPH) maintains primacy for the regulation and enforcement of drinking water quality, and has codified allowable water quality parameters, including sampling, testing, and reporting requirements in the State Public Health Code. Compliance with water quality standards under the Public Health Code is noted by the DPH in its routine sanitary inspection reports. Copies of water systems reports were submitted by the Company in response to Interrogatory WA-90. The Company has provided the Department with the status of actions taken to achieve compliance with any of the report requirements and recommendations. Response to Interrogatory WA-90.

The Company indicated that the water quality of the Company's distribution systems meets all requirements of the Safe Drinking Water Act, with two exceptions. For the Lakewood System, the Company failed to test and report one volatile organic compound. For the Plainfield System, total coliform bacteria exceeded the maximum concentration level. Both violations have been corrected. Response to Interrogatory WA-89; Tr. 3/12/10, pp. 344 and 345.

The Company has treatment for radon and uranium removal. The Company's uranium removal treatment installed in Madison in 2009 is the first uranium treatment in Connecticut. Tr. 3/17/10, p. 738. In this treatment, one of the most difficult problems is disposal of the waste product. CT Water contracted the responsibility for disposal of radioactive waste generated during the water treatment and it is the responsibility of the contractor. Tr. 3/17/10, pp. 741 and 742.

At the March 9, 2010 hearing in Danielson, a customer in the Thompson system complained about the presence of high sodium content in the water. Tr. 3/9/10, pp. 259 and 260. The Company has known of this problem since its acquisition of the Crystal Water Company's systems. The Company subsequently responded that the high sodium issue is a long-standing problem and is due to the proximity of a garage that stores salt and sand for winter use. When the sodium level exceeds 28 milligrams per liter, the DPH requires a water company to notify its customers, particularly for any customers that might be on a low sodium diet. Tr. 3/17/10, pp. 739 and 740. CT Water testified that it has issued such notification on an annual basis, thereby meeting the DPH's guidelines.*Ibid.*

*8 The Department directs the Company to explore whether there are any reasonable and viable remedies that might eliminate or alleviate this issue. As a first step, the Company should meet with the owner of the

garage to explore that possibility. The Company will be ordered to submit to the Department a report on its efforts and recommendations.

4. Periodic Meter Testing

[16] In order to maintain meter effectiveness, a water company must periodically test its meters for accuracy. Meter tests are necessary to determine the accuracy of meters to: (1) insure that billings to customers are accurate; (2) assist a company in controlling its levels of non-revenue water (NRW): and (3) assist customers in reducing their consumption. As specified by Conn. Agencies Regs. §16-11-88, all 5/8-inch, 3/4-inch and 1-inch meters must be tested at intervals of eight years and all other size meters at more frequent intervals. Meter testing may be required more frequently in the event of a consumer request or a complaint to the Department. Conn. Agencies Regs. §16-11-88(a) states:
If a utility's meters are maintained in compliance with the provisions for meter testing over the most current consecutive three-year period including the condition that the utility has not exceeded an amount of overdue meters equal to ten percent (10%) of the total due tests in any year over that three-year period, and if at least ninety percent (90%) of the meters so tested register an accuracy of not less than ninety-six percent (96%) nor more than one hundred two percent (102%) during the given three-year period, such utility, upon request, may be granted an extension in the time interval between test years.

In 2008, the Company requested that its meter testing schedules and reporting requirements for all its water systems be consolidated. The Company submits its Periodic Meter Testing records on an annual basis to the Department. The Company's reports for the past three years indicate that over 90% of all tested meters have registered accuracy between 96% and 102%. After reviewing the Company's Periodic Meter Testing records for 2009, the Department noted that the Company has complied with the periodic meter testing according to Conn. Agencies Regs. §16-11-88 and granted a 16-year interval for meter testing. Response to Interrogatory WA-102. The decision was based on the Company's past testing program and its current test results. Tr. 3/12/10, p. 360. At present, the Company tests meters in sizes of 5/8-inch, 3/4-inch and 1-inch for each of its regions every 16 years, the maximum meter test interval period allowed by Conn. Agencies Regs. §16-11-88. Production meters are tested annually. Tr. 3/12/10, pp. 356 and 359. The Company's meters are tested by CT Water personnel. Most of the meters are tested in a certified meter shop in the Company's East Windsor office; while some are tested in the field. The location of the meter test depends on the type of meter. Response to Interrogatory WA-102; Tr. 3/12/10, p. 359.

***9** By extending the meter test interval period, the Company is saving about 10% of material and employees time. Tr. 3/12/10, p. 361. The meters have a minimum service life of 35 years and were manufactured with newer technology to comply with American Water Works Association (AWWA) standards in order to maintain their accuracy levels for longer periods of time.

5. Vehicles

[17] Of the 175 vehicles in its possession, the Company owns 124 and leases 51. Response to Interrogatory OCC-74. The Company's criteria for vehicle replacement are 5 years/90,000 miles and work type vehicle 7 years/115,000 miles. Application, Exhibit A.4, p.4. Based on those criteria, the Company replaces 35 vehicles every year. The number of vehicles acquired by the Company in recent years include: 2007 - 27, in 2008 - 36 and in 2009 - 36 for a total of 99 vehicles. This represents a 25% increase between 2007 and 2009. Since its previous rate case, the Company spent $1.8 million on vehicle replacement and construction equipment. Application, Exhibit A.4, p. 4. In 2009, the Company spent $985,026 on the purchase of new vehicles. Response to Interrogatory OCC-74.

At the 225 employee level, the Company's fleet of 175 vehicles appears excessive. Although the Department will not make a reduction in the current proceeding for the level of vehicles, the Department expects the Company to investigate reducing its fleet of vehicles. In the

Company's next rate filing, the Department will order the Company to provide a detailed listing of vehicles from the current 175 to the level of vehicles requested in its next rate application. At a minimum, the Company shall include purchase date, actual mileage per year and function that the vehicle serves. This report will include all vehicles from this rate case, year of retirement, if applicable, as well as all additions to the fleet and associated per vehicle included in rate base.

6. Depreciation

[18, 19] In reviewing the depreciation practices of a water utility, the Department's primary concern is that capital assets are depreciated over their estimated useful service life. Proper depreciation rates are essential to adequately represent balances in asset accounts that are reflective of the expected remaining use of an asset as well as providing a tool for planning the renewal of Company infrastructure.

The Company submitted depreciation rates for its capital assets. Application, Schedule C-3.3wp; Response to Interrogatory WA-104; Late Filed Exhibit No. 7. The Department has reviewed the depreciation schedule and finds that the Company has generally applied depreciation rates and useful service lives that fall within the National Association of Regulatory Utility Commissioners (NARUC) guidelines, which have been adopted by the Department for private water companies. In future proceedings, the Department expects the Company to continue aligning its depreciation practices in accordance with the NARUC guidelines.

***10** The Department will disallow depreciation expense of $397,882 associated with plant not in service as of the last day of hearing. Plant excluded equates to $20,509,384 [$474,371,740, as stated in Late Filed Exhibit No. 69, Schedule B-1.0, less $453,862,356, as stated in Late Filed Exhibit No. 8]. The Company calculated $7,629,245 as an annual depreciation expense. Late Filed Exhibit No. 8, Schedule C-1.0 Revised. The Department approves the annual depreciation expense in the amount of $7,231,363 [$7,629,245-$397,882]. The $397,882 is arrived at by multiplying the Company's composite depreciation rate of 1.94% [FN2] by the $20,509,384 in reduced plant.

7. Information Technology (IT) System

The Company has purchased and begun installing a new J.D. Edwards computer system. The Company testified that the driving force for the new computer system was not cost savings, efficiency, or increase in productivity, but that the old system was placed in service in 1996 and parts were difficult to replace and the system was fully depreciated. The new system allows elimination of some IT cost. Tr. 3/12/10, pp. 333 and 335. As of April 12, 2010, the Company spent $6,909,831 on computer equipment and the system is not yet fully completed.

D. CAPITAL SPENDING

1. General

[20-29] In its application for Docket No. 06-07-08, CT Water provided a Five Year Capital Spending Plan for the years 2006 through 2010. At the request of the Department, the Company submitted Late Filed Exhibit No. 10, which provided a detailed year-by-year comparison of the projects originally proposed against the projects actually completed.

For each elapsed year, the Department makes the following observations:

- For 2006, the Company originally proposed 19 projects with a total estimated cost of $7,959,000. The Company completed 14 of those projects at a combined actual cost of $6,390,000, plus two new projects at a combined actual cost of $821,359, for a total cost of $7,211,359.

- For 2007, the Company originally proposed 19 projects with a total estimated cost of $6,390,000. The Company completed 11 of those projects at a combined actual cost of $3,613,410, plus three new projects at a combined actual cost of $2,165,058, for a total cost of $5,778,468.

- For 2008, the Company originally proposed 10

projects with a total estimated cost of $6,102,000. The Company completed seven of those projects at a combined actual cost of $3,308,792, plus nine new projects at a combined actual cost of $2,830,778, for a total cost of $6,139,570.

• For 2009, the Company originally proposed 12 projects with a total estimated cost of $5,175,000. The Company only completed one of those projects at an actual cost of $193,966, plus ten new projects at a combined actual cost of $4,423,529, for a total cost of $4,617,495.

Company Late Filed Exhibit No. 10, p. 1.

With each passing year, CT Water has increasingly deviated from the timing and spending schedules it originally proposed in Docket No. 06-07-08.The Company completed the construction of progressively more new projects, and delayed the construction of previously scheduled projects. For 2006, the cost of new projects totaled $821,359. For the 2008 test year and the 2009 *pro forma* year, that total had increased to $2,830,778 and $4,423,529, respectively.

*11 One example of a postponed project is the replacement of the Clapboard Hill Tank at an estimated cost of $1,000,000. This project was originally scheduled for completion in 2008. It was rescheduled to 2009 but was not constructed that year. Late Filed Exhibit No. 10, p. 1.

Moreover, this project does not appear in the Five Year Capital Spending Plan submitted in this proceeding. Application, Schedule F-7.0. While the Department might question the necessity of replacing this tank, the Company's postponement of the tank replacement to 2009 and its apparent removal from the current capital spending plan serve to support a need for improved planning tools. The Department acknowledges that CT Water should have a measure of flexibility to amend its capital construction schedule as necessary. All the same, the Department encourages the Company to consider implementing planning tools that might better assist it to more closely scrutinize its project spending plans.

2. Plant In-Service for 2008 Test Year

For 2008, there were ten major projects proposed at an estimated cost of $6,102,000. The Company incurred an actual cost of $6,139,570 for three of the originally proposed projects and nine new ones not included in the original ten projects. $2,830,778 of that amount was incurred for the nine new projects. The table below details the spending for addition of plant in service during the 2008 year.

Spending for plant in service during 2008	
CT Water Co -Shoreline Region	
Route 154 Bridge	$135,729
Soundview Metering Program	$107,622
Replace AS400, File Server, Network	$497,050
Replace CIS, FIS	$923,732
North High Street WM	$501,822
CT Water Co -Naugatuck Region	
SCADA Upgrade	$41,211
Replace Maple Hill Pump Station	$182,047
CT Water Co -Northern Region	
Replace Shaker Rd Pump Station	$836,707

Hunt WTP Electrical System, Alarms	$15,000	
Suffield/North St, WL WM REPL	$316,429	
Rockville High Service, Butcher/Grove	$1,472,374	
Spending for plant in service during 2008		
Eastern Region		
Standby Power, Gallup Well	1	$157,015
Wauregan Distribution System	$385,746	
Plainfield Center Distribution System	$329,815	
New Thompson Well	$13,929	
High Service Main to Industrial Park	$223,342	
Total, Major Projects	$6,139,570	
Multiple Systems		
Diversion Permits		
Well & Reservoir Improvements/Equipment	$272,290	
Killingworth Reservoir - 5' Increase	$9,637	
Well & Reservoir	$281,927	
Pumping Improvements/Equipment		
Pumping	$836,241	
Brooklyn Well Chlorination	$203,675	
WTP Improvements/Equipment	$285,317	
WTP Lab Improvements/Equipment	$2,050	
Mains	$1,528,203	
Services	$407,286	
Meters	$859,331	
Hydrants	$664,273	
Developer Extensions	$156,860	
Town & State Projects	$794,518	
Infrastructure Replacements	$1,956,699	
Storage Tank Projects	$330,500	
Transmission & Distribution	$6,697,670	
Tools & Equipment	$146,642	
Office Equipment	$26,734	
Vehicle Purchases	$678,626	
VA Security Implementation	$100,704	

D & C Engineering	$193,058
Control Systems	$330,155
Corporate Facilities	$326,389
General	$1,802,308

Spending for plant in service during 2008

Information Systems	$1,323,324
5p	
Aquifer Mapping	$101,883
Distribution Mapping	$120,843
Mapping	$222,726
5p	
Land & Land Rights	$62,816
Land & Land Rights	$62,816
5p	
Unassigned /OTHER Spending	$667,079
5p	
Total:	$18,524,703

3. 2009 Plant Additions

***12** For 2009, the Company proposed 12 major projects with an estimated cost of $5,175,000. The Company actually incurred a cost of $4,617,495 for one of the proposed projects and ten new ones. The cost for the new projects was $4,423,529. Company Late Filed Exhibit

No. 10, p. 1. The table below details the projected and actual spending for plant additions during 2009.

Project Description	Projected 12/31/2009	Actual
CT Water Co-Shoreline Region		
Soundview Metering Program		$950
Replace AS400, File Server, Network		$188,960
Replace Clapboard Hill Tank	$1,000,000	
Replace CIS, FIS		$2,540,708
Soundview - Additional Supply	$200,000	
Phone System Replacement	$300,000	$193,966
Lee Co. Property Storage Tank		$343,914
5p		
CT Water Co -Naugatuck Region		
Avon Interconnection, Collinsville		$650,924
New Haven Road Valve	$125,000	
Second Reynolds Bridge Clearwell	$500,000	
5p		
CT Water Co -Northern Region		
Replace Shaker Rd Pump Station		$26,129
Suffield/North St, WL WM REPL		$36,323
Rockville High Service, Butcher/ Grove	$500,000	
Replace Tolland Aqueduct Building	$100,000	
Stafford WTP-Add Chlorine Dioxide/ UV	$500,000	
Springfield Rd., Somers - WM	$500,000	

Project Description	Projected 12/31/2009	Actual
Eastern Region		
Wauregan Distribution System	$250,000	
Plainfield Center Distribution System	$200,000	
New Thompson Well		$65,069
High Service Main to Industrial Park		$412,594
Second Thompson Storage Tank		$157,958

Unionville Region		
Route 4 Distribution Improvements	$1,000,000	
Total, Major Projects	$5,175,000	$4,617,495
Multiple Systems		
Well & Reservoir Improvements/Equipment	$104,000	$610,848
Killingworth Reservoir - 5' Increase		$6,455
Well & Reservoir	$104,000	$617,303
Pumping Improvements/Equipment	$130,000	$2,398,087
Pumping	$130,000	$2,398,087
Brooklyn Well Chlorination		$3,161
WTP Improvements/Equipment	$185,000	$520,703
WTP Lab Improvements/Equipment	$25,000	$5,326
Water Treatment	$210,000	$529,190
Mains	$760,000	$1,962,250
Services	$275,000	$630,224
Meters	$565,000	$485,571
Hydrants	$245,000	$603,848
Developer Extensions	$70,000	$204,033
Prior Year Job Adjustments	$-	$-

Town & State Projects	$720,000	$671,909
Measurement Line Replacement	$-	
Infrastructure Replacements	$850,000	$10,071,657
Storage Tank Projects	$-	$63,288
Transmission & Distribution	$3,485,000	$14,692,780

Project Description	Projected 12/31/2009	Actual
Tools & Equipment	$100,000	$360,350
Office Equipment	$35,000	$36,820
Vehicle Purchases	$400,000	$883,541
VA Security Implementation	$325,000	$94,367
D & C Engineering	$20,000	$173,132
Control Systems	$218,000	$380,151
Corporate Facilities	$115,000	$311,742
Demolitions/Abandonments	$50,000	
General	$1,263,000	$2,240,103
Information Systems	$165,000	$2,072,506
Information Systems	$165,000	$2,072,506
Aquifer Mapping	$220,000	$182,626
Distribution Mapping	$119,000	$215,160
Mapping	$339,000	$397,786
Land & Land Rights	$230,000	$90,798

Land & Land Rights	$230,000	$90,798
Unassigned /OTHER Spending	$965,000	$-
Total:	$12,066,000	$27,656,048

***13** The above table illustrates actual spending of $27,656,048 and includes $10,015,468 in costs associated with WICA projects. After taking into consideration the WICA additions, overall actual spending exceeds projected spending by $5,574,580 [$27,656,048-$12,066,000-$10,015,468]. The increased spending includes more than double the projected spending for items such as tools and equipment, vehicle purchases and corporate facilities. During the present, difficult economic times, the Company must look at ways to decrease overall spending and decrease its discretionary spending.

4. Projected Plant in Service

The Company projected that plant in service at the mid-point of the rate year, December 2010, would amount to $474,371,740. Late Filed Exhibit No. 69, Schedule B-1.0 Revised. As discussed in Section II.B, above, the Department rejected the Company's multi-year rate plan which includes plant in service to the mid-point of the rate year. Instead, the Department will allow plant in service which is used and useful as of the last day of hearing. However, as of the last day of hearing, plant in service amounted to $453,862,356. Therefore, the Department reduces rate base by $20,509,384 [$474,371,740-$453,862,356].

5. Five-Year Capital Spending Plan

For the next five years, the Company proposes to spend the following amounts:

Year	Budget
2010	$25,781,454
2011	$29,040,000
2012	$30,090,000
2013	$40,540,000
2014	$36,690,000
Total	$162,141,454

Application, Schedule F-7.0.

These budgeted amounts include WICA-eligible projects at a cost of $12,000,000 for 2010 and $15,000,000 for each of the following years. The Company provided general items for future capital spending. For example, the plan includes at budget number 201, Acquisition Improvements and Pumping Improvements, a vague spending plan of $600,000 in 2010 and $900,000 for each year in the following four years. The plan also includes at budget number 505, Corporate Fa-

cilities, spending of $830,000 each year starting in 2011. Application, Schedule F. The Department will order the Company to submit a greater explanation for the capital spending for both of those items. A significant factor in this is the Company's investment in WICA-eligible projects. Throughout the proceeding, the Company has expressed a concern over customers' ability to absorb increases in rates. One way to moderate the level of these increases is to temper the level of investment. The Company must balance the needs of its customers while making infrastructure investment decisions.

6. Additional Required Adjustments to

Rate Base

The Department has approved CT Water's plant in service as of the last day of hearing, April 12, 2010. For consistency, certain other rate base adjustments must be made to match the plant in service date. Presently, the Company's set of final exhibits include rate base items through December 31, 2010. Company Late Filed Exhibit No. 69, Schedule B-1.0.

*14 The Company claims there are three areas of adjustment that need to be made: accumulated depreciation, deferred income taxes and other rate base deductions. To match dates for rate base items, the Company proposes to prorate accumulated depreciation and deferred taxes. The Company states that other rate base deductions need to be removed entirely as there has been no activity in this account during the period being measured. Since the ending in service date for plant is April 12, 2010, the Company calculates a 28% utilization for the 2010 year. This is calculated by dividing the number of days in the January 1, 2010 to April 12, 2010 period (102 days) by a 365 day year. Company Written Exceptions, p. 30. The table below illustrates the Company's requested changes to the draft Decision's rate base amount:

Item	Full Year Amount	Utilization to April 12, 2010 (28%)	Difference
Accumulated Depreciation	$7,376,879	$2,065,526	$5,311,353
Deferred Income Taxes	$1,424,350	$398,818	$1,025,532
Other Rate Base Deductions	$993,490	N/A	$993,490
			$7,330,375

Ibid., pp. 29-31.

The Company states the need for two additional rate base adjustments in the area of working capital and capitalization of employee salaries.

Regarding working capital, the Department made an adjustment for this in the amount of $314,506. This adjustment was based on a 12.5% adjustment to working capital for Department reductions to operating expenses. The Company states that its working capital allowance is tied to 2009 Operations and Maintenance expenses (O&M); therefore, a strict 12.5% disallowance is not appropriate. The Company also suggests that due to increases in O&M expenses above 2009 amounts, the Company's working capital should be increased by

$128,400. Company Written Exceptions, pp. 32 and 33.

Regarding the working capital allowance, the Department has approved O&M expenses of $33,886,369 in this proceeding. This amounts to $4,235,796 when multiplied by the 12.5% working capital factor, when adding the Company's $1,250,000 in Inventory: Materials and Supplies. Application, Schedule B-4.0. This yields an amount for working capital of $5,485,796. Compared to the Company pro forma amount of $5,153,173, working capital is increased by $332,623.

Regarding capitalization, the Department reduced rate base by $265,109 to reflect capitalization of employee payroll. The Department will not make an adjustment for this item as it extends past the period of rate base approval.

The Department is in agreement with the Company on the above noted changes. Rate base is therefore increased by $7,928,107 [$7,330,375 + $332,623 + $265,109].

E. RATE BASE SUMMARY - TABLE I

Table I shows the requested rate base by the Company, the Department's adjustments and the rate base allowed by the Department:

TABLE I

LFE 69, Schedule B-1.0 revised LFE-8 (4/12/10 in service date)	Company Pro Forma	Department Adjustments	Department Allowed	
Utility Plant in Service	$474,371,740	$20,509,384	$453,862,356	
Less: Reserve for Accumulated Dep.	$124,595,445		$124,595,445	
Net Utility Plant In-Service	$349,776,295	$(20,509,384)	$329,266,911	
Plus: Working Capital	5,153,173	332,623	5,485,796	Prepaid/Deferred Tax assets
Less: Deferred Income Taxes	53,507,760	0	53,507,760	Other Rate Base Deductions
Total Rate Base	$250,429,069	(20,176,761)	$230,252,308	

[Note: The following TABLE/FORM is too wide to be displayed on one screen. You must print it for a meaningful review of its contents. The table has been divided into multiple pieces with each piece containing information to help you assemble a printout of the table. The information for each piece includes: (1) a three line message preceding the tabular data showing by line # and character # the position of the upper left-hand corner of the piece and the position of the piece within the entire table; and (2) a numeric scale following the tabular data displaying the character positions.]**********

****
** This is piece 1. -- It begins at character 1 of table line 1.
****
****
TABLE ILFE 69, Schedule B-1.0 revised Company DepartmentLFE-8 (4/12/10 in service date) Pro Forma AdjustmentsUtility Plant in Service $474,371,740 $20,509,384Less: Reserve for Accumulated Dep. $124,595,445 _____ _____Net Utility Plant In-Service $349,776,295 $(20,509,384)Plus: Working Capital 5,153,173 332,623Less: De- ferred Income Taxes 53,507,760 0 _____ _____Total Rate Base $250,429,069 (20,176,761) _____ _____1... ...10.... ...20.... ...30.... ...40.... ...50.... ...60....**********
****
** This is piece 2. -- It begins at character 65 of table line 1.
****
****
Department Allowed $453,862,356 $124,595,445 _____ $329,266,911 5,485,796 21,616,415 0 21,616,415 5,782,374 0 Prepaid/Deferred Tax Other Rate assets Base Additions 53,507,760 Other Rate 78,391,428 0 78,391,428 Base Deductions _____ $230,252,308 _____65..70.... ...80.... ...90.... ....0.... ...10.... ...20.... ...30....**********
****
** This is piece 3. -- It begins at character 135 of table line 1.
****
****
5,782,374135..... WIDETABLE NOTE--Some parts of this form are wider than one screen. To view material that exceeds the width of this screen, use the right arrow key. To return to the original screen, use the left arrow key. TABLE ILFE 69, Schedule B-1.0 revised Company Department DepartmentLFE-8 (4/12/10 in service date) Pro Forma Adjustments AllowedUtility Plant in Service $474,371,740 $20,509,384 $453,862,356Less: Reserve for Accumulated Dep. $124,595,445 $124,595,445 _____ _____ _____Net Utility Plant In-Service $349,776,295 $(20,509,384) $329,266,911Plus: Working Capit- al 5,153,173 332,623 5,485,796 21,616,415 0 21,616,41 5 5,782,374 0 5,782,374 P repaid/Deferred Tax Other Rate assets AdditionsLess: Deferred Income Taxes 53,507,760 0 53,507,760 Other Rate 78,391,428 0 78,391,428 Base Deductions _____ _____ _____Total Rate Base $250,429,069 (20,176,761) $230,252,308 _____ _____

***15** *F. EXPENSES AND DEPARTMENT* ADJUSTMENTS

1. Vacant Positions

[30] The Company has included expenses associated with 12 vacant positions. Although the Company claims a required total workforce of 245, it does not intend on filling four of these positions and includes a vacancy factor of 3 in its filing. Company Response to OCC-ADR 8. Therefore, the total workforce proposed by the

Company is 238 [245-4-3]. When compared to the test year workforce of 226, this produces an increased employee level of 12.

The OCC states that the data provided in response to Interrogatory OCC-139 shows that for the test year, CT Water's active full time equivalent (FTE) levels ranged between 215 and 225 positions, with approximately 225 active employees for the last third of the year. The OCC believes the 225 FTE level is consistent with the Company's past history and is a reasonable basis for ongoing operations. CT Water has provided no compelling evidence to demonstrate that a 5% escalation in employee levels is necessary at this time. The OCC continues that over the years CT Water has acquired numerous water systems and companies and has added a number of employees. The OCC also believes that when a larger company acquires a smaller water system, it assumes the responsibility of operating and managing the system more efficiently than the previous small owner. However, this does not appear true with CT Water's acquisitions. Therefore the OCC recommends a reduction of $624,528 based on the reduction of 12 positions at an average salary of $52,044. Company Response to OCC-ADR 8; OCC Brief, p. 51.

The Company states that it has included vacancies in its requested payroll expense and that it has removed three FTEs from its *pro forma* payroll expense because it represents the average number of vacancies in any given year. In response to OCC's adjustment, the Company states that 12 vacancies is an anomaly and that it intends to fill those vacancies because they represent employees that are on the front line serving customers. Lastly, the Company states that the OCC failed to consider that some of the vacancies are part-time or seasonal positions and if such positions were removed from the payroll expense, they should not be removed as FTEs. Company Reply Brief, pp. 19-20.

CT Water has steadily increased its employee count from 2005 through 2009. Company Late Filed Exhibit No. 20.

Year	Number of Employees
2005	191
2006	200
2007	206
2008	226
2009	225

This five-year period shows increases with the exception of 2009 which experienced a decrease. CT Water has acquired systems and as a result increased employee count in that manner. However, the Department must agree with the OCC that CT Water has not used this growth in its workforce efficiently. The Company projects a workforce of 244 positions, although the Company is requesting funding for 238 positions. Company Response to Interrogatory WA-200. Employee growth has outpaced customer. The Company has experienced incremental customer growth on a yearly basis and with larger customer additions has added employees such as in the Eastern acquisition. The Department also notes that the increasing workforce has paralleled the Company's increase in regulated activities, particularly NEWUS.

*16 In terms of the Company's claim that the positions to be adjusted include part-time or seasonal positions, a review of the positions shows two part time positions out of a total of 19 vacancies. The Company has not clearly identified which positions will be filled and which are included in the vacancy factor. Including

these part time positions, at lower salaries, in the average salary accounts for these positions and is therefore reasonable for adjustment purposes.

In its response to Interrogatory WA-200, the Company itemized the 226 positions it currently has on its payroll. This response also lists, by position, the Company's vacancies. In its written exceptions, the Company identified seven positions that it states most impact day-to-day operations and quality of service. Company Written Exceptions, p. 21. The Department will allow these seven positions, and therefore denies the expenses associated with the five remaining vacant positions.

The average salary for employee vacancies is $67,600 [$1,284,517 / 19]. Company Response to OCC-ADR 8. Therefore, the Department reduces payroll by $338,000 [$67,600 X 5] to reflect the elimination of these positions.

CT Water is cautioned that rate future applications will be scrutinized for overall size of the Company workforce, including executive positions. The Company is expected to thoroughly evaluate necessary positions and consolidate functions where possible through attrition.

2. Annual Wage Increases

[31] CT Water proposes to increase its salary levels by 4% for the rate year and continue annual wage increases to keep in line with the market. Benoit PFT, pp. 15 and 16.

The OCC advocates that in light of the deep recession affecting customers, it is inappropriate to grant wage increases as high as 4%. OCC Brief, p. 54. The Company has increased its payroll in the range of 3.4%-3.7% from 2008-2009, with executive officers receiving as much as 4.7%. The OCC believes that the increase in wages should be limited to 2%.*Ibid.* As a result, CT Water's proposed payroll increase should be reduced by $510,199. OCC Brief, p. 55.

CT Water contends that salaries must be maintained at the market level to attract reliable, high quality employees. Tr. 4/9/10, pp. 1678 and 1679. CT Water states that it evaluates the Towers Perrin and Mercer market studies to be certain that its wage increases remain at the market level.*Ibid.*, Company Brief, p. 46. Furthermore, CT Water states that it has tried to diminish the payroll increase as their top executives have foregone wage increases for 2009. Thornburg PFT, p. 6.

The AG suggests that the Department reduce the Company's proposed 4% wage increase for all of its employees and that a 2% wage increase be approved, saving ratepayers $250,000. AG Brief, p. 11.

The Department is concerned about the escalation of payroll and the Company's unwillingness to adjust to the current economic climate in terms of wages. The Department finds that a 4% salary increase is excessive at this time. Therefore, the Department will allow a 3% escalation for payroll consistent with the Decision dated March 31, 2010, in Docket No. 09-10-08,*Application of The Avon Water Company to Increase Rates* (Avon Water Rate Case Decision). The Department therefore reduces the annual wage increase by $125,000.

3. Merit and Employee Awards

*17 **[32]** CT Water proposes to include $160,196 in *pro forma* expenses associated with merit and employee awards as reflected in accounts 920 and 660 during the test year. Company Response to Interrogatory OCC-221, p.1.

The OCC argues that these amounts should be removed as non-recurring costs that are not recoverable from the ratepayers because of the deep recession affecting Connecticut. Sobolewski/Larkin PFT, p. 39. Furthermore, CT Water did not provide supporting documentation for these expenses. Sobolewski/ Larkin PFT, p. 39. The OCC recommends that $160,196 [$138,400 + $21,796] be disallowed. Application, Schedule C-3.2-008, WP G2.6-wp, pp. 12 and13.

As with the annual wage increase, the Department is concerned about the status quo in terms of increasing overall payroll in the current economic climate and the Company's unwillingness to adjust. Accordingly, the Department reduces this expense by $160,196.

4. Payroll Tax

[33] Based upon the $623,196 [$338, 200 + $160,196 + $125,000] reduction in total payroll relating to vacancies, merit increases and wage increases, payroll taxes are decreased by $48,921 [$623,196 X 7.85%].

5. Medical and Dental

[34] The Company requests expenses for medical and dental insurance in the amount of $2,508,619, an increase over test year expense of $997,601. Application, Schedule C-3.2-010. Adjustments include a 10% projected increase in 2010, a 5% increase applied to the first half of 2011 and increases due to coverage of new employees. Application, Schedule C-3.2-.010.

The OCC states that the requested increase includes medical and dental benefits for 11 additional positions which relate to employees who are not currently on the Company's payroll. The OCC believes that these employees should not be included in the Company's proposed wage and salary expense (*see* Section II.F.2) and recommends that the Department remove $91,850 from CT Water's request related to employees who do not currently exist on the Company's payroll. The OCC also argues that the Company has requested a 5% increase in medical and dental expense for the first half of 2011 which is beyond the beginning and mid-point of the rate year and far beyond the December 31, 2008 test year. Therefore, the OCC recommends that the Department remove this increase for 2011 which amounts to $117,769. The OCC recommended adjustment to medical and dental expense is $209,619 [$91,850 + $117,769]. OCC Brief, pp. 55 and 56.

As the Department is removing 5 of the 12 salaries associated with the vacancies, it will also remove the medical and dental expense associated with these employees. Therefore, the Department will reduce the medical and dental expense by $38,271 [$91,850 X 5/12].

Regarding the proposed 2011 escalation of the 5% increase in medical and dental expense, the Department finds that treatment similar to that of pension expense and Post Retirement Medical Expense is also appropriate for this expense. Since the rate year enters both years (2010-2011), recognizing a modest increase for the second half of the rate year is appropriate in estimating rate year costs.

6. Pension Expense - Actuarial Estimate

***18 [35]** The Company estimated its pension expense based on an actuarial estimate for calendar years 2010 and 2011 to arrive at an average pension cost of $2,294,000 for the rate year. The test year expense was $1,257,741 and therefore the Company seeks to increase the pension expense by $1,036,259. Application, Schedule C-3.2-006.

The OCC states that the actuarially determined pension cost based on the value of pension assets as of December 31, 2009, is $2,173,000 and argues that this is the amount to use as it represents a known and measurable amount. The OCC therefore recommends a reduction to the pension expense of $121,000. OCC Brief, pp. 49 and 50.

The Company states that the Department has in the past approved pension expenses based on actuarial estimates for the rate year. The requested pension expense is based on actuarial estimates for the rate year and in line with the Department's past practice. Company Reply Brief, pp. 17 and 18.

The Department agrees that an averaging of 2010 and 2011 is an appropriate method for estimating the pension expense for the rate year which runs from July 1, 2010 to June 30, 2011. Since the rate year enters both years, averaging of this expense is reasonable.

7. Pension Expense - Vacancies

In connection with the OCC's recommendation of removing 12 vacant positions from payroll, the OCC has also made an adjustment to the pension expense. The OCC suggests a $109,000 reduction by multiplying 5% (12 vacancies/238 total employees) by its recommended

pension expense of $2,173,000. OCC Brief, pp. 49 and 50.

The Company states that the OCC's adjustment is not valid as vacant positions do not impact the pension expense. The actuarially determined pension and post-retirement medical expense reflect the Company's actual number of employees as of December 31, 2008, not the level of FTEs authorized in rates. Additionally, any individual that fills one of the positions is not eligible to participate in the pension plan as employees hired on or after January 1, 2009, are not eligible to participate in the Company's pension plan. Company Reply Brief, pp. 18 and 19.

No pension expense adjustment is warranted for vacancies as the Company's pension plan has been closed to new employees.

8. Post Retirement Medical Expense

[36] As with pension expense, the Company estimated its post retirement medical expense based on an actuarial estimate for calendar years 2010 and 2011 to arrive at an average pension cost of $901,500 for the rate year. The test year expense was $1,565,471. Therefore, the Company seeks to decrease this expense by $633,971.

The OCC states that the actuarially determined post retirement medical expense cost based on the value of pension assets at December 31, 2009, is $750,000 and argues that this is the amount that should be used for expense determination. The OCC therefore recommends a credit to this expense of $840,471 or $176,500 above the Company's calculated credit. OCC Brief, p. 50.

*19 The Company states that the Department has in the past approved post retirement medical expense based on actuarial estimates for the rate year. The requested pension expense is based on actuarial estimates for the rate year and in line with the Department's past practice. Company Brief, pp. 17 and 18.

The Department finds that an averaging of 2010 and 2011 is an appropriate method for estimating post retirement medical expense for the rate year which runs from July 1, 2010 to June 30, 2011. Since the rate year enters both years, averaging of this expense is reasonable.

9. Employee Severance

The OCC states that expenses for this account should be reduced by $81,422 because these non recurring costs that should not be borne by ratepayers. Sobolewski/Larkin PFT, p. 38, OCC Brief, p. 58.

CT Water contends that employee severance costs were included in test year expenses but were not used to develop *pro forma* expenses. Company Reply Brief, p. 23.

The Department finds that no adjustment to employee severance is needed as review of the Application confirms the Company's contention.

10. Directors and Officers Insurance

[37] The Company requests a rate year expense of $152,583 for Directors & Officers (D&O) Liability Insurance. This amount was then reduced by an allocation amount which the Company included in Schedule G2.6 WP, at page 14.

The OCC recommends a 70% disallowance to CT Water's Directors and Officers (D&O) Liability Insurance or removal of $108,191 of the proposed rate year expense for D&O. The OCC believes that water company ratepayers should not be required to pay for a charge that in reality saves the shareholders from their own poor decisions. OCC Brief, pp. 24, 60 and 61.

The OCC further asserts that in Docket No. 07-07-01 *Application of The Connecticut Light and Power Company to Amend Rate Schedules*, the Department disallowed 70% of the D&O Insurance expense which The Connecticut Light and Power Company (CL&P) was requesting, stating the following reason:
The Department agrees in part with the OCC that ratepayers should not be required to protect shareholders from the decisions they make in electing the BOD. However, the Department historically has allocated a

percentage to ratepayers to protect from catastrophic lawsuits. Accordingly, the Department finds it appropriate to allocate 30% to ratepayers and 70% to shareholders. This allocation is fair and consistent with the level allowed in the Decision in Docket No. 03-07-02,*Application of The Connecticut Light and Power Company to Amend Its Rate Schedules.*
OCC Brief, p. 61.

The OCC recommends a disallowance of $108,190, or 70%, to CT Water's proposed D&O insurance expense for the rate year of $152,583, allowing an expense in the rate year of $44,393 as detailed below. OCC Brief, p. 61.

D&O Insurance Expense	
Rate Year Expense[3]	$152,583
Less: MASS Formula Allocation 3.02%	($4,608)
CT Water Rate Year Expense	$147,975
Less: 70% Shareholders' Allocation	($103,582)
Rate Year D&O Expense	$44,393
Adjustment to D&O Expense per OCC	($108,190)

***20** In its Decision dated November 28, 2006, in Docket No. 06-05-10,*Application of* Birmingham Utilities, Inc. to Increase its Rates (Birmingham Utilities Rate Case Decision), the Department calculated an expense of $20,413. Birmingham Utilities originally allocated $22,462 for D&O Insurance. The Department reduced the D&O expense by $2,049 based on the modified the MASS Formula. That was also the case in the Decision dated December 23, 2009, in Docket No. 09-06-10,*Application of The Hazardville Water Company to Amend Rate Schedules* (Hazardville Water Rate Case De- cision).

In both of these dockets, the OCC made deduction recommendations to the D&O expense based on the MASS Formula. The unallocated portion was not recommended to be reduced in either of those rate cases. In the instant docket, the OCC makes a specific reduction to the unallocated portion of D&O expense. OCC Brief, p. 61.

The Company contends that water companies are allowed to recover their full D&O insurance expense (less appropriate affiliate allocations). Company Reply Brief, p. 24. The Company also states that the Department disallows a portion of the D&O insurance expense only when the water utility has unregulated affiliates.*Ibid.*, p. 25.CT Water has already allocated a portion of its D&O insurance expense to its affiliates. Company Reply Brief, p. 25; OCC Brief, p. 60.

As a precedent, CT Water relies on the Avon Water Rate Case Decision, at page 20; the Hazardville Water Rate Case Decision, at page 20; and the Birmingham Utilities Rate Case Decision, at page 36. CT Water contends that in those Decisions, the Department approved D&O insurance expense less allocations and notes that D&O insurance is an appropriate expense providing benefit to ratepayers and shareholders. Company Reply Brief, pp. 24 and 25.

In those dockets, the Department made deductions to the D&O strictly through the MASS Formula. However, the Department is not precluded from making additional reductions to this expense as necessary. D&O insurance provides a benefit to shareholders and ratepayers as necessary. It protects Board of Director members in their decision making. Absent this protection, a company would have difficulty attracting board members. While the MASS Formula reduction reduces this expense, this

is for unregulated entity purposes. To capture the shareholder benefit of D&O insurance, the Department finds it necessary to also reduce the regulated entity portion of this amount. The Department will reduce the regulated company D&O insurance amount by 50% to account for the shared benefit mentioned above. Based on a Company requested expense of $152,583, the Department reduces this by the 6.13% MASS Formula allocation, producing for a net regulated entity amount of $143,230; this amount is then reduced by $71,615 [$143,230 X 50%].

11. Chemicals

[38] The Company included in its *pro forma* expenses $1,912,976 in account number 641 for Chemicals. Late Filed Exhibit No. 22a. To adjust the test year chemical expense to the *pro forma* rate year the Company requested an increase of $580,601 and an inflation increase of $15,182. Application, Schedule C-3.2-015. These expenses increased by $244,839 from test year 2008 to 2009. The Company states that since its last rate case filing, the price for treatment chemicals has increased by $1 million. Benoit PFT, pp. 12 and 13.

***21** The OCC recommends that the Department adopt the actual known and measurable chemical expense for the year ended December 31, 2009, as the appropriate level of chemical expense. OCC Brief, p. 57.

The Company states that the OCC's recommendation to reduce the chemical expense to actual 2009 levels is inappropriate because wet weather in 2009 resulted in abnormally low consumption and chemical costs continue to rise. The Company further states that chemical costs are variable costs which fluctuate depending on consumption and that limited supply and production has put the market into a 'tailspin' that will continue at least through the rate year. Company Reply Brief, p. 22.

The AG states the Department should disallow approximately $580,000 that the Company proposes to recover for chemical expenses. The AG further states that the expenses are 44% higher than the test year and the cost associated with these are unsupported. AG Brief, pp. 11 and 12.

The Company's chemical expense has increased approximately 24% from 2007 to 2008 and 19% from 2008 to 2009. The Company requests a $350,944 increase from actual 2009 expenses to the rate year which equates to an approximate 23% increase. Late Filed Exhibit No. 22a. The Company premise for the increase in chemical costs is that wet weather in 2009 resulted in abnormally low consumption and that these are variable costs which fluctuate depending on consumption. Company Reply Brief, p. 22. The Company testified that the price of chemicals on a per unit basis increased significantly as it has gone through 2009. The Company looks at its ability to project the price, but it is all a projection just like many of its other O&M expenses. Tr. 4/9/10, pp. 1667 and 1668.

The Department is concerned with the rate of increases over the years for the costs of chemicals. The Department also recognizes that the Company can be subject to spikes in chemical cost by product type. Company Response to Interrogatory OCC-39. The Company's pricing for yearly and multiple-year contracts from its chemical suppliers and vendors may be market driven to a certain degree. However, there is no basis to determine that prices will continue to increase beyond the rate year. Chemical costs are fixed in the sense that they are necessary expenses to purchase various products used to treat water to make it potable. Likewise, the Department believes that chemical costs are also variable increasing or decreasing with fluctuations in weather patterns and consumption. The Company's projection that chemical costs will increase in the rate year and beyond is a prediction that is neither measurable nor reliable. The Company's assumptions do not justify its requested 23% increase from 2009 to the rate year. In addition, the Department is not convinced that the Company has done enough to manage and reduce its chemical costs and expect it to continue to look for ways to reduce those costs. Company Brief, pp. 47 and 48; Company Response to Interrogatory OCC-40; Tr. 4/9/10, pp. 1666-1673.

***22** Further, the Department disagrees with the OCC position to adopt the December 31, 2009 amount as the

appropriate level of chemical expense. The Department will allow a 10% increase in chemical expenses from 2009 to the rate year and reduces the operation and maintenance expenses by $194,741. [FN4]

12. Purchased Water

[39] The Company proposed for inclusion in its *pro forma* expenses $1,245,133 in account number 602 for Purchased Water. Late Filed Exhibit No. 22a. To adjust the test year purchased water expense to the *pro forma* rate year the Company request an increase of $192,947 and an inflation increase of $41,510. Application, Schedule C-3.2-014. These expenses increased by $128,572 from test year 2008 to 2009. This account includes the cost at the point of delivery of water purchased for resale. The Company states that in the 2008 test year, the purchased water expense was reduced by $192,947 from what it would have been due to a nonrecurring credit for the prior year's water purchases assuming the same gallonage as in 2008 actual. Application, Schedule C-3.2-014; Company Response to Interrogatory WA-130. The Company also states that it sought to reduce or defer operating expenses and one of its notable gains was a renegotiated purchased water contract with the Metropolitan District Commission (MDC). Thornburg PFT, p. 6. In addition, the Company states that the OCC's recommendation to reduce the purchased water expenses to actual 2009 levels is inappropriate for the same reasons delineated in its water chemicals argument. Company Reply Brief, p. 22.

The OCC recommends that the Department adopt the most recent purchased water expense for the year ended December 31, 2009, as a proxy for forecasted rate year expenses. OCC Brief, p. 56.

The Company's purchased water expense has increased approximately 13% from year 2008 to 2009. The Company requests a $107,610 increase from actual 2009 expenses to the rate year which equates to an approximately 10% increase. Late Filed Exhibit No. 22a. The Department questions whether a renegotiated water purchase contract with the MDC in 2008 caused a nonrecurring credit received in 2008 and a resulting projected increase in purchased water in the rate year. An analysis of the Company's 2009 audited financial statements Form 10-K shows that it has an off-balance sheet arrangement and contractual obligation with the MDC. The Company's agreement with the MDC to purchase water became effective in 2000 for 50 years. The Company's future contractual cash obligations as of December 31, 2009, are payments of $1,977,000 due in years 2 and 3. Late Filed Exhibit No. 20, p. 19. The Company's projected purchase water expenses for the years 2010 and 2011 total approximately $2.5 million. These projections are significantly higher than the Company's contractual cash obligations for the same period.

In addition, the Company testified that the Collinsville system is another source for which it purchased water that, based on the footnotes in the Company's Form 10-K, is not part of the payments of $1,977,000 due in years 2 and 3. Tr. 4/9/10, pp. 1657-1666. The Department is aware that the Company is not obligated to purchase water from Collinsville nor are they listed as a vendor. Company Response to Interrogatory WA-130, Exhibit WA-130.

***23** The Company's projected increase in purchased water expense in the rate year is not predictable. The Company can not justify its assumption that the MDC will pass along whatever rate increase(s) it has in the rate year. Tr. 4/9/10, p. 1661. The Department believes that purchased water costs are fixed and necessary to serve some of its systems. Likewise, these costs are variable costs that can increase or decrease with fluctuations in weather patterns and consumption year to year.

Accordingly, the Department will adopt the most recent purchased water expense for the year ended December 31, 2009, as a proxy for forecasted rate year expenses and reduces operation and maintenance expenses by $107,610.

13. Fuel or Power Purchased for

Pumping

[40] The Company proposed for inclusion in its *pro forma* expenses $2,305,771 in account number 623 for

Fuel or Power Purchased for Pumping. Late Filed Exhibit No. 22a. To adjust the test year expense to the *pro forma* rate year these expenses decreased by $49,148 from test year 2008 to 2009. The Company requests an increase of $127,121 from actual 2009 expenses to the rate year. This account includes the cost of fuel or power purchased used directly in operation of pumps. The Company states it sought to reduce or defer operating expenses and that one of its notable gains was that it successfully bid major electricity contracts to capture energy savings available in the open market. Thornburg PFT, p. 6. The Company also states that one of the proactive measures it has taken to minimize the impact of rising expenses on rates is to enter into a fixed price contract for 50% of its purchased power. Company Brief, pp. 43 and 44. In addition, the Company states that the OCC's recommendation to reduce the Fuel or Power Purchased for Pumping expenses to actual 2009 levels is inappropriate for the same reasons delineated in its water chemicals argument. Company Reply Brief, p. 22.

The OCC states that the Company has entered into a contract with TransCanada for the purchase of 50% of its generation service. The OCC also states that the rate for this contract is fixed through 2012 and represents a decrease from 2008 and 2009 purchases through CL&P's Standard Service generation. Similarly, the price for the other 50% of generation purchased by the Company through CL&P's Standard Service also decreased in 2010. The OCC recommends that the Department reduce this expense to reflect the 2009 level of expenses. OCC Brief, p. 59.

The Company's fuel or power purchased for pumping expense has increased approximately 3% from the year 2007 to 2008 although it decreased 2% from 2008 to 2009. The Company requests a $127,121 increase from actual 2009 expenses to the rate year which equates to an approximate 6% increase. Late Filed Exhibit No. 22a. The Department believes that fuel or power purchased for pumping costs are variable and change with fluctuations in weather patterns and consumption from year to year. The Company's projection that these costs will increase in the rate year and beyond is a prediction that is neither measurable nor reliable. The Company testified that in 2008 that it did not sell as much water as it expected to because of the weather conditions and that those sales have a direct impact on its overall electric bill. The Company also stated that it attributes that decline not to the rate, but as a result of not selling as much water and needing the power. Tr. 4/9/10, pp. 1674 and 1675. Therefore, the Company's projection that fuel or power purchased for pumping expense will increase in the rate year is not predictable.

***24** In light of the above, the Department will reduce this expense to reflect the 2009 level of expenses and reduces operation and maintenance expenses by $127,121.

14. Inflation Adjustment

[41] The Company requested an inflation adjustment of 3.5% for Rate Year 1 based upon its computation of inflation using data from the December 1, 2009 *Blue Chip Financial Forecasts*. This request is based on 2.5 years of an average blended inflation rate covering the period from the midpoint of the test year to the midpoint of the rate year. Application, Schedule C-3.2-042 Workpaper; Company Response to Interrogatory WA-6. For Rate Years 2 and 3, the Company requested an inflation rate of 1.8% in each year based upon their review of The Blue Chip Financial Indicators Index. Company Response to Interrogatory OCC-1, Exhibit OCC-1B, p. 24 (Schedule C-3.2-042B); Company Response to Interrogatory OCC-1, Exhibit OCC-1C, p. 24 (Schedule C-3.2-042C).

The OCC is concerned over the Company's computation of the proposed inflation rate and suggested updating it by using the February 1, 2010 *Blue Chip Financial Forecasts*. Additionally, the OCC does not agree with the Company's request of 2.5 years of inflation. Since the OCC recommends cutting off plant additions at December 31, 2009, the OCC recommends only 1.5 years. Taken together the OCC's recommended inflation rate is 1.75%. Sobolewski/Larkin PFT, pp. 30 and 31; Late Filed Exhibit No. 55; OCC Brief, Schedule C-5. Given that the OCC recommended a shorter time frame

for the inflation rate applicable to Rate Year 1, its proposed inflation rate for Rate Years 2 and 3 is higher at 2.3%. Late Filed Exhibit No. 55.

The Department's past precedent has been to use eight quarters or two full years of inflation. Tr. 3/12/10; pp. 382 and 383. The Company cites this statement and provides reference to numerous Department Decisions, where two full years are used in support of its 2.5 year proposal as opposed to the OCC's 1.5 year recommendation. Company Brief, p. 48. What the Company fails to do however, is detail the remainder of the Department's cross examination which brought forth that the two years of inflation is applied utilizing a percentage change approach as opposed to an additive approach recommended by the Company. Based upon cross examination, the Department percentage change approach would yield an inflation adjustment of 1.47% with two full years. Tr. 3/12/10, pp. 384-388. The OCC made a similar finding applying the multiplicative approach to its cutoff date of December 31, 2009, indicating a 0.73% escalation rate for inflation. Late Filed Exhibit No. 55.

Given that the OCC's final recommendation is for a 1.75% inflation escalation rate, the Department will allow 1.75% inflation escalation instead of the 1.47% borne out by the Department's analysis. The adjustment to expense is $165,503, one-half of the expense proposed by the Company [3.50%-1.75%]. Given the multi year rate plan is disallowed, the Department will not address Rate Years 2 and 3.

15. Conservation Program

*25 In exchange for approval of its WCAM, the Company proposed to increase expenses by $100,000 to increase its conservation efforts. Thornburg PFT, p. 16. The Company has reflected this additional expense in the Application. Application, Schedule C-3.4-004.

In Section II.G.5 below, the Department has rejected the Company's WCAM proposal. As the $100,000 in conservation expenses is tied to approval of the Company's WCAM, this expense is being eliminated due to the rejection of that proposal.

16. Non-Revenue Water

[42] Non-revenue water (NRW) is the difference between the volume of water produced or purchased by a company and the volume of water delivered to its customers. The Department concurs with the generally accepted goal of both the AWWA and the NARUC that a water utility's non-revenue water target should not exceed 15%. In this age of conservation, it is particularly important for all water companies to continue to initiate supply and demand management techniques to curtail high NRW levels. Lowering NRW will tend to reduce costs to customers.

The Company provided the NRW percentages for each of its water systems for the 2004-2008 period. Application, Schedule G-6. The Company calculated an average of 11.3% NRW for all systems in 2008. The schedule also provided the total water production and the unaccounted-for water for each water system. The schedule indicates the following:

• Guilford System: from 2007 to 2008 NRW increased more than double from 7.8% to 16.7% or a loss of over 224 million gallons of water; • Masons Island System: from 19.2% NRW in 2007 increased to 30.6% in 2008; • Bay Mountain System: from 1.8% NRW in 2007 increased to 16.0% in 2008; • Heritage-Middlebury System: from 0.8% NRW in 2005 increased to 26.3% in 2008; • Terryville System: from 4.6% NRW in 2007 increased to 11.9% in 2008; • Collinsville System: from 2007 to 2008 NRW increased more than double from 11.3% to 25.9% or a loss of over 51.6 million gallons of water; • Hillcrest Fire District System: from 27.6% NRW in 2007 increased to 62.4% in 2008; • Lakeview/ Lakewood System: from 14.2% NRW in 2007 increased to 25.1% in 2008; • Crystal System: from 12.7% NRW in 2007 increased to 22.0% in 2008; • Thompson System: from 18.5% NRW in 2007 increased to 33.5% in 2008.

The above water systems are only some of total metered water systems where NRW has increased from 2007.

Below are metered water systems which have decreased NRW in 2008:

• Central System: from 17.5% NRW on 2007 decreased to 15.3% in 2008; • Heritage-Middlebury System: from 27.6% NRW in 2007 decreased to 26.3% in 2008; • Western System: from 6.8% NRW on 2007 decreased to 4.8% in 2008

• Country Mobile Estate System: from 20.9% NRW in 2007 decreased to 18.5% in 2008;

• Reservoir Heights System: from 19.2% NRW in 2007 decreased to 18.3% in 2008;

• South Coventry System: from 28.7% NRW in 2007 decreased to 26.8% in 2008.

Comparison of the above NRW amounts of metered water systems shows that NRW increased suddenly from 2007 to 2008 for the majority of the systems. All systems which have decreased NRW, with the exception of the Western System, still have 2007-2008 NRW percentages over 15%. The percentage of NRW is very high for many systems. The 62.4% of NRW in the Hillcrest Fire District System is troublesome.

***26** The table below indicates an increase of 2009 NRW of 50% over the 2008 year and of 45% over the Company's last rate case.

TOTAL ALL METERED SYSTEMS (in TG)

Year	Total Water Production	Unaccounted-For Water	Change since 2007 Rate Case
2004	8,179,421	914,391	11.2%
2005	8,543,810	1,033,408	12.1%
2006	8,057,860	906,565	11.3%
2007	8,340,343	820,820	9.8%

	2008	8,048,170	966,435	12.0%
22%				
				2009
7,729,805	1,099,365	14.2%	45%	

Late Filed Exhibit No. 28B, Updated Schedule G-6.0.

Taking into consideration the above described NRW situation, the Department will disallow $59,545 from proforma production expenses. This reduction is the result of a Company calculation of the cost associated with NRW for each system that exceeded NARUC's 15% standard. Late Filed Exhibit No. 28A.

17. Tank Painting and Maintenance

[43] The Company requested a $31,623 adjustment for tank painting amortization and maintenance expense. The Company lists a test year expense of $104,912 and *pro forma* expense of $136,536. Application, Schedule C-3.2-026. The *pro forma* tank painting amortization and tank maintenance expense includes forecasted amortization expenses of $350,000 for the Killingly Industrial Park (KIP) tank, $50,000 for the Elm Street tank, and $50,000 for the Strafford Springs tank for painting and maintenance. Response to Interrogatory OCC-46. The Company plans to paint and provide maintenance to these three tanks in 2010. Tr. 3/15/10, p. 554.

The OCC recommends a $9,434 reduction in the amortization for *pro forma* purposes based on the 2009 calculated actual amortization and tank maintenance expense of $95,478. OCC Brief, p. 57.

The Company submitted $79,126 in actual tank painting amortization expense for 2009. Response to Interrogatory OCC-46. The Company proposed a tank maintenance expense of $21,800. Application, Schedule C-3.2-026. The Department approves these expenses. The total of the tank painting amortization and tank maintenance expenses for 2009 is $100,926 [$79,126 + $21,800]. The tank painting amortization and tank maintenance expense for 2008 is $104,912. Application, Schedule C-3.2-026. Therefore, the Department adjusts total tank painting amortization and tank maintenance expense by $3,986 [$104,912-$100,926]. As a result, the Department reduces the test year amortization and maintenance expense by $27,637 [$31,623-$3,986].

18. MASS Formula

[44-46] The Company allocates corporate and other shared expenses among its regulated and non-regulated subsidiaries using the MASS Formula. The MASS Formula looks at factors of operations as a whole and determines the regulated and non-regulated portion of each of these factors. The Company uses a three-factor approach to determine allocation of costs. The three factors used are: gross revenues, gross plant and gross payroll.

***27** The OCC states that a modified version of the MASS Formula consistent with Department precedent should be applied to remove the very high level of subsidization that is being done currently. Specifically, the OCC takes issue with including all three factors in the MASS Formula for the Company at this time. Based on the Company's method the regulated utility would be forced to absorb over 98% of the total allocable charges. This is due to the fact that the unregulated affiliates own very little or no plant, and have no employees or direct labor costs, but operate their business activities using equipment, and staff from the regulated water company. Although any allocation of expense provides some level of expense recovery to CT Water, the subsidiaries do not have to incur the capital or carrying costs for their own equipment, or pay operations, maintenance or depreciation costs on most of this equipment, or pay the high costs to acquire and train employees and officers of the unregulated companies. OCC Brief, pp. 64 and 65.

The OCC continues that having access to the specialized and high cost equipment and personnel needed for their operation is a unique opportunity and a tremendous benefit to the unregulated subsidiaries. The OCC believes that allocating almost 100% of the costs to the regulated utility does not recognize this benefit to the

subsidiaries. The OCC recommends the allocation of shared expenses, office expenses, president's salary and benefits, salary and benefits of the finance staff, and rent be based on a modified, two-part MASS Formula, based on the gross revenues and plant factors of the subsidiaries and parent company. This recommendation is consistent with the Department's Decisions for rate case proceedings involving Birmingham Utilities and Hazardville Water, wherein a modification to the MASS Formula was utilized to allocate costs amongst parent and subsidiary companies. Birmingham Utilities Rate Case Decision, pp. 34-37; Hazardville Water Rate Case Decision, pp. 8-21.

The allocation factor being recommended by the OCC is 3.03% as opposed to the Company's 2.01% allocation. After applying the 3.03% allocator to relevant expenses, the OCC recommends an increased expense adjustment of $116,442 associated with the modified MASS Formula.*Ibid.*, pp. 65-69.

The Company states that it has used the MASS Formula since 1998. Recently, the OCC has pursued, and the Department acquiesced to, a modification of the MASS Formula. CT Water disagrees with the modification of the MASS Formula because it to be a traditional and proven allocation method if one of its parts is removed from the allocation determination. According to the Company, the OCC has not provided compelling evidence to justify completely disregarding one part of the MASS Formula. The OCC suggests that the inclusion of the payroll component somehow provides an unfair result. The OCC agrees that the numbers are accurate, but believes the use of all three traditional components does not 'seem' to be fair. In the opinion of the Company, the three-part MASS Formula is a fair and reasonable allocation method and should not be modified. Company Brief, pp. 50 and 51.

***28** Additionally, the Company argues that the OCC fails to recognize the benefits of unregulated business activity. In the past two years, CT Water directly charged over $1 million each year in employees' salaries to its affiliates. It also indirectly charged some of its payroll through the MASS Formula. These charges reflect amounts that would otherwise be completely charged to CT Water and passed on to ratepayers. Changing CT water's indirect cost allocation method will require the Company to re-evaluate its continued involvement in unregulated activities. The net result on customers of no longer engaging in unregulated activities will be higher costs because over $1 million of direct payroll will come back to the Company as discussed above. Mr. Thornburg concurs that a prospective review of indirect cost allocations would be appropriate. But an ad hoc adjustment in an attempt to reach rough justice is not the way to address affiliate cost allocations.*Ibid.*, p. 51.

The OCC states that CT Water is threatening to discontinue its investments in unregulated activities should the Department adopt the allocation method advocated by the OCC, it would not object if the Company moves all of its unregulated activities above the line, because as indicated in the Decision in Docket No. 98-12-22, the Company's unregulated activities were related to its core business. Thus, the integration would benefit both ratepayers and shareholders, a business plan that the OCC would certainly support. Similar to other recent water utility cases, the Department could treat such activities as merchandising and jobbing and move said expenses and revenues above-the-line for ratemaking purposes. OCC Reply Brief, p. 12.

The Company asserts that arbitrarily making up a new indirect cost allocation methodology will also have long running implications for the shape of CT Water's unregulated businesses. CT Water currently uses the MASS Formula to allocate its indirect costs. It does so pursuant to a Department Order that (1) recognized the MASS Formula as an equitable allocation methodology with three equally weighted factors, and (2) ordered CT Water to use the MASS Formula to allocate indirect costs between affiliates. Relying on that Order and long-standing Department precedent as a firm foundation with respect to indirect cost allocations, Connecticut Water Service, Inc. has made substantive business decisions, including undertaking a number of contract operations for its unregulated subsidiaries. These unregulated operations deliver a direct benefit to the Company's water customers because they allow employees to allocate time to unregulated operations that would

otherwise be borne by the water business. Competing for and winning these contracts and performing them is a long run proposition that cannot be easily undone overnight. The Company cannot go to its contracted clients and simply increase their charges. The indirect cost allocation change becomes a direct loss of the Company and erodes the platform on which this business is built. Company Reply Brief, p. 29.

*29 The issue of cost allocation has been a contentious one, dating back to 2006 when the Department first applied the modified MASS Formula in the Birmingham Utilities Rate Case Decision. In that Decision, the Department stated that an appropriate level of expense allocation should be the ultimate goal of any allocation formula. While a previous formula may have been appropriate, the proliferation of non-regulated activity in the water industry calls for regulators to review practices to ensure that ratepayers are not subsidizing unregulated operations. Birmingham Utilities Rate Case Decision, p. 26. The Company's characterization that the Department acquiesced to an OCC recommendation to apply this modification is unfounded. A record was developed in that proceeding and a Department conclusion arrived at. CT Water also filed for a rate increase in 2006 and although that proceeding ended in a settlement agreement, this very issue was examined. In the Hazardville Rate Case Decision, the Department once again addressed the modified MASS Formula by stating, '[T]he Department finds that requiring [Hazardville Water] to allocate costs based on a modified approach of the MASS Formula, utilizing two factors, gross revenues and gross payroll is appropriate. This will lead to more transparency in the allocation of expenses, facilitate tracking of these expenses (for Hazardville Water and the Department) and align the Company with a commonly accepted form of allocation in the regulated community. The Department will utilize the modified MASS Formula to allocate certain expenses.' Hazardville Water Rate Case Decision, p. 23.

As can be seen, this issue has been in the spotlight and should have been acknowledged by the Company as its regulated/non-regulated business model is similar to these companies. Witnesses in CT Water's last rate case where this topic was explored are the same witnesses in this proceeding.

CT Water has expanded its unregulated activities on a yearly basis. There is no doubt from reading the Company's annual report (10-K) that this is a growing income source for the parent Connecticut Water Service. The Company states that the Services and Rental segment, while still a relatively small portion of its overall business, has grown significantly over the past five years and now provides approximately 9% of overall net income in 2009. Net Income by this segment was $929,000, $790,000 and $651,000 for the years 2009, 2008 and 2007, respectively. Late Filed Exhibit No. 20, p. 9.

The relevant information that the Company uses for its MASS Formula is as follows:

All units in 000's	CT Water	NEWUS	Chester Realty	Total
Gross Revenues	$60,004	$3,655	$84	100%
Gross Payroll	$10,842	$0	$0	100%
Gross Plant	$385,328	$33	$636	100%

Allocation Percent	98.00%	1.90%	0.10%	100%

*30 The Company's proposed MASS Formula that is computed from these amounts is as follows:

	CT Water	NEWUS	Chester Realty	Total
Gross Revenues	94.13%	5.73%	.14%	100%
Gross Payroll	100%	0.00%	0.00%	100%
Gross Plant	99.82%	.01%	.16%	100%
Allocation Percent	98.00%	1.90%	0.10%	100%

Late Filed Exhibit No. 27a, p. 1.

As stated in the Hazardville Water Rate Case Decision, the reason behind the modified formula is that regulated utilities, being capital intensive, are disadvantaged by using a gross plant allocator while unregulated subsidiaries have little plant and may even utilize utility plant and equipment to perform its operations. The factors of that formula are critical because they determine the percentage allocation among regulated and non-regulated entities. Hazardville Water Rate Case Decision, pp. 22 and 23. The Company agrees that the Water Industry is a capital intensive business. Thornburg PFT, p. 4; Tr. 4/9/10, p. 1690. The Company also agrees that the Company's unregulated entities are not capital intensive. Tr. 4/9/10, p. 1690. As can be seen in the tables above, there can be no dispute that CT Water dwarfs its affiliates in terms of plant.

The purpose of any shared expense allocation mechanism is to equitably charge non-direct shared costs to all entities that benefit. As can be seen from the above tables, the traditional MASS Formula applies two factors that severely disadvantage the formula from performing its intended function. The Company agrees that the MASS Formula charges costs to those entities that they would otherwise have if they were standalone entities. Tr. 4/9/10, p. 1694. The Company admits that there are a mix of capital intensive and non-capital intensive businesses yet one-third of the formula relies on gross plant. In terms of human capital, Gross Payroll is allocated at 0% for both non regulated entities, yet the unregulated entities are projected to utilize over $1 mil-

lion dollars in labor from the regulated entity in their operations (Non rate revenue payroll). Application, Workpaper C-3.2. Logically, the Company agrees that if its unregulated entities were standalone companies, they would need employees to generate revenue.*Ibid.*

The Company's claim, that it is allocating payroll to affiliates that it would otherwise be charging directly to CT Water customers, does, to a point, have some merit. The Company has a workforce of 225 employees. To accommodate the fluctuations in work levels in a rather large distribution system at any particular time, the Company is most likely staffed to the point that there are some inefficiencies. However, the Company's suggestion that in excess of $1 million in payroll is underutilized by the regulated Company is worrisome to the Department and points to the inefficiencies suggested by the OCC. The Department firmly believes that some level of payroll should be assigned to unregulated entities while recognizing some benefit of allocating salaries to these entities.

***31** Notwithstanding the above analysis, the Department acknowledges that any attempt to modify the MASS formula at this juncture lacks evidentiary basis for any specific adjustment and could have consequences adverse to ratepayers. As such, the Company is on notice that any subsidiary subject to an allocation methodology should reflect a realistic business organization with realistic payroll and plant allocations.

19. Expense Adjustment Summary

The following table summarizes the Department's expense adjustments:

Expense Item	Department Adjustment
Payroll	$623,196
Payroll Tax	48,921
Medical and Dental	38,271
Chemicals	194,741
Purchased Water	107,610
Purchased Power	127,121
Inflation Adjustment	165,503
Non-Revenue Water	59,545
Conservation Program	100,000

D&O Insurance	71,615
Tank Painting and Maintenance	27,637
Total	$1,564,160

G. PRO FORMA REVENUES AND DEPARTMENT ADJUSTMENTS

1. General

[47] In the Application, CT Water initially stated $51,269,775 in actual test year revenues. Application, Schedule C-3.1a. The Company made net adjustments totaling $10,346,979 to arrive at *pro forma* annual revenues of $61,616,754 at present rates. Application, Schedule C-3.1a; Benoit PFT, Exhibit DCB-4. As discussed in more detail in Section II.H below, the Company originally proposed: (a) to increase its rates for metered sales, unmetered sales, private fire protection and sales for resale by 31.36% across-the-board; (b) to limit the increase to its rates for public fire protection to 2.0%; and (c) to maintain rates for special charges at their current levels. Accordingly, the Company requested an overall revenue increase of $16,282,655, or 26.426%, for total *pro forma* annual revenues of $77,899,409 at proposed rates. Application, Schedule C-3.1a; Benoit PFT, Exhibit DCB-4.

On April 16, 2010, by way of Late Filed Exhibit No. 69, the Company submitted its final adjustments to its initial Application. Late Filed Exhibit No. 69 incorporated and/or detailed several adjustments, corrections and revisions made to certain components of the initial Application based on facts clarified in the record as the case unfolded. As a result, CT Water restated *pro forma* annual revenues at present rates as $61,850,124. Late Filed Exhibit No. 69, Exhibit LFE-69 DCB-4 Revised and Schedule C-3.1a Adjust.

CT Water has maintained its initial proposal in regards to public fire protection and special charges. Late Filed Exhibit No. 69, Exhibit LFE-69, DCB-4 Revised. However, the Company now seeks to increase its rates for meter sales, unmetered sales, private fire protection and sales for resale by 33.407% across-the-board.*Ibid.* As a result, the Company instead requests an overall revenue increase of $17,362,085, or 28.071%, for total *pro forma* annual revenues of $79,212,206 at the revised proposed rates. Late Filed Exhibit No. 69, Exhibit LFE-69, DCB-4 Revised, Schedule C-3.1a Adjust.

***32** In the CT Water 2nd SAFR Decision, the Department authorized the Company to impose a 2.10% WICA surcharge on its customers' bills on a bills-rendered basis effective January 1, 2010. That 2.10% surcharge was the result of the Company completing a total of $10,015,468 in WICA-eligible construction (plus the purchase of leak detection equipment), and was designed to increase the Company's annual revenues by $1,346,192. Consequently, the overall revenue increase requested by the Company in this Application incorporates into rates the $1,346,192 previously approved by the Department.

2. Annualization Adjustments

a. Brookside System Residential Revenue

[48] For the Brookside system, total annual consumption in the bill analysis raw data matches that shown by the detailed bill analysis. However, there is a disparity in the bill counts. The detailed bill analysis stated 1,336 quarterly residential bills on 5/8-inch meters and 28 quarterly bills on 3/4-inch meters, whereas the bill analysis raw data showed that test year bill counts were 1,372 and 19, respectively. Responses to Interrogatories WA-176, Exhibit WA-176; and WA-190C, p. 3. Therefore, the Department believes that the Company understated the count for bills on 5/8-inch meters and overstated the count for bills on 3/4-inch meters.

Therefore, the Department will adjust *pro forma* revenue to reflect an increase of 36 quarterly bills on 5/8-inch meters and a reduction of 9 quarterly bills on 3/4-inch meters. This results in a net increase to *pro forma* revenues at present rates of $562 [(36 X $24.99)-(9 X $37.48)] and at proposed rates of $750 [$562 X 133.407%].

b. South Coventry System Residential

Revenue

The Company had miscoded a single South Coventry residential customer as being billed at the rates of Sterling Municipal Water. Bill Analysis Raw Data, Schedule E-5.3c WP, p. 152. In response to Interrogatory WA-177, the Company corrected this error but did not reflect this correction in its Late Filed Exhibit No. 69.

For *pro forma* purposes, an adjustment must be made to reflect the four quarterly bills on a 5/8-inch meter and the 18 thousand gallons (TG) in annual consumption attributed to this customer. Currently, the service charge for the South Coventry system is $26.56 per quarter, and the commodity charge is $7.302 per TG, which the Company proposes to increase by 33.407%. Response to Interrogatory WA-190, Exhibit WA-190C, p. 8; Late Filed Exhibit No. 69, Exhibit LFE-69, DCB-4 Revised. Accordingly, the Department increases *pro forma* revenues at present rates by $238 [(4 x $26.56) + (18 X $7.302)], and *pro forma* revenues at proposed rates by $317 [$238 x 133.407%].

c. Masons Island System Seasonal

Revenue

The Company currently bills each seasonal customer on the Masons Island system at a rate of $198.99 per season on a 5/8-inch meter and $464.07 per season on a 1-inch meter. Schedule E-1.0; Response to Interrogatory WA-190, Exhibit WA-190C, p. 14. The Company proposes to increase these rates by 33.407%. Late Filed Exhibit No. 69, Exhibit LFE-69, DCB-4 Revised. For the purposes of calculating *pro forma* revenue in this Application, the Company stated an annualized total of 11 seasonal bills on 5/8-inch meters and 1 bill on a 1-inch meter. Response to Interrogatory WA-190, Exhibit WA-190C, p. 14. The Company appears to have understated these bill counts.

***33** According to its bill analysis raw data, at page 144, the Company had 46 bills on 5/8-inch meters and 4 bills on a 1-inch meter during the test year. Also, for comparative purposes, the Company showed a total of 52 bills on 5/8-inch meters and 12 bills on 1-inch meters in its last rate case. Supplemental to Late Filed Exhibit No. 34B, Attachment. To correct this, the Department will quadruple the annualized bill numbers to 44 bills and 4 bills, respectively.

For the adjustment, the Department has calculated the *pro forma* revenue for the additional 33 bills on 5/8-inch meters and 3 bills on 1-inch meters. Accordingly, the adjustment to *pro forma* revenue at present rates is $7,959 [(33 X $198.99) + (3 x $464.07)]. The adjustment to *pro forma* revenue at proposed rates is $10,618 [$7,959 x 133.407%].

3. Weather Normalization Adjustment

a. Department's Multi-Year Average

Approach

[49] The Department has typically allowed the use of a weather normalization adjustment to set *pro forma* usage levels representative of a test year with 'normal' weather conditions. Its use serves to acknowledge that yearly variations in consumption levels occur and are due in most part to weather-related use (*e.g.*, lawn and garden irrigation, car washing, and the filling of swimming pools). While other variables (*e.g.*, the economy, conservation, type of housing, household size, lifestyle and saturation of water-using appliances) are involved, the Department believes that these variations from year to year are largely due to weather-related use. Generally, the Department has found it reasonable to use an approach that averages a multi-year period of consumption per customer to determine a 'normal' year's usage levels for the residential, commercial and public author-

ity classes. As a rule, the Department has excluded the industrial class from such an adjustment on the basis that water consumption by this customer class is not significantly impacted by weather variations.

This approach takes the following steps. For each of the residential, commercial and public authority customer classes, total annual consumption is divided by the year-end customer count to arrive at the average consumption per customer for that year. This is done for each year of the multi-year period being used. Next, the average consumption per customer for each year are added together, and then divided by the number of years in the multi-year period to determine that period's average consumption per customer. Under this approach, this represents the average consumption per customer for a 'normal' year, or N. N is then compared against the test year average to arrive at a weather normalization factor, using the following formula:
F = (N / T)-1, where:

F is the weather normalization factor;

N is the average consumption per customer for the 'normal' year; and

T is the average consumption per customer for the test year.

As the last step, *annualized* test year consumption is multiplied by F to calculate the consumption amount representing the weather normalization adjustment.

***34** The Department's multi-year average approach was most recently implemented in the Avon Water Rate Case Decision. In that Decision, the Department found it reasonable to base the weather normalization adjustment on a four-year average of data for the 2006-2009 period, wherein the test year was 2008. Avon Water Rate Case Decision, pp. 12-15.

b. CT Water's Proposed Base Load

Approach

CT Water has taken the position that continuing to use historical multi-year averages to determine the weather normalization adjustment, while in the midst of a declining trend, will continue to result in artificially high and frequent rate requests. Company Reply Brief, p. 17. According to the Company, declining consumption significantly impacts its earnings. Company Brief, p. 20. The Company claims it has neither recovered its fixed cost nor achieved the level of allowed earnings previously approved by the Department, largely because of declining consumption. Tr. 3/18/10, p. 959; Company Brief, p. 20. The Company asserts that this decline in consumption is most evident when comparing base use per customer during the least weather sensitive months over the course of a multi-year period. Company Brief, p. 40. The Company believes that the approach used by the Department 'necessarily understates *pro forma* sales because it averages base usage levels that are in fact steadily declining.' *Ibid.*, p. 38.The Company adds that '[b]y contrast, averaging only the weather-sensitive portion (as opposed to total consumption) of the Company's residential sales over several years smoothes out the impacts of varying weather conditions on usage, resulting in a more reliable forecast of *pro forma* consumption. ' *Ibid.*

Accordingly, CT Water instead proposes the use of a base load approach for the purpose of calculating the weather normalization adjustment. According to CT Water, '[t]his methodology allows the Company to incorporate the declining consumption trend and the impact of weather on use over the last five years, in its *pro forma* consumption to set appropriate *pro forma* sales levels.' Company Brief, p. 38. Using this approach, CT Water proposed adjustments to *pro forma* residential consumption for the CWC Main, Gallup, Crystal and Unionville Divisions. The Company also proposed a combined adjustment for the systems of Masons Island, SDC and Bay Mountain, as well as a separate adjustment for the Wildwood system. No adjustments were calculated for the systems of Bradley, Ellington Acres, South Coventry and Middlebury. [FN5]The Company limited its weather normalization adjustment to the residential class on its perception that economic factors have a larger effect than weather on consumption in the commercial, industrial and public authority classes. Re-

sponse to Interrogatory WA-163.

The foundation of the base load approach is the use of annualized 1st quarter residential usage data. [FN6]Response to Interrogatory WA-164. The Company intends to isolate the impact of weather on consumption. Tr. 3/18/10, p. 936. Since most of its residential customers are billed on a quarterly basis, the Company found it imperative to use three consecutive months of consumption data in order to ensure the inclusion of every residential customer in the usage data. Response to Interrogatory WA-164. By limiting usage data to billings for the 1st quarter (January through March), the Company looks to separate weather sensitive load from non-weather sensitive load (base load), on a consumption per customer basis. Tr. 3/18/10, p. 936; Company Brief, pp. 8, 38. In the Company's view, the 1st quarter of each year best represents the months during which weather-related use by its residential customers is least likely. Response to Interrogatory WA-164; Tr. 3/18/10, pp. 942 and 943.

*35 In the first step of its calculation, CT Water determines the estimated base load consumption per customer for 2010, as follows. For each of the applicable divisions and systems, CT Water calculated the estimated base load consumption per customer for the 2010 rate year by determining the overall decline over the five-year period from 2005 to 2009, then determining the average decline by dividing it by five. Response to Interrogatory WA-168. That average decline is then subtracted from 2009 annualized base load to arrive at the estimated base load consumption per customer for 2010. Response to Interrogatory WA-168; Response to Interrogatory WA-166, Updated Workpaper C-3.1-02WP.

The second step requires determining the average weather load for that same 5-year period. In the Company's view, the weather load for each year is what remains when the annualized base load (non-weather load) is subtracted from the actual consumption for that year. The average weather load consumption per customer is then determined by dividing the combined total weather load for the five years by five. Response to Interrogatory WA-166, Updated Workpaper C-3.1-02WP.

In the next step, the estimated 2010 base load and the average weather load are added together. Response to Interrogatory WA-166, Updated Workpaper C-3.1-02WP; Tr. 3/18/10, p. 951. This combined amount is then compared against the annual consumption per customer for test year 2008. The resulting difference is then multiplied by the year-end number of customers for the test year, to arrive at the consumption adjustment for weather normalization. Response to Interrogatory WA-166, Updated Workpaper C-3.1-02WP; Responses to Interrogatories WA-167 and WA-168.

As a result, the Company adjusted *pro forma* revenues at present rates by a net decrease of $1,428,832 to reflect weather normalization.

c. Department Analysis

By way of Late Filed Exhibit No. 46, the Company submitted a table that presented the 'Average Daily Use Per Customer Billed' (in gallons) for its entire residential class for each year for the 2005-2009 period, for the first five months of each year (January through May), as follows:

Year	January	February	March	April	May
2005	180.3	169.6	170.8	181.3	165.1
2006	175.3	168.4	163.4	169.9	168.5

2007	171.1	163.7	160.2	167.8	160.2
2008	170.7	156.0	157.3	162.4	157.1
2009	167.9	147.6	154.7	158.6	156.9

Additionally, John F. Guastella, CT Water's bill analysis consultant, provided the following comments relative to the impact of weather on billings during the 1st quarter: ...January billings roughly on a quarterly billing basis you'd be picking up one-sixth of consumption for January, a third for December, a third for November, and a sixth for October.' 'I'm fairly comfortable knowing that the last two weeks of October and then November, December and January has, if any, it had very very little impact from weather associated with it, and then the February billings have even less, if any at all, I would think none, impact of weather, and March would have no impact of [weather].

Tr. 3/18/10, p. 942.

***36** Therefore, the cornerstone of the Company's proposed base load approach is its contention that billings for the months of January, February and March exhibit the least impact from weather-related use. Company Brief, p. 39. Indeed, relative to the suggestion that the use of a half-year period (*i.e.*, October through March) might be more appropriate, the Company responded that utilizing that period would introduce more months wherein weather impacts customer usage. Response to Interrogatory WA-164. However, the above table belies that claim. In every year, per customer daily usage for January clearly exceeds the corresponding usage for May. Also, February usage compares favorably with that for May, and in two instances, exceeds that of May.

Moreover, the Department found an inconsistency in the figures presented by the Company as annual consumption per customer in Updated Workpaper C-3.1-02WP. The Company testified that the amounts in the column 'Annual Consumption/Customer' provided in Workpaper C-3.1-02WP are based on the year-end number of customers for that given year. Response to Interrogatory WA-167. Separately, at the request of the Department, the Company provided an exhibit containing annual consumption and year-end customer data by division and by customer class. Response to Interrogatory WA-191, Exhibit WA-191. If the Company's testimony is correct, calculations using the residential data provided in that exhibit (Exhibit WA-191) should produce the same results provided in Workpaper C-3.1-02WP. Upon review, however, the Department found that the annual consumption/per customer column in the Company's weather normalization exhibits do not align with the data provided under Exhibit WA-191.

For example, the Company represented in its weather normalization calculation for the Unionville Division (Response to Interrogatory WA-166, Exhibit WA-166, Updated Workpaper C-3.1-02WP, at page 4) that annual consumption per residential customer are as shown on the left side of the table below. However, using the consumption and customer count data provided in Exhibit WA-191, the Department calculated the figures on the right side of the same table, which inexplicably differ from those on the left.

Year	Annual Consumption/ Customer (in TG)	Annual Consumption/ Customer (in TG)
2005	99.420	97.066
2006	89.930	89.287
2007	97.100	95.978
2008	85.210	85.960
2009	78.047	77.290

An inconsistency such as this on a relatively basic level gives the Department pause for concern when, on a more complex level, the annualized base loads presented in Updated Workpaper C-3.1-02WP relies on 'a report created by the Company's IT Department which provides the billing amount in dollars and gallons, number of days billed, number of bills and average number of days per bill for the 3 months ending March 31.' Response to Interrogatory WA-167.

The Department also takes issue with the Company's initial proposal not to weather normalize commercial and public authority consumption. Subsequently, CT Water acknowledged that weather impacts commercial usage to some extent, but less significantly than residential usage in comparison, as evidenced by the separate weather normalization exhibits provided by the Company for its residential class and commercial class. Responses to Interrogatories WA-163, Exhibit WA-163; and WA-166, Updated Workpaper C-3.1-02WP, p. 1; Tr. 3/18/10, pp. 996 and 997. The Department believes the same should be true relative to consumption by the public authority class.

*37 In light of the foregoing, the Department will not accept the Company's proposed use of a base load approach. While the Company's proposal to isolate the non-weather related load may be a way to smooth out yearly variation, the Department still believes that the averaging of annual consumption better accounts for the impact of weather, as well as other factors including conservation and the economy, on usage. Therefore, the Department will continue use of the multi-year average approach for the purpose of determining the appropriate *pro forma* adjustments to consumption.

It bears noting that during the earlier years of the Department's multi-year average approach, a six-year average was the norm. However, in its more recent Decisions, the Department has adjusted the time period used in averaging more recent Company experience in per customer usage. The Department has realized that the continued use of older data in an average may unreasonably skew results. In the more recent water rate cases, the Department's close review of consumption and customer count data have resulted in the use of shorter time periods, which, in a way, has allowed for some moderation of any perceived declines in consumption per customer. For example, in the Decision dated August 7, 2003, in Docket No. 03-02-07,*Application of Birmingham Utilities, Inc. to Increase Its Rates* (Birmingham Rate Case Decision), the Department was 'persuaded to some extent by Birmingham Utilities' argument that usage by the residential class in the Ansonia Division has steadily declined over the years. As a result, the Department found it more appropriate to forego use of data for the less recent years and based its weather normalization adjustment on lesser period of time.' Birmingham Rate Case Decision, p. 28.

Relative to the length of the data period, the OCC has recommended that the Department use the three-year period of 2006-2008, and specifically exclude 2009. Sobolewski/ Larkin PFT, p. 17. The AG supports this recommendation. AG Brief, p. 10. While CT Water continues to believe that its base use approach is more appropriate, the Company argues that use of the average multi-year approach should include the 2009 data since it is the most recent data available and provides the best basis for estimating future sales. Company Brief, p. 40. The Department concurs.

The Department has reviewed the consumption and customer count data provided in Updated Workpaper C-3.1-02WP and Exhibit WA-191, and has determined it is appropriate to use three years of data from the 2007-2009 period, wherein the test year is 2008. Given the inconsistency discussed above, the Department will rely on the consumption and customer count data provided in Exhibit WA-191. More importantly, since the Company's calculation of its weather normalization adjustment is limited to residential customers, Exhibit WA-191 also provides the necessary data for commercial and public authority customers, with two exceptions.

***38** The first exception involves the systems of Mason's Island, SDC and Bay Mountain, for which the Company calculated a combined weather normalization adjustment for residential usage in those systems. Since Exhibit WA-191 lacks that data, the Department has no choice but to rely on the annual consumption per customer numbers provided in Updated Workpaper C-3.1-02WP.

The second exception relates to CT Water's weather normalization for the Wildwood system, for which the Company reduced consumption by 355 TG. Since no separate revenue proof was provided for the Wildwood system, no annualized test year consumption specific to the Wildwood system was available. In response to Interrogatory WA-162, the Company noted that Wildwood 'could and should have been combined with the [CWC Main] Division.' Moreover, there is no indication that the CWC Main Division data contained in Exhibit WA-191 specifically excluded the Wildwood system. Therefore, the Department will deny the Company's consumption adjustment for Wildwood and add 355 TG back.

The following tables show the data used by the Department and the resulting four-year average consumption per customer for each of the residential, commercial and public authority classes in the four divisions, and the combined residential class for the Masons Island, SDC and Bay Mountain systems:

CWC Main Division	2007	Test Year 2008	2009	3-Year Average			
Residential Class:							
					63,644	64,080	65,175
				Year-end Customer Count			

Avg. Consumption per Customer	67.3702	64.2737	60.7784	64.1408			
Commercial Class:							
					1,053,231	986,566	908,443
				Annual Consumption			
					4,752	4,822	4,839
				Year-end Customer Count			
Avg. Consumption per Customer	221.6395	204.5968	187.7336	204.6567			
Public Authority Class							
					320,129	305,043	292,710
				Annual Consumption			
					436	435	433
				Year-end Cus-			

				tomer Count
Avg. Consumption per Customer	734.2408	701.2483	676.0046	703.8312

Response to Interrogatory WA-191, Exhibit WA-191.

Crystal Division	2007	Test Year 2008	2009	3-Year Average			
Residential Class:							
					3,409	3,416	3,431
				Year-end Customer Count			
Avg. Consumption per Customer	77.4737	75.1244	71.3728	74.6570			
Commercial Class:							

–					70,890	65,151	62,148
				__ Annual Consumption			
–					314	333	334
				__ Year-end Customer Count			
–							
Avg. Consumption per Customer	225.7643	195.6486	186.0719	202.4949			
–							
Public Authority Class							
–					47,282	38,937	41,516
				__ Annual Consumption			
–					74	74	75
				__ Year-end Customer Count			
–							
Avg. Consumption per Customer	638.9459	526.1757	553.5467	572.8894			

*39 *Ibid.*

Gallup Division	2007	Test Year 2008	2009	3-Year Average			
Residential Class:							
Year-end Customer Count					1,157	1,163	1,170
Avg. Consumption per Customer	52.7796	52.3310	51.4581	52.1896			
Commercial Class:							
Annual Consumption					24,666	25,049	20,674
Year-end Customer Count					89	90	87

Avg. Consumption per Customer	277.1461	278.3222	237.6322	264.3668			
Public Authority Class:							
					2,026	2,018	2,046
				Annual Consumption			
					13	13	13
				Year-end Customer Count			
Avg. Consumption per Customer	155.8462	155.2308	157.3846	156.1538			

Ibid.

Unionville Division	2007	Test Year 2008	2009	3-Year Average
Residential Class:				

–							
–					5,623	5,653	5,680
				__ Year-end Customer Count			
–							
Avg. Consumption per Customer	95.9781	85.9600	77.2903	86.4095			
–							
Commercial Class:							
–					101,998	96,143	80,195
				__ Annual Consumption			
–					347	347	344
				__ Year-end Customer Count			
–							
Avg. Consumption per Customer	293.9424	277.0692	233.1250	268.0455			
–							
Public Au-							

thority Class:							
_					20,325	18,767	14,560
				__ Annual Consumption			
_					45	45	45
				__ Year-end Customer Count			
_							
Avg. Consumption per Customer	451.6667	417.0444	323.5556	397.4222			

Ibid.

Mason's Island SDC & Bay Mountain systems	2007	Test Year 2008	2009	3-Year Average
_				
Combined Residential Class:				
_				
Avg. Consumption per Customer	62.1700	60.8000	54.6910	59.2203

Response to Interrogatory WA-166, Exhibit WA-166, Updated Workpaper C-3.1-02WP, p. 5.

The tables below show the Department's calculation of its consumption adjustments for weather normalization under a four-year average approach:

CWC Main Residential Commercial Public Au-

Division			thority			
3-Year Avg. Consumption per Customer	64.1408	204.6567	703.8312			
				64.2737	204.5968	701.2483
			Divided by 2008 Test Year Avg. Consumption per Cust.			
	0.9979	1.0003	1.0037			
				(1.0000)	(1.0000)	(1.0000)
			Less 1			
Conversion Factor (shown as a percent-age)	-0.21%	0.03%	0.37%			
				4,016,424	926,188	270,066
			Multiplied by Annualized Test Year Consumption			
Consumption Adjustment (in TG)	(8,307)	271	995			

Crystal Division	Residential	Commercial	Public Authority			
3-Year Avg. Consumption per Customer	74.6570	202.4949	572.8894			
				75.1244	195.6486	526.1757
			Divided by 2008 Test Year Avg. Consumption per Cust.			
	0.9938	1.0350	1.0888			
				(1.0000)	(1.0000)	(1.0000)
			Less 1			
Conversion Factor (shown as a percentage)	-0.62%	3.50%	8.88%			
				257,007	65,158	42,229
			Multiplied by Annualized Test Year Consumption			
Consumption Adjustment (in TG)	(1,599)	2,280	3,749			

Gallup Division	Residential	Commercial	Public Authority			
3-Year Avg. Consumption per Customer	52.1896	264.3668	156.1538	52.3310	278.3222	155.2308
			Divided by 2008 Test Year Avg. Consumption per Cust.			
	0.9973	0.9499	1.0059	(1.0000)	(1.0000)	(1.0000)
			Less 1			
Conversion Factor (shown as a percentage)	-0.27%	-5.01%	0.59%			
				43,511	25,049	2,018
			Multiplied by Annualized Test Year Consumption			
Consumption Adjustment (in TG)	(118)	(1,256)	12			

Unionville Division	Residential	Commercial	Public Authority			
3-Year Avg. Consumption per Customer	86.4095	268.0455	397.4222	85.9600	277.0692	417.0444
			Divided by 2008 Test Year Avg. Consumption per Cust.			
	1.0052	0.9674	0.9529	(1.0000)	(1.0000)	(1.0000)
			Less 1			
Conversion Factor (sbown as a percentage)	0.52%	-3.26%	-4.71%			
			Multiplied by Annualized Test Year Consumption	484,690	96,106	19,163
Consumption	2,534	(3,130)	(902)			

Adjustment (in TG)			
Masons Island, SDC & Bay Mountain systems	Residential		
3-Year Avg. Consumption per Customer	59.2203		
	Divided by 2008 Test Year Avg. Consumption per Cust.		60.8000
	0.9740		
	Less 1		(1.0000)
Conversion Factor (shown as a percentage)	-2.60%		
	Multiplied by Annualized Test Year Consumption		18,824
Consumption Adjustment (in TG)	(489)		

*40 The following tables summarize the respective Department and Company weather normalization consumption adjustments and the revenues derived at present and proposed rates:

Department's Weather Normalization Adjustments	Consumption Adj. (in TG)	Revenue Adj. at Present Rates	Revenue Adj. at Proposed Rates
CWC Main Division, Residential	(8,307)	($52,848)	($70,503)
CWC Main Division, Commercial	271	1,508	2,011

CWC Main Division, Public Authority	995	5,195	6,930
Crystal Division, Residential	(1,599)	(7,407)	(9,882)
Crystal Division, Commercial	2,280	8,518	11,364
Crystal Division, Public Authority	3,749	13,317	17,765
Gallup Division, Residential	(118)	(672)	(896)
Gallup Division, Commercial	(1,256)	(6,012)	(8,021)
Gallup Division, Public Authority	12	58	78
Unionville Division, Residential	2,534	8,624	11,506
Unionville Division, Commercial	(3,130)	(8,626)	(11,508)
Unionville Division, Public Authority	(902)	(2,128)	(2,839)
Masons/SDC/Bay Mtn., Residential	(489)	(2,793)	(3,726)
Totals	(11,984)	($43,266)	($57,720)

CT Water's Weather Normalization Adjustments	Consumption Adj. (in TG)	Revenue Adj. at Present Rates	Revenue Adj. at Proposed Rates

CWC Main Division, Residential	(219,653)	($1,397,435)	($1,864,276)
Crystal Division, Residential	(4,202)	(19,462)	(25,964)
Gallup Division, Residential	2,385	13,616	18,165
Unionville Division, Residential	(4,345)	(14,786)	(19,725)
Masons/SDC/Bay Mtn., Residential	(1,489)	(8,504)	(11,344)
Wildwood system, Residential	(355)	(2,262)	(3,017)
Totals	(227,660)	($1,428,832)	($1,906,162)

As shown in the Department's Weather Normalization Adjustments Table, the Department has calculated the total adjustment to revenues for weather normalization to be ($43,266) and ($57,720), at present and proposed rates, respectively. As shown in CT Water's Weather Normalization Adjustments Table, the Company calculated a total adjustment under its proposed base load approach that decreased *pro forma* revenues at present rates by $1,428,832. At the Company's proposed rate increase of 33.407%, *pro forma* revenues at proposed rates would be decreased by a net adjustment of $1,906,162.

Accordingly, after accounting for the adjustment already claimed by the Company, the Department has determined that *pro forma* revenues should be adjusted upwards by $1,385,566 [$1,428,832-$43,266] at present rates and $1,848,442 [$1,906,162-$57,720] at proposed rates.

4. Customer Growth Adjustments

***41 [50]** CT Water limited its customer growth calculation to the residential class in all four divisions and only the commercial class in the CWC Main Division. Application, Schedule C-3.1-01, Workpaper C-3.1-01WP; Schedule C-3.1-04, Workpaper C-3.1-04WP; Response to Interrogatory WA-159. The Company prepared no adjustment for the public authority classes because of declines in 2009 that it had not yet determined to be either temporary or permanent.*Ibid.*

The Company adjusted test year residential and commercial revenues to reflect two and a half years of customer growth from the mid-point of test year 2008 through the mid-point of the rate year, or from July 1, 2008 through December 31, 2010. Application, Benoit PFT, p. 11; Response to Interrogatory OCC-238.

For its residential customer growth adjustments, the

Company determined the *pro forma* growth rate to be 0.7%, based upon its most recent 12-month experience (July 1, 2008 through June 30, 2009) before the filing of its Application. Application, Schedule C-3.1-01, Workpaper C-3.1-01WP; Tr. 3/18/10, pp. 1018 and 1019. Accordingly, the Company calculated that two and a half years of *pro forma* residential growth would add 1,206 customers in the CWC Main Division, 86 in the Crystal Division, 16 in the Gallup Division, and 20 in the Unionville Division. For each division, the Company calculated all meter service charges at the quarterly rate for the 5/8-inch meter size. More importantly, the consumption used for each division is the sum of the estimated base load for 2010 and the average 5-year weather load, as calculated for each division under the proposed base load approach for weather normalization.

For its commercial customer growth adjustment, the Company determined that it would add 10 additional commercial customers in its CWC Main Division per year. Therefore, two and a half years of *pro forma* customer growth would add 25 commercial customers. Application, Schedule C-3.1-04, Workpaper C-3.1-04WP.

The following table summarizes CT Water's calculated customer growth adjustments:

CT Water Customer Growth Adjustments	Number of Quarterly Bills	Usage (in TG)	Pro Forma Revenue at Present Rates	Pro Forma Revenue at Proposed Rates
CWC Main Residential	4,824	71,612	$575,706	$768,032
CWC Main Commercial	100	4,300	$30,188	$40,273
Crystal Residential	344	6,322	$37,852	$50,497
Gallup Residential	64	869	$6,565	$8,758
Unionville Residential	80	1,690	$7,746	$10,334
Totals			$658,057	$877,894

Application, Schedule C-3.1-01, Workpaper C-3.1-01WP; Schedule C-3.1-04, Workpaper C-3.1-04WP.

Given the Department's rejection of the proposed base load approach, the Department will adjust revenues for customer growth using a modified multi-year average based on annual consumption and year-end customer count data submitted in Exhibit WA-191. Moreover, the Department believes that *pro forma* customer growth should reflect growth following the test year to the mid-point of the rate year (January 1, 2009 to December 31, 2010). This amounts to two years of growth and not the two and a half years as the Company proposed.

***42** Upon review of the data in Exhibit WA-191, the Department has determined that the appropriate period for use is from 2006 to 2009, which would provide the percentage annual growth for three continuous years (2006-2007, 2007-2008 and 2008-2009). The annual growth percentage for each of the three years is first calculated. Then, the sum of all three annual growth percentages is divided by three to arrive at the average growth percentage. That percentage is then multiplied against the customer count for the 2008 test year to calculate the annual growth in customers.

The Department would then calculate two years of growth. Since actual customer growth for 2009 is readily available, the Department will substitute one year's worth of growth with actual 2009 growth. Therefore, two years of *pro forma* annual growth would be the sum of actual 2009 growth plus one year of annual customer growth.

Exhibit WA-191 contains the year-end customer counts by customer class in each division since 2004. The Department's review found that the customer numbers for the industrial and public authority classes have exhibited little to no change over the years. Therefore, customer growth should be determined for the residential classes in all divisions and the commercial class in the CWC Main Division, but not for the commercial classes in the Gallup and Unionville Divisions. However, while the growth exhibited in the commercial class in the Crystal Division is not as significant as in the CWC Main Division, the growth experienced by the Crystal Division over the past six years warrants inclusion of that division.

The following table summarizes the Department's calculated customer growth adjustments using its modified three-year average approach:

Department Customer Growth Adjustments	Number of Quarterly Bills	Usage (in TG)	Pro Forma Revenue at Present Rates	Pro Forma Revenue at Proposed Rates
CWC Main Residential	7,764	124,760	$987,751	$1,317,728
CWC Main Commercial	239	12,203	$82,848	$110,525
Crystal Residential	116	2,183	$13,016	$17,364

Crystal Commercial	35	1,714	$8,593	$11,464
Gallup Residential	123	1,606	$12,239	$16,328
Unionville Residential	253	5,441	$24,844	$33,144
Totals			$1,129,291	$1,506,553

The following table summarizes the Department's net growth adjustments for bills and consumption, when compared to CT Water's adjustments in the prior table:

Net Customer Growth Adjustments	Number of Quarterly Bills	Usage (in TG)
CWC Main Residential	2,940	53,148
CWC Main Commercial	139	7,903
Crystal Residential	(228)	(4,139)
Crystal Commercial	35	1,714
Gallup Residential	59	737
Unionville Residential	173	3,751
Total Increase in Consumption	63,114	

***43** Taking into account the revenue adjustments already applied by the Company, the Department adjusts *pro forma* revenue by net increases of $471,235 [$1,129,291-$658,057] at present rates and $628,660 [$1,506,553-$877,894] at proposed rates.

On page 34 of its Written Exceptions, the Company alleged that '[w]hen the Department adjusts the Company's *pro forma* revenues to account for customer growth, it includes revenues associated with customer growth stemming from the [Jensen Communities' systems] acquisition.' [FN7] The Department disagrees.

Former customers of the Jensen Communities' systems are currently billed at the year-round flat rate for the Mansfield Division. Response to Interrogatory OCC-255, Exhibit OCC-255; Application, Schedule E-1.0, p. 12. As evidenced by the second table, above, the Department included no customer growth adjustment for the Mansfield Division. Therefore, no growth adjustment is associated with the Jensen Communities' systems.

5. Proposed Water Conservation

Adjustment Mechanism (WCAM)

a. General

[51-55] CT Water seeks to implement a limited revenue adjustment mechanism WCAM that, in the Company's view, would allow it 'to continue to promote conservation aggressively in an effective manner while addressing the declining revenues associated with increased conservation by its customers.' Application, Thornburg PFT, p. 8. Moreover, the Company believes that the WCAM 'protects both the Company and the customers from actual sales levels that depart materially from the levels approved by the Department because it works in both directions symmetrically.*Ibid.*, p. 9. Furthermore, the Company stated that the intent of the WCAM is 'to allow [CT Water] to recover adequate revenues over the next few years, to promote conservation and ensure sustainability of the Company's water systems, including the continued provision of safe, reliable, cost-effective service to current and future customers.'*Ibid.*

With the WCAM, the Company attempts to align its financial interests with water conservation goals. Application, Benoit PFT, p. 9. In its view, the WCAM eliminates the Company's disincentive for aggressively promoting water conservation by its customers whereby customer conservation erodes its earnings. Application, Benoit PFT, p. 9; Company Brief, p. 15. In the short run, reduced water use would lower the Company's costs for power, chemicals and waste disposal, and lessens wear and tear on its systems and its customers' septic systems. Tr. 3/8/10, p. 16; Company Brief, p. 17. In the long run, conservation delays, or may eliminate, the need to construct new water treatment plants or seek new groundwater supplies, and reduces the impact on the environment.*Ibid.*

Under either of CT Water's proposed rate design plans (the Standard Rate Plan and the Alternative Rate Plan), the Company had proposed to implement the WCAM for Rate Year 2 and Rate Year 3. Application, Thornburg PFT, p. 8. Therefore, given the Department's rejection of the use of a three-year rate plan in Section II.B above, this issue is technically moot. However, CT Water's proposed WCAM represents the first instance of a water company requesting to implement an adjustment tied to revenue loss from conservation, and merits a more detailed discussion.

b. Mechanics of the Proposed WCAM

***44** The WCAM has five steps. The first two steps lead to the determination of the Base Use Variation. The first step assumes that non-weather related sales for the residential class may be based on 1st quarter (January, February and March) usage. (*See* Section II.G.3, above') According to CT Water, limiting the WCAM to residential use would force the Company to continue to bear the risks affecting consumption, revenues and earnings. Response to Interrogatory WA-170. This first step requires calculation of average daily usage in gallons per customer, by referencing 1st quarter residential usage (Approved Daily Usage). Application, Benoit PFT, p. 8; Exhibits DCB-3a, 3b, 3c and 3d.

In the second step, a corresponding figure for the subsequent year is calculated based on *actual* 1st quarter usage by the residential class (Actual Daily Usage). The Base Use Variation is determined by comparing the Approved Daily Usage with the Actual Daily Usage to arrive at a figure representing Daily Conservation (when Actual Daily Usage is less than Approved Daily Usage) or Daily Growth (when the reverse is true).*Ibid.*

For the third step, the projected annual revenues allowed in this Decision would be compared to the actual annual revenues for that subsequent year.*Ibid.* Accord-

ing to the Company, this difference represents the extent to which the Base Use Variation was offset by factors including customer growth, weather-related usage, and commercial or industrial sales. Application, Benoit PFT, p. 8.

Two conditions must be met by the results of the third step before proceeding to the fourth step. The first condition requires that the difference is more than 1% lesser or greater than the allowed annual revenues. [FN8]*Ibid.* If so, the second condition requires that that difference be in the same direction as the Base Use Variation.*Ibid.* For example, should the difference result in a revenue shortfall, Base Use Variation must also result in a Daily Conservation. The Company linked the direction of the variations in both base use and revenues in order to avoid scenarios that would not be supportive of the intended goal of the WCAM, which is to align its financial interests with water conservation goals. Company Response to Interrogatory WA-170. Relative to the 1% threshold, CT Water believes it to be sensible in order to minimize the administrative costs of both the Department and Company. Company Response to Interrogatory WA-169.

The Company provided four scenarios representing possible results of the second step (Base Use Variation) and the third step (Difference between Actual and Projected Revenues). Application, Exhibit DCB-3a, 3b, 3c, 3d. The following table summarized each scenario:

WCAM Scenario	Base Use Variation (second step)	Revenue Difference (third step)	Action Taken
Example #1	Daily conservation	decrease of less than 1%	no shortfall is recorded
Example #2	Daily conservation	decrease of more than 1%	shortfall is recorded as deferred expense
Example #3	Daily conservation	increase of more than 1%	no shortfall is recorded
Example #4	Daily growth	increase of more than 1%	overage is recorded as deferred credit

***45** Application, Exhibit DCB-3a, 3b, 3c, 3d.

If both conditions are satisfied, as in examples #2 and #4 above, the Company moves on to the fourth step, which requires determination of the annual variation in base use for residential customers (Annual Conservation or Growth). To do so, the (daily) Base Use Variation is multiplied by the total number of metered residential customers and then by 365 days. That Annual Conservation or Growth is then multiplied by the net cost per gallon. The net cost per gallon is the residential commodity cost per gallon less the variable costs per gallon of treating and distributing water (*e.g.*, power and chemicals). Application, Benoit PFT, p. 8. The result would either become a deferred expense (in the case of a revenue shortfall) or a deferred credit (in the case of a revenue overage).*Ibid.* The Company would carry this deferred expense/credit on its books going forward, and repeat this process each year.*Ibid.*

The fifth step would only be triggered if the total deferred expense/credit reaches $2 million. The Company proposed that customer bills would not reflect the impact of the WCAM until that threshold is met so as to mitigate customer confusion that might be caused by

constant bill changes. Company Response to Interrogatory OCC-115. At the fifth and final step, CT Water would apply for Department approval to adjust metered residential rates to collect or credit the deferred amount, possibly through a reopening of this proceeding or in the Company's next general rate case. Application, Benoit PFT, pp. 3 and 9.

c. Department Analysis of the Proposed

WCAM

CT Water realizes that any success in fostering the conservation ethic in its customers is tempered by a decline in revenues associated with increased conservation. However, the Company also realizes how crucial water conservation is to its business, 'Water conservation is critical to ensure sustainability of [the Company's] water infrastructure for future generations.' Company Brief, p. 8. Therefore, the Company developed the proposed WCAM as a tool that would enable it to achieve conservation success without: (a) having that success hurt its financial performance; (b) placing unnecessary risk on its customers; and (c) depriving its customers the ability to control their water bills. Application, Benoit PFT, p. 7; Company Brief, p. 8.

In conjunction with the proposed implementation of the WCAM, the Company has also requested $100,000 in seed funding to launch a program that would allow the Company to aggressively promote conservation. Application, Westbrook PFT, p. 5; Schedule C-3.4-004; Tr. 3/8/10, p. 16. However, while CT Water has identified some key components (*e.g.*, retrofit programs for schools, government buildings and hardship customers; rebates for appliances and fixtures meeting certain efficiency standards; incentives for customers meeting certain specifications for water-efficient new homes) that it anticipates would be incorporated into its conservation program, the Company has yet to finalize the specific design of the program. Application, Westbrook PFT, p. 5; Company Response to Interrogatory OCC-23.

***46** The first two steps of the WCAM are contingent on the Department's acceptance of the base load concept. As proof of the decline in residential consumption, the Company provided exhibits centered on the concept that usage in the 1st quarter would best represent non-weather related usage, and that the changes from year to year in non-weather related usage is due to the conservation ethic that has taken hold amongst its customers. However, as discussed in Section II.G.3, above, the Department dismissed the use of the base load concept primarily because data submitted by CT Water has not effectively supported the Company's concept that 1st quarter billing best reflects the billing period least affected by weather-related water use. As noted by the OCC, the data suggests that the appropriate three-month billing period would more likely be from March through May, not January through March. OCC Brief, p. 86. In the OCC's opinion, instead of the proposed base load approach, a more relevant approach for determining a true base use period would require the analysis of actual monthly usage data.*Ibid.*

The Department does not argue that water conservation has contributed to usage variations. However, the Department disagrees with the Company's seemingly steadfast stance that conservation is the predominant cause for variation in non-weather related usage. Tellingly, the Company could offer no empirical data quantifying the effects of conservation measures. It is merely assumed. Among other factors, the Department believes that the poor economy and the recent increases to customers' bills (as a result of two phases of rate increases from the Company's last rate case and the WICA surcharge) have significantly contributed to any decline in consumption. Relative to the current economic challenges facing the Company's customers, Eric Thornburg, CWS' President and CEO, specifically stated:

> ...we also recognize that these are historic and unprecedented economic times. We are sensitive to the challenges our customers face on a daily basis. We speak to them every day and hear how difficult and uncertain the times are for many of them.

Application, Thornburg PFT, p. 5.

As a testament to the ongoing impact of the current economy and recent bill increases, a number of the Company's ratepayers, especially those on fixed incomes, spoke during several of the public comment hearings about financial difficulties of their own and in their communities. Tr. 3/16/10, pp. 663, 666; Tr. 3/15/10, pp. 645, 647 and 648, 651; Tr. 3/17/10, pp. 838-841; 846-851; Tr. 3/31/10, pp. 1470-1475; 1476 and 1477, 1483-1485, 1495, 1503 and 1504, 1515-1518, 1521-1525, 1533. Even the declines in consumption that the Company readily attributes to conservation arguably could have been driven by a combination of both environmental concern and economic hardship, as one customer attested to be the case. Tr. 3/17/10, pp. 846-848. Subsequently, even the Company has acknowledged that the current economy does impact consumption. Tr. 3/18/10, pp. 1012 and 1023.

***47** In the light of the above, the Company has chosen a uniquely inopportune time to promote an aggressive conservation effort. The current recession has apparently already collaterally provided significant impetus to conserve. It has also lowered the Company's returns. These are both common experiences of market-based industries at a time of recession.

According to the Company, it limited its proposed implementation of the WCAM to just residential usage in order to make the WCAM 'as narrow as practical and yet still provide some recognition of continuing conservation.' Company Response to Interrogatory WA-170. The Company argued that this limitation takes into consideration that its commercial and industrial usage levels are more impacted by fluctuations in general economic activity or the loss of a few large customers.*Ibid.* Therefore, any adjustment resulting from implementing the WCAM would only impact residential customers as an adjustment to their rates. Company Response to Interrogatory WA-172. The Department disagrees with this limitation, as conservation measures can also be effectively undertaken by the non-residential customers. Indeed, as noted above, some of the key components that the Company expects to include in its conservation program are either specifically geared to non-residential customers (schools and government buildings) or could also benefit them (rebates for appliances and fixtures). It bears reiterating that CT Water intends for the WCAM to allow it to continue promoting conservation effectively and aggressively while addressing declining revenues associated with increased conservation. Application, Thornburg PFT, p. 8. Therefore, since the Company does not intend to limit its conservation program to just the residential class, any adjustment mechanism should also be applied to usage by the non-residential classes.

CT Water believes that true conservation is already in place and that water conservation efforts by the Company's ratepayers have led it to experience declines in sales and revenues. Application, Thornburg PFT, p. 9; Tr. 3/8/10, p. 60. The Company believes this to be true even though the Department has yet to rule on its request for $100,000 in funding for its conservation program. Should that conservation program be approved and CT Water's aggressive promotion of it is met with success, the assumption is that both usage and revenues would likely decline (ostensibly from water conservation) even further than that already experienced by the Company. Therefore, with or without the program, the Company would be protected from a decline in sales and revenues under the WCAM. While the Company stated that the WCAM would also give the customers the opportunity to receive a benefit as a deferred credit, the strict conditions for that outcome require that: (a) annual revenues exceed projected revenues by 1%, and (b) the daily use variation result in Daily Growth rather than Daily Conservation. This would suggest that, in order for customers to benefit from the WCAM, the Company's endeavors must somehow fail to achieve any significant conservation impact, *and* customers must collectively use considerably more water than projected. Moreover, the Company has stated that the WCAM 'will remove the disincentive of implementing and promoting conservation programs [to] ensure cost savings are passed onto ratepayers, and help reduce overall water consumption.' Application, Thornburg PFT, p. 10. However, according to the Company, any cost savings realized by customers from the ratepayer-sponsored conservation program would only come as a result of more efficient fixture or appliance replacements. Re-

sponse to Interrogatory OCC-23. Neither the Company nor its shareholders share in the costs for the program. Therefore, on top of funding the totality of the Company's conservation program, any significant sales declines resulting from any sustained success of that conservation program would likely lead to a deferred expense, and ultimately, another rate increase in the near future for the Company's residential customers.

*48 In the AG's opinion, the WCAM would 'render [the Company] largely indifferent if actual sales differ form forecasted sales and, therefore, would insulate the Company from any risk that actual sales fall short of projected sales.' AG Brief, p. 12. The AG believes the WCAM unfairly and improperly shifts the business risk of sales from the Company to its customers.*Ibid.* According to the AG, that business risk properly lies with CT Water, and for which the Company receives an authorized ROE.*Ibid.* Similarly, the OCC has concluded that the Company's WCAM proposal 'is all about revenue stability, not conservation.' OCC Brief, p. 78. The OCC believes that the WCAM provides a shield 'from any decline in sales or drop in per customer usage, no matter if the reason is the economy, weather, conservation or adding a new system of customers with low usage.' *Ibid.* Even CT Water cost of capital witness believes that the adoption of the WCAM would somewhat reduce the Company's risk. Company Response to Interrogatory WA-81.

The Company stated that without the WCAM to support conservation, declining sales alone will cause the Company to return to the Department for additional rate relief in a relatively short time. Application, Thornburg PFT, p. 10. According to the Company, it has a long-standing practice of avoiding the need to file a rate case application unless 'absolutely necessary.' *Ibid.*, p. 11.However, as previously noted, the Company seeks to only implement the WCAM for Rate Years 2 and 3, as part of its proposed three-year rate plan. The very fact that the Company has not specified any further use of the WCAM beyond Rate Year 3, as well as the Company's overall proposal of spreading out the rate increase over a three-year period, points to the strong likelihood that the Company will seek rate relief shortly after Rate Year 3. Therefore, the Department does not necessarily see how the WCAM would contribute in extending the period of time between rate cases.

Lastly, the Company indicated that its WCAM proposal allows it to propose a minimal increase of 2% for public fire protection charges. Application, Benoit PFT, p. 7. However, the Company compensated for this minimal increase, in large part, by proposing a larger increase in rates for its residential customers, which would ultimately translate into a higher WCAM effect. This would grant CT Water a level of revenue stability greater than what would be enjoyed by the Company if public fire protection charges were raised at the same across-the-board increase as metered rates, flat rates and private fire protection charges.

In summary, the Department is reluctant to approve implementation of the proposed WCAM due to the foregoing concerns and the current state of the economy. Quite simply, now is not the appropriate time for the Company to propose implementing a revenue adjustment mechanism such as the WCAM on the Company's ratepayers, whom the Company has readily acknowledged are facing difficult and uncertain times. Accordingly, the Department rejects the Company's use of the proposed WCAM.

6. Late Payment Adjustments

a. Proposed Late Payment Penalty Fee

*49 The Company has proposed to introduce a Late Payment Penalty Fee. For pro forma purposes, the Company has estimated that the proposed $25 fee, if billed for an estimated 24,000 notices, would generate $600,000 in *pro forma* revenue at present rates and the same amount at proposed rates. Schedule C-3.1-11; Response to Interrogatory OCC-19; Late Filed Exhibit No. 69, Update to Exhibit WA-158.

Were the Late Payment Penalty Fee an existing charge, the Company would be correct in reflecting this amount to *pro forma* revenue at present rates. However, it is a newly proposed charge that provides a new source of income to the Company. Thus, any income resulting

from this proposed charge should only be reflected in *pro forma* revenues at proposed rates. Accordingly, the Department reduces *pro forma* revenues at present rates by $600,000. Given that the Department has ruled against the Company implementing the Late Payment Penalty Fee in Section II.H.3.b below, the Department also reduces *pro forma* revenues at proposed rates by that amount.

b. Existing Late Payment Fee

[56] Not to be confused with the proposed Late Payment Penalty Fee, CT Water is presently approved to apply a Late Payment Fee at an interest rate of 1.5% per month against past due amounts on customers' bills. Schedule E-1.0. In 2009, the Company collected a total of $207,664 in late payment fees. Late Filed Exhibit No. 69, Update to Exhibit WA-158.

Moreover, the Company acknowledged that a limitation of its current billing system creates a time lapse that precludes timely application of the Late Payment Fee. Tr. 3/8/10, pp. 144 and 145. As a result, the Company is unable to bill for and collect the first month's late payment fee if the delinquent balance is paid before the next billing cycle.*Ibid.*, pp. 157 and 158.The Company has stated that the Project Blue Horizon computer system it plans to install would address this limitation.*Ibid.* , p. 158.Without that limitation, the Company estimates it would have applied an additional $70,517 in 'missed' interest fees. Late Filed Exhibit No. 69, Update to Exhibit WA-158. Altogether, *pro forma* Late Payment Fee revenue at present rates amounts to $278,181.

Historically, the Department increases revenue from the late payment interest fees by the overall increase in allowed revenues as an adjustment to *pro forma* revenue at proposed rates. The overall increase requested by the Company, under Late Filed Exhibit No. 69, is 28.071%. Accordingly, the Department adjusts *pro forma* revenue at proposed rates upward by $78,088 [$278,181 X 28.071%].

7. Summary of Department Adjustments

In summary, the Department makes the following adjustments to *pro forma* revenues:

	Adjusted Revenue at Present Rates	Adjusted Revenue at Proposed Rates
Operating Revenues (LFE-69)	$61,850,124	$79,212,206
Department Adjustments: Brookside Residential	562	750 South Coventry Residential
Net Department Adjustments	$1,455,468	$2,220,227
Adjusted Operating Revenues	$63,305,592	$81,432,433

[Note: The following TABLE/FORM is too wide to be displayed on one screen. You must print it for a meaningful review of its contents. The table has been divided into multiple pieces with each piece containing information to help you assemble a printout of the table. The information for each piece includes: (1) a three line message preceding the tabular data showing by line # and character # the position of the upper left-hand corner of the piece and the position of the piece within the entire table; and (2) a numeric scale following the tabular data displaying the character positions.]**********

****
** This is piece 1. -- It begins at character 1 of table line 1.
****
****
Adjusted Adjusted Revenue at Revenue at Present Proposed Rates RatesOperating Reven- ues $61,850,124 $79,212,206 (LFE-69)Department 562 750 South 238 317 Masons 7,959 10,618 Adjustments: Coventry Island Customer Brookside Resid- ential Seasonal Growth Residential _____ _____Net Department $1,455,468 $2,220,227 Adjustments __ _____ _____Adjusted Operating $63,305,592 $81,432,433 Revenues1... ...10.... ...20.... ...30.... ...40.... ...50.... ...60.... ...70.... ....**********
****
This is piece 2. -- It begins at character 80 of table line 1.
****
****
471,235 628,660 Weather 1,575,475 2,101,793 (600,000) (600,000) -- Normalization Late Late Payment Payment Penalty Fee Interest80.. ...90.... ....0.... ...10.... ...20.... ...30.... ...40.... ...50...**********
****
* This is piece 3. -- It begins at character 153 of table line 1.
****
****
78,089153...6 WIDETABLE NOTE--Some parts of this form are wider than one screen. To view material that exceeds the width of this screen, use the right arrow key. To return to the original screen, use the left arrow key. Adjus- ted Adjusted Revenue at Revenue at Present Proposed Rates RatesOperating Revenues $61,850,124 $79,212,206 (LFE-69)Department 562 750 South 238 317 Masons 7,959 10,618 471,235 628,660 Weather 1,575,475 2,101,793 (600,000) (600,000) -- 78,089 Adjustments: Coventry Island Customer Normaliza- tion Late Late Brookside Resid- ential Seasonal Growth Payment Payment Residential Penalty Fee Interest _____ _____Net Department $1,455,468 $2,220,227 Adjustments __ _____ _____Adjusted Operating $63,305,592 $81,432,433 Revenues

***50** For the purposes of this proceeding, total *pro forma* revenues are $63,305,592 at present rates and $81,432,433 at the revised rate increases proposed by CT Water in Late Filed Exhibit No. 69.

H. RATE DESIGN

1. Existing and Proposed Rate Structure

a. Existing Rate Structures

CT Water has five major rate divisions: the CWC Main Division, which covers the Shoreline, Northern and Naugatuck Regions; the Crystal Water Division; the Gallup Division; the Unionville Water Division and the Mansfield Division. In the 2007 CT Water Rate Case Decision, CT Water allocated the allowed revenue increase through a rate design that applied different percentages to work towards equalization to the meter service charges, commodity charges and fire protection charges of CT Water's four separate rate divisions (excluding the Mansfield Division) as a step toward an eventual goal of single tariff pricing among four of its major divisions.

The CWC Main Division's meter service charge rate schedule is billed based on a single set of graduated

meter service charges based on the size of the meter. This holds true for the meter service charges that are billed to the former Masons Island Company Water Supply (Masons Island), SDC Water Company (SDC), Bay Mountain Water Company (Bay Mountain), Crystal, Unionville, Gallup and Brookside Divisions either on a monthly or quarterly basis. All consumption for the CWC Main, Crystal and Unionville divisions are billed a separate commodity charge for each class of customer either in thousand gallons or hundred cubic feet. The Gallup, Brookside, Bay Mountain, SDC and Masons Island Divisions are billed a separate commodity charge but have the same common commodity charge for its residential, commercial, industrial and public authority classes and are billed in either thousand gallons or hundred cubic feet. Private fire protection charges are billed quarterly based on the size of the service connection. Public fire protection charges are billed in linear feet monthly, and hydrant charges are billed quarterly. Some systems still bill public fire protection charges based on an inch-foot basis. The CWC Main, Crystal and Unionville Divisions also have a separate private right of way linear foot charge. This rate typically applies to a condominium association or a commercial shopping center in which these customers often have small (approximately, 6-inch) mains that they have paid for via a customer contribution.

CT Water also has 2,000 seasonal metered customers, 1,424 in its Guilford system, 10 in its Chester system, 554 in its Sound View system and 12 in its Masons Island system. Company Responses to Interrogatories OCC-135 and OCC-138; Company Late Filed Exhibit No. 34.1. These customers usually get billed three times a year. The first bill includes the service charge which is only billed once at the start up of the season (usually in April) and is priced at the annual level of the non-seasonal customers because the customer service charge is essentially the same as the year round customers. The first bill includes the $20 seasonal service activation fee. Seasonal metered customers are also billed a commodity rate based on all usage for that season. The second bill is usually a quarterly bill and is mailed around July 1st based just on the consumption used up to that point and then a last bill is rendered at the end of the season to bill the customer for the remainder of the consumption. Tr. 4/9/10, p. 1603.

*51 There are 365 unmetered seasonal customers in the Shoreline Region. These customers are charged a flat rate for the season and are also charged a $20 seasonal service activation fee.

Since the 2007 CT Water Rate Case Decision, CT Water has acquired many new customers and water systems. As of December 31, 2006, CT Water had 83,216 customers. As of December 31, 2009, CT Water had 88,441 customers, an increase of 5,225 customers in which 3,285 came from acquisitions of 36 small water systems. Company Response to Interrogatory WA-179.

The Company states that since its 2007 rate case Decision, a significant move toward single tariff pricing was accomplished under the proposed rates in the last rate case. The following list details what was accomplished by the proposed rate design from the 2007 CT Water Rate Case Decision (excluding the newly acquired systems) as follows:

• Meter service charges are the same for all divisions except for the Bradley and Middlebury-Heritage systems due to contract provisions; • Commodity charges are uniform in terms of having separate rates for each customer class, except where limited by contract provisions or percentage increases; • Public fire protection charges for hydrant fees and the newly proposed linear foot charges, reflect single tariff pricing for all divisions except for the Crystal Division and the Bradley System; • Private fire protection service charges reflect single tariff pricing for all divisions except for the Crystal and Gallup Divisions, due to the general policy approach to avoid rate reductions; and • Seasonal usage rates reflect single tariff pricing; however, there remains a difference in seasonal meter service charges for the customers of Masons Island system and all other CT Water Division systems because of a policy decision to avoid rate decreases.
2007 CT Water Rate Case Decision, p. 14.

There are some Company systems that, as a result of acquisition, have unique rates. For example, in its De-

cision dated September 20, 2006, in Docket No. 06-06-21,*Application of Connecticut Water Service, Inc., The Connecticut Water Company & South Coventry Water Supply Company, Inc. for a Change of Control of South Coventry Water and Its Merger with and Into The Connecticut Water Company*, the Department permitted the Company to keep former South Coventry customers at there existing rate schedule. Specifically, that schedule of rates and charges consists of a single service charge for all meter sizes, a single commodity rate block for residential customers, and a two-block declining commodity block structure for non-residential customers. The Company bills its customers in hundred cubic feet. This system does not include fire protection charges.

In addition, by Decision dated November 16, 2007, in Docket No. 07-07-33,*DPUC and DPH Review of Joint Application of South Central Connecticut Regional Water Authority, The Connecticut Water Company and BIW Limited for Approval of the Merger of BIW Limited with and into South Central Connecticut Regional Water Authority and The* Connecticut Water Company's Acquisition of Assets Owned by Eastern Connecticut Regional Water Company, Inc., the Department approved CT Water's proposal to maintain former Eastern Connecticut Regional Water Company, Inc.'s customers at the Company's then current meter service charges, commodity charges and fire protection charges.

***52** Presently, the Mansfield Division charges monthly meter service charges based on the size of the meter and has different commodity charges in thousands of gallons for its residential, commercial, and public authority classes. The Mansfield Division also has flat rate charges for its 1,158 unmetered residential year-round customers which are billed on a monthly basis. Company Responses to Interrogatories WA-174 and OCC-255, Exhibit WA-174B, Exhibit OCC-255; Company Late Filed Exhibit No. 69, Schedule C-3.1a Adjust.

The Mansfield Division also has 411 unmetered flat rate seasonal accounts (175 in the Amston Lake System and 236 in the Lake Hayward System) which are billed on a monthly basis. Company Response to Interrogatory OCC-138; Company Late Filed Exhibits No. 34.1; and No. 42. The Mansfield Division seasonal customers are also billed a $20 seasonal service activation fee for consistency with other seasonal customers. Tr. 3/18/10, p. 899; Tr. 4/9/10, p. 1617. The Mansfield Division includes public fire protection rates on a per inch-foot basis as opposed to the Company's typical linear foot charge as well as monthly and annual fire hydrant charges. The Company is working on metering certain Mansfield Division systems, for example, 33% of customers in the Westchester east system and 25% of the customers in the Westchester Village system have been metered. Company Response to Interrogatory OCC-237.

Further, in the Decision dated December 24, 2008, in Docket No. 08-08-15,*Joint Proceeding of DPH and DPUC for the Application of The Connecticut Water Company for Change of Control of the Ellington Acres Company and Merger of Ellington Acres Company with and into The Connecticut Water Company*, the Department approved maintaining the former Ellington Acres customers (EAC) schedule of rates. Presently, the EAC system bills all of its customers on a quarterly basis for its meter service charges depending on the size of the meter, a single commodity charge per 1,000 gallons for its residential, commercial and industrial customers, quarterly private fire protection charges based on the size of the service connection, and bills its public fire protection hydrants and inch-foot charges on an annual basis.

In the 2008 CT Water Rate Case Decision, the Department implemented the second phase of its revenue increase. The Company's divisional rates were increased on an across-the-board basis effective on April 1, 2008. This Decision did not affect the rates of the former customers of South Coventry, Mansfield and EAC. However, the Company was permitted to apply a uniform schedule of special charges to all of it customers, including those in recently acquired systems.

CT Water also calculates a daily rate for its meter service charges using four quarterly charges divided by 365 days to establish a per diem rate for the actual number of days in a particular billing cycle for each customer in all of its divisions as well as South Coventry, Mansfield and EAC. This allows CT Water to accur-

ately bill ratepayers for the actual number of days in a billing cycle. 2008 CT Water Rate Case Decision, p. 15.

b. Contractual Rate Schedules

***53** In the Naugatuck region, CT Water currently serves 452 residential customers, 17 commercial customers and 14 public authority customers in the Town of Middlebury (Middlebury). By Decision dated August 8, 2001, in Docket No. 01-04-21,*Application of The Connecticut Water Company for Approval of a Special Main Extension Agreement with the Town of Middlebury*, CT Water and Middlebury entered into a special contract that extended Middlebury's distribution system and interconnected it with the Company's Naugatuck system (Middlebury-Heritage system).

The Middlebury-Heritage system had its own existing schedule of fees and charges that CT Water retained as a result of that Decision. CT Water bills Middlebury-Heritage system customers a meter service charge according to the meter size and a commodity rate based on a two-block inclining rate structure. Fire protection customers are billed monthly based on a combination of hydrant and inch-foot charges. 2007 CT Water Rate Case Decision, p. 12.

CT Water also supplies water to the Bradley International Airport in Windsor Locks, Connecticut (Bradley) in accordance with the Department of Transportation (DOT) Agreement (Agreement) No. 4.06-04(84) dated July 18, 1984. As a result of the Agreement, customers on the Bradley system are billed a schedule of fees and charges at 60% of CT Water's current rates. 2007 CT Water Rate Case Decision, p. 12. The Bradley system serves no residential customers, just commercial and public authority customers. Meter service charges are based on the size of the meter and there is a separate commodity rate for these customers.

c. Sales for Resale Customers

CT Water has six resale accounts located in its Northern division. These accounts are under The Metropolitan District Commission (MDC) and Hazardville Water. MDC's accounts are billed monthly based on a 6-inch meter service charge. Hazardville Water's accounts are billed quarterly based on a 1-inch meter service charge and usage billed at CT Water's commercial commodity rate. Only two of these customers are regularly billed; the other accounts are for emergency use and billed on an 'as needed basis'. Tr. 3/18/10, pp. 868 and 979; Company Response to Interrogatory WA-143; Company Late Filed Exhibits No. 48a and 48b.

d. Rate Design Proposal

A Cost of Service Study (COSS) was not performed for the instant rate case proceeding. The Company's most recent company-wide COSS was performed for its last rate case application in order to determine CT Water's revenue allocation and rate design proposals. For that COSS, the Company used the Base-Extra Capacity methodology, which identifies and classifies the various cost components comprising the revenue requirement and allocates the functionalized costs among customer classes including its seasonal customers. A fire service cost allocation was also provided within the format of that study.

For this Application, CT Water is proposing a three-year rate plan for the Department's consideration. The Company is proposing two versions of three-year rate plans, the Standard Rate Plan (SRP) and the Alternate Rate Plan (ARP). Under the SRP, the Company is requesting a $16.8 million rate increase in the first rate year, $1.4 million in the second rate year and $1.399 million in the third rate year. Under the ARP, the Company would spread the total revenue increase evenly across each of the three years by approximately $6.36 million each year. Application, Benoit PFT, Exhibit A-2, pp. 2 and 3; Exhibit DCB-4.

***54** In both cases, the Company is proposing to limit the increase to public fire protection rates to two percent each year, and to apply the remainder of the approved revenue increase for each year on an across-the-board basis to all other rates, except miscellaneous service charges.*Ibid.* By the third rate year, both rate design proposals would have achieved the same level of

revenues and rates.*Ibid.* CT Water's decision to limit the proposed increase public fire protection charges to two percent was not based on the results of a cost of service study, but rather, the challenging economic times municipalities are having in keeping their costs down and staying within their budgets. The Company also states that increased public fire protection rates would ultimately be passed onto residents through higher property taxes. Company Response to Interrogatory OCC-130.

CT Water did not offer any additional alternative rate design proposals other than the across-the-board increases under its SRP and ARP, essentially not continuing with its move towards a single tariff rate structure. The Company asserts that it has not changed its plan to move towards a single tariff rate structure and intends to address rate equalization issues in its next rate case application. Benoit PFT, p. 19; Company Late Filed Exhibit No. 52.

e. OCC Position Regarding Rate

Design Proposals

By proposing an across-the-board increase, the OCC states that the Company's rate design proposals are not in keeping with the move toward single tariff pricing. Rather, the rates from the different divisions are moving further apart, instead of closer together. The OCC further believes that these rate design proposals are not in line with CT Water's last cost of service study. OCC Brief, p. 5. Additionally, the OCC claims that the consequences of its 2% increase limitation on public fire protection has CT Water's residential, commercial and industrial customers subsidizing the public fire protection customers and does not base the Company's rates on cost causation.*Ibid.* The OCC is of the opinion that the Company's proposed rate design is not consistent with the Department's past precedents in regards to adopting rate structures that move to gradual rate equalization.*Ibid.*

2. Department Analysis of Rate Design

a. General

[57-59] CT Water has requested the Department's approval to amend its existing rate schedules by one of two proposed three-year rate plans, the SRP and the ARP. Under either plan, the revenue increases would result in the same revenue requirement over the three-year period. As noted in Section II.B of this Decision, the Department has rejected the Company's multi-year rate plan approach.

The Company proposes to allocate its approved revenue increase on an across-the-board basis to all of its customer classes excluding the public fire protection class and miscellaneous service charges. Spreading the increase across-the-board will widen the gap between divisions and move away from the concept of single tariff pricing in which efforts were made in the 2007 CT Water Rate Case Decision. The Department is concerned with the Company's willingness to depart so easily from a COSS which was just completed its last rate case. The Department will order the Company in its next rate filing to structure its proposed rates based on the most recent COSS and continue its move towards a single tariff pricing structure and equalization of rates amongst all of its divisions.

b. Seasonal Metered Customers

***55 [60]** Throughout this proceeding there has been much discussion regarding the existing rate design for CT Water's Shoreline Region and its metered seasonal customers. The existing and proposed rate design for these customers contains a meter service charge for the entire year that is billed in the beginning of the season along with a $20 seasonal service activation fee, as well as a consumption charge based on each thousand gallons of use. In the Shoreline Region, the consumption charge for seasonal customers is more than double that for year-round customers. Seasonal customers usually receive a second bill based on their consumption from the first portion of the season and a final bill at the end of the season for the remaining consumption.

Some seasonal customers were under the impression that they were being billed a $120 charge just to turn their water service on at the beginning of the season.

The Company explained that there were several costs associated with the activation process to start up a system. These include bringing sources of supply on line, flushing the system and installing meters that were 'pulled' from some of the seasonal customers at the end of the prior season. The Company also stated that it needs to engage in an education process with customers to help them fully understand the costs associated with the start up of a seasonal system and to inform them that the first bill contains the year-round service charge in addition to a seasonal activation fee. Tr. 4/9/10, pp. 1614-1617.

Additionally, the Company asserted that if a water system only strictly serves seasonal customers, the entire cost of the service or revenue requirement allocated to that system must be recovered from these seasonal customers. For systems that serve both year-round and seasonal customers, allocations are made to recognize that it is more costly to serve seasonal customers because they impose peak demands during overall system maximum demand periods, but no demand during off peak (non-seasonal) months. Further, with the water systems, a large portion of the total costs are fixed for the facilities in place such as mains, meter services, hydrants and pumps. Company Response to Interrogatory OCC-136. Seasonal customers only provide revenue for a part of the year as opposed to a year-round customer who generates revenues for the full year. Therefore, in order to recover total costs, and not have year-round customers subsidize seasonal customers, a rate differential is imposed. Company Response to Interrogatory OCC-136; Tr. 3/18/10, pp. 887-894. Because these are only partial year customers, the service charges for meter/services, billing and accounting must reflect not only the number of bills, but also the fact that the cost of the meters/services must be recouped over fewer billing periods. *Ibid.*

CT Water is amenable to working with the OCC regarding the rate structure for seasonal customers and possibly developing an alternate seasonal rate design as long as the Company is able to recover its total costs from all of its customers. A possible alternative suggestion was to equalize the commodity rate to allocate some costs to the basic service charge or increase the seasonal activation fees. Tr. 4/9/10, pp. 1601 and 1602, 1605-1611. Neither the Company nor the OCC filed an alternative seasonal rate design proposal prior to the close of hearing in this proceeding.

***56** The Department notes that cost of service principles provide justification for the rates paid by seasonal customers. Unfortunately, the two options for billing these customers (smaller year-round billing covering periods when no usage occurs or seasonal billing involving fewer, but larger billings) have the effect of creating the appearance of inequity.

Due to the small number of customers subject to these rates, an overall revenue requirement allocation from seasonal customers to other classes involves a modest sum. While not a justification in itself, revising the Company's proposed seasonal customer rate structure gives the Department the opportunity to balance competing interests. Specifically, the Department will equalize the seasonal customer commodity charge with that of year-round customers. In the opinion of the Department this provides a measure of fairness without violating cost causation. Many of these customers would prefer to be year-round customers, but are prevented by the local government from doing so due to health and/or safety concerns. As such, the rates approved in this Decision reflect the equalization of commodity rates of the Shoreline Region seasonal-metered customers and the Masons Island seasonal-metered customers to that of the year-round commodity rates in their respective divisions. CT Water may no longer charge these seasonal-metered customers, along with the seasonal flat rate shoreline and Mansfield seasonal flat rate customers, the existing $20 seasonal service activation fee at the beginning of the season, and will eliminate the seasonal activation fee from its miscellaneous service charge rate schedule.

c. Seasonal Flat Rate Customers

[61] In the CWC Main Division, there are 365 unmetered seasonal customers in the systems of Point of Woods, Sound View and White Sands Beach that are

charged a flat rate for the season and a $20 seasonal service activation fee. Response to Interrogatory WA-148; Company Late Filed Exhibit No. 40. CT Water plans to meter the majority of these customers in 2010. Tr. 3/18/10, p. 867; Company Response to Interrogatory OCC-138.

The Company's seasonal flat rates for this division are currently charged commensurate to the unit type: single, duplex, triplex, quadplex or commercial. Schedule E-1.0. Only single customers remain unmetered. Response to Interrogatory WA-148. Accordingly, the Department will maintain the single flat rate but will eliminate duplex, triplex, quadplex and commercial flat rates as they serve no remaining purpose. The seasonal activation fee will no longer apply to these customers since this rate will be eliminated by the Department. Seasonal flat rate customers will also not be subject to the across-the-board adjustment to rates.

3. Schedule of Special Charges

a. Existing Charges

[62, 63] CT Water's existing schedule of special charges consists of turn-on and turn-off fees, a seasonal service activation fee, frozen meter charges, bulk water charges, unauthorized hydrant and water use fees, curb box repair charges, a cross-connection notice fee, a returned check fee, a late payment fee, and service connection fees. This schedule of special charges is uniformly applied to the Company's customers in all divisions and systems.

***57** The Company proposes to maintain all of these charges at their current levels as significant changes to most of those fees were approved in the 2007 CT Water Rate Case Decision. The Company has acknowledged that there has been an increase (from $24.42 to $25.51) in the labor component of some of these fees. However, the Company believes that even with this minimal increase, these charges remain cost-justified, appropriate and comparable to those of other water utilities. Tr. 3/8/10, pp. 148-151; Tr. 4/9/10, pp. 1596 and 1597; Company Response to Interrogatory WA-153, Supplement to WA-153. The Company failed to file its fire service connection tariff fees in the Application and has subsequently filed them as Late Filed Exhibit No. 45. The Company also proposes no changes to these fees and believes that they are cost justified. Tr. 4/9/10 pp. 1598-1601; Company Late Filed Exhibit No. 45. Upon review, the Department approves the Company's proposal to maintain existing rates contained in its schedule of special charges except for the seasonal activation fee which the Department is eliminating as an approved rate.

b. Proposed Late Payment Penalty Fee

[64] CT Water proposes a Late Payment Penalty fee of $25 per occurrence. This fee would be applied whenever the Company issues a termination notice for a delinquent account. The Company hopes that this fee would encourage more timely payments and minimize the considerable time, expense and customer impact of initiating collection activity and shut-off procedures when an account becomes delinquent. CT Water states that some customers frequently wait to make their payment when they are called by Company Collections' staff or when a service person arrives to shut off service. Company Response to Interrogatory OCC-19.

The OCC questioned the Company as to why it proposed to offer a Late Payment Penalty Fee after its President stated that CT Water was sensitive to the challenges of customers and local governments. The OCC believes that the proposed late penalty fee contradicts this statement. The OCC also believes that this proposed fee is excessive and inappropriate given current economic times and that there should not be a service charge associated with a termination notice or late payment absent a truck being sent to terminate service. Overall, the OCC opposes the proposed late penalty fee. Tr. 3/8/10, pp. 36-44; OCC Brief, pp. 76 and 77.

The AG also requested that the Department deny the proposed Late Payment Penalty Fee stating that the Company is already entitled to assess a 1.5% late payment charge and that this proposed fee is simply punitive and, more importantly, specifically targeted to those

customers who are already struggling to pay their bills and can least afford it. AG Brief, p. 10.

No other water company in Connecticut has an approved fee similar to what CT Water is proposing. Also, the Company was unable to provide a detailed cost breakdown justifying the proposed $25 amount. The Company could only offer that the $25 amount is comparable to what credit card companies might charge. Tr. 3/8/10, pp. 140 and 141. Presently, the Company already has an approved late payment fee of 1.5% per month assessed to delinquent bills and a service turn on and turn off fee before and after hours which recoups the collection efforts made by the Company pertaining to a delinquent bill or shut off notice. Tr. 3/8/10, pp. 151-155; Company Response to Interrogatory WA-158. The Department denies approval of the Late Payment Penalty Fee.

I. SUMMARY - TABLE II

Table II, below, shows the revised *pro forma* Income Statement at the proposed rates as presented by the Company, the adjustments made by the Department and the pro forma Income Statement as adjusted by the Department.

TABLE II

	Company Pro Forma	Department Adjustments	Proforma after Department Adjustments
Operating Revenue: Present Rates	$61,850,124	1,265,559	$63,115,683 M&J/Other Income
Total Operating Revenues	$79,969,533	$1,966,875	$81,936,408
Operating Expenses: Operation & Maintenance	$35,401,608	$(1,515,239)	$33,886,369 Depreciation Expense
Total Operating Expenses	$59,274,474	$(267,536)	$59,006,938
Utility Operating Income	$20,695,059	$2,234,411	$22,929,470

[Note: The following TABLE/FORM is too wide to be displayed on one screen. You must print it for a meaningful review of its contents. The table has been divided into multiple pieces with each piece containing information to help you assemble a printout of the table. The information for each piece includes: (1) a three line message preceding the tabular data showing by line # and character # the position of the upper left-hand corner of the piece and the position of the piece within the entire table; and (2) a numeric scale following the tabular data displaying the character positions.]**********
****
** This is piece 1. -- It begins at character 1 of table

line 1.
****
****
TABLE II Proforma after Company Depart- ment Department Pro Forma Adjust- ments AdjustmentsOperating Reven- ue: $61,850,124 1,265,559 $63,115,683 757,324 Present Rates M&J/Other In- come
Total Operating
$79,969,533 $1,966,875 $81,936,408 Revenues

Operating Expenses:
$35,401,608 $(1,515,239) $33,886,369 7,629,24 5 Operation & Depreci- ation Maintenance Expen se
Total Operating
$59,274,474 $(267,536) $59,006,938 Expenses

Utility Operating
$20,695,059 $2,234,411 $22,929,470 Income

1... ...10.... ...20.... ...30.... ...40.... ...50.... ...60.... ...70.... ....**********
****
This is piece 2. -- It begins at character 80 of table line 1.
****
****
757,324 17,362,085 701,316 18,063,401 Pro- posed Increase (397,882) 7,231,363 5,351,502 5,351,502 1,031,361 Prop- erty Payroll Taxes Taxes80.. ...90.... ....0.... ...10.... ...20.... ...30.... ...40.... ...50..**********
****
* This is piece 3. -- It begins at character 152 of table line 1.
****
****
(48,921) 982,440 CT 1,497,822 354,409 1,852,231 8,362,936 1,340,097 Corporate Federal Busi- ness Income Taxes Taxes152....60.... ...70.... ...80.... ...90.... ....0.... ...10.... ...20.... ...30**********
****
This is piece 4. -- It begins at character 231 of table line 1.
****
********** 9,7 03,033231.....40. WIDETABLE NOTE--Some parts of this form are wider than one screen. To view material that exceeds the width of this screen, use the right arrow key. To return to the original screen, use the left arrow key. TABLE II Proforma after Company Depart- ment Department Pro Forma Adjust- ments AdjustmentsOperating Reven- ue: $61,850,124 1,265,559 $63,115,683 757,324 757,324 17,362,085 701,316 18,063,401 Present Rates M&J/Other In- come Proposed Increase
Total Operating
$79,969,533 $1,966,875 $81,936,408 Revenues

Operating Expenses:
$35,401,608 $(1,515,239) $33,886,369 7,629,245 (397,882) 7,231,363 5,351,502 5,351,502 1,031,361 (48,921) 982, 440 CT 1,497,822 354,409 1,852,231 8,362,936 1,340,097 9,703,033 Operation & Depreci- Payroll Corporate Fede ral Maintenance Expense

	Taxes Taxes	Business In- come Ta	
xes	Taxes		
		Total	Operat-
$59,274,474	$(267,536)	$59,006,938	Expenses
	Utility	Operating	
$20,695,059	$2,234,411	$22,929,470	Income

***58** *J. RATE OF RETURN*

1. Introduction

[65, 66] In determining the appropriate cost of capital to allow the Company, Conn. Gen. Stat. §16-19e(a) requires that:

[T]he level and structure of rates be sufficient, but no more than sufficient, to allow public service companies to cover their operating costs including, but not limited to, appropriate staffing levels, and capital costs, to attract needed capital and to maintain their financial integrity, and yet provide appropriate protection to the relevant public interests, both existing and foreseeable ... .

To determine a rate of return (ROR) on rate base that is appropriate for the Company's overall cost of capital, the Department identifies the components of its capital structure and estimates the cost of each component. The components are then weighted according to their proportion of total capitalization. These weighted costs are summed to determine the Company's overall cost of capital, which becomes the allowed ROR.

2. Capital Structure and Financial

Condition

a. Capital Structure

The Company has proposed that rates be based upon a simple hypothetical capital struc ture consisting of 50% Long-term Debt to 50% Common Equity valued as of the Test Year, December 31, 2008. Application, Schedule D-1.0. According to the Company, the 50% Long-term Debt to 50% Common Equity mix is its targeted capital structure. Response to Interrogatory WA-8; Tr. 3/12/10, pp. 400 and 401. The Company further states that the 50%-50% hypothetical is in line with water industry standards and is based upon the Department's past practices. Company Brief, p. 21. The Company's review of water companies' total capitalization in 2008 shows that, on average, common equity made up 50.90% of the capital structure. Benoit PFT, p. 10.

The Company's final capital structure proposal including components and corresponding costs are provided in the table below.

Class of Capital	Percentage to Total	Cost	Weighted Cost
Long-term Debt	50.00%	5.74%	2.87%
Common Equity	50.00%	11.30%	5.65%
Total Capitalization	100.00%		8.52%

Application, Schedule D-1.0

Given the Company's proposal of a multi-year rate plan, the Company also supplied forecasted capital structures for Rate Years 2 and 3. These capital structures are exactly the same as the one for Rate Year 1, consisting of 50% Long-term Debt to 50% Common Equity. Application, Schedule D-1.0B and Schedule D-1.0C; Response to Interrogatory WA-12.

The Company feels that its targeted and proposed 50% Long-term Debt to 50% Common Equity ratio is appropriate to finance its rate base on a long-term basis. In support of this position, the Company indicates that it manages its financings to align with the target in the long-term. Likewise, the Company suggests that the 50%-50% target is within the norm of other Connecticut utilities. Response to Interrogatory OCC-106.

*59 The Company supplied an exhibit depicting anticipated quarterly changes in capital structure over the time period covering December 31, 2009 though December 31, 2012. CT Water Late Filed Exhibit No. 15. According to CT Water Late Filed Exhibit No. 15, the Company's use of Short-term Debt increases over the time period December 31, 2009 through March 31, 2010, from 7.33% to 9.34%. Short-term Debt use then steadily declines over the period June 30, 2011 through June 30, 2012, to 0% then slightly increases over the next two quarters. An amount of Short-term Debt ranging between 7-9% is consistently used through March 31, 2012. CT Water Late Filed Exhibit No. 15; Tr. 3/12/10, pp. 419-422. According to the Company's estimates at June 30, 2010, CT Water's actual capital structure will consist of 45.50% Common Equity, 45.94% Long-term Debt and 8.56% Short-term Debt. Excluding Short-term Debt, the June 30, 2010 capital structure translates to 49.76% Common Equity and 50.24% Long-term Debt. Responses to Interrogatories OCC-107 and WA-12; CT Water Late Filed Exhibit No. 15; Tr. 3/29/10, pp. 1357-1359.

An exhibit compiling and summarizing the Company's December 31st year end capi talization mix between Common Equity and Long-term Debt is tabulated below:

	2004	2005	2006	2007	2008	2009
Common Equity	57.69%	54.07%	56.29%	52.03%	52.55%	52.4%
Long-term Debt	42.31%	45.93%	43.71%	47.97%	47.45%	47.6%

	Rate Year 2010	Rate Year 2011	Rate Year 2012
Common Equity	50.18%	47.44%	52.47%
Long-term Debt	49.82%	52.56%	47.53%

Application, Schedule G-1.3; Responses to Interrogatories WA-11 and WA-12; CT Water Late Filed Exhibit No. 17; Tr. 3/12/10, p. 411.

In December 2009, the Company's parent, CT Water

Service, Inc. (CWS or Parent Company) provided a $5.1 million capital infusion. The purpose of the infusion was to reflect equity received by the Parent Company derived from CT Water's operations. The sources of the equity infusion were from the Company's dividend reinvestment program and stock options exercised over the past year. Response to Interrogatory WA-10.

The Company indicates that over the next three years, a $20 million long-term debt issuance and a $20 million CWS stock issuance will be needed to finance its future capital improvements. These requirements have been factored into the period covering the multi-year rate plan. Response to Interrogatory WA-18.

The Company indicates that it had not prepared a forecasted financial plan for itself or its Parent Company. Therefore, it could not provide projected capital structures for the years 2013 through 2016. Given that this level of detail was not available, the Company could not respond to Department inquiry regarding future capital expenditures and projected capital structures. Response to Interrogatory WA-13; Tr. 3/12/10, p. 412.

b. Financial Condition

***60** While on the surface, its financial condition and viability appears the same as in 2006, the Company feels that declining consumption is going to be a long-term trend that will hamper its ability to recover its allowed revenue requirement. In response to this observation, the Company proposed the WCAM as a means to address the issue. Response to Interrogatory WA-19. The Company notes that land sale profits and tax credits from those sales are sporadic and are based upon excess land and demand for that land. Although land sales and tax credits are beneficial sources of tax relief, they further complicate the Company's financial condition as the Company is unable to consistently use land sale profits and tax credits to enhance net income.*Ibid.*

Since its last rate case, the Company's Return on Equity (ROE) has been less than the 10.125% ROE allowed by the Department. According to the Company, its average ROE was 8.83% on December 31, 2007, 9.57% on December 31, 2008, and 8.01% on December 31, 2009. CT Water Late Filed Exhibit No. 19; Supplemental Exhibit No. 19. At the Department's request, the Company supplied other key financial metrics valued at year end, December 31st, as compiled in the table below:

Ratio	2006	2007	2008	2009
Total Asset Turnover (TAT)	0.153	0.167	0.168	0.148
Current Ratio (CR)	0.821	1.166	0.563	0.842
Cash Flow from Operations (CFO)	0.722	0.889	0.925	0.862
Total Debt to Total Capitalization	0.462	0.501	0.495	0.524

Times Interest Earned (TIE)	3.363	4.835	4.519	3.400
Fixed Coverage Ratio (FCR)	0.570	0.717	0.720	0.440
Cash Flow Coverage Ratio (CFC)	2.386	3.083	2.879	3.005
Operating Margin (OM)	0.161	0.225	0.229	0.222
Profit Margin (PM)	0.114	0.139	0.144	0.153
Contribution Margin (CM)	14.181	16.027	15.360	15.017
Return on Total Assets (ROA)	0.052	0.065	0.066	0.044
Return on Invested Capital (ROI)	(0.005)	0.009	0.011	0.010

Response to Interrogatory WA-21; Late Filed Exhibit No. 17a.

The Company states that CWS has no strict dividend payout target, but believes that over the long run, a payout of 70%-80% of earnings should be paid to shareholders. Overall, the Company believes shareholders value consistency combined with modest increases to the dividend payout ratio. In recent years, CWS has supplied its shareholders with increased common dividends of $0.02 annually, translating to a 2% annual growth rate in shareholder dividends. Response to Interrogatory WA-22. The following tables summarize past and future dividend payouts:

	2000	2001	2002	2003	2004
EPS	$5,439	$5,780	$5,542	$5,734	$5,924
DPS	$3,841	$3,998	$4,194	$4,052	$4,106
DPS/EPS	70.6%	69.2%	75.7%	70.7%	69.3%

	2005	2006	2007	2008	2009
EPS	$4,506	$3,582	$5,480	$5,888	$6,054
DPS	$4,187	$4,095	$4,367	$4,474	$4,571
DPS/EPS	92.9%	114.3%	79.7%	76.0%	75.5%

	Forecast		
	2010	2011	2012
EPS	$6,112	$8,859	$8,855
DPS	$5,179	$5,335	$5,442
DPS/EPS	84.7%	60.2%	61.5%

***61** Response to Interrogatory WA-23; Supplemental Response to Interrogatory WA-23.

3. Cost of Long-term Debt

CT Water has 11 long-term loan issues. The Company has both fixed and variable rate debt. The interest rate on its fixed rate debt ranges from 4.40% to 5.125%, whereas the interest rate on its variable rate debt ranges from 1.90% to 3.48%. The embedded cost of its 11 borrowings is 5.74%. Application, Schedule D-3.0; Response to Interrogatory WA-17. The Company almost exclusively used the Connecticut Development Author-

ity (CDA) to issue its debt. According to the Company, the CDA provides a great means to keep its borrowing costs low. Additionally, the Company has been active in refinancing its debt. It currently has five series of bonds eligible to refinance, but current market conditions do not provide an opportunity to refinance. Response to Interrogatory WA-16.

4. Short-term Debt and Short-term Debt

Equivalent

The Company conducts its intercompany short-term borrowing with CWS. CWS maintains lines of credit (LOC) with three banks with total access to approximately $40 million. The three banks and corresponding LOC are CoBank and Citizen's Bank each with $15 million and Bank of America with $10 million. The Company indicates CWS will negotiate to extend these LOCs as they expire over the next one to two years. Application, Schedule D-2.0, Response to Interrogatory WA-14. The Company indicates its composite cost of Short-term Debt is 2.384%. Application, Schedule D-2.0; Tr. 3/12/10, pp. 414-418.

The Company recognizes that there is a difference between its proposed ratemaking rate base and total capitalization. According to the Company, the reason for this difference is the amortization of a negative acquisition premium that arose from CT Water's acquisition of the assets of Birmingham Utilities' Eastern Division (formerly, the Eastern Connecticut Regional Water Authority) and the amortization of Contributions in Aid of Construction (CIAC). [FN9] Company Brief, p. 22. The Company disagrees with a portion of the Birmingham Utilities Rate Case Decision. Specifically, that Decision suggested that CT Water had agreed that the rate base differential from the Eastern acquisition could be treated as a Short-term Debt Equivalent for ratemaking purposes. Tr. 4/9/10, p. 1633; Company Brief, p. 22. The Company believes that if the Short-term Debt Equivalent is applied to the Eastern acquisition assets, then the Company will experience negative earning impacts from the acquisition. Indeed, the Company believes it will be punished for negotiating a purchase price below book value and returning the negative acquisition premium amortization to the customers in the form of lower rates. Company Reply Brief, p. 12. According to the Company, the only thing agreed to during the Eastern acquisition hearings was that determining the cost of this rate base differential is a decision that is fought in the rate case, not that the differential could be treated as an offset to rate base. Company Brief, pp. 22 and 23. The Company's final position is that it did not agree to the Short-term Debt Equivalent treatment of the Eastern acquisition during the acquisition docket. Company Reply Brief, p. 12.

***62** Although the Eastern acquisition issue is unique to CT Water, the CAIC issue is experienced by all Connecticut water companies given that in 1986, the Department created Account 272 (in the Uniform System of Accounts Prescribed for Water Utilities Class A) to provide a procedure for CIAC to be amortized over the life of the plant rather than remaining on a company's books indefinitely. Company Brief, p. 23. Therefore, the Company feels CIAC amortization is necessary and should not be used as justification to reduce a company's return potential.*Ibid.*

The Company also believes that the Department should not use a Short-term Debt Equivalent to equalize rate base and capitalization in this case. According to the Company, truing up capitalization to rate base results in a fictitious amount of dollars that does not finance any dollars in the ratemaking rate base. Furthermore, the Company suggests such a short-term debt plug would be particularly inequitable since its composite cost of short-term debt is 2.38%. Company Brief, p. 24. The OCC does not disagree with the Company's idea of a Short-term Debt Equivalent being fictitious. However, the OCC argues that the Company's proposal to ignore the difference between the capitalization and rate base balances, and to impose the 50%/50% hypothetical capital structure, are also fictitious. OCC Reply Brief, p. 4.

Although it acknowledged, during the Eastern acquisition proceeding, that the Short-term Debt Equivalent approach was one possibility, the Company points out that short-term debt costs at that time were approximately 5%. The Company argues that in today's interest rate

environment, the use of 2.384% would be devastating. Company Reply Brief, p. 12. In response, the OCC stated that short-term debt costs are what they are. According to the OCC, a company as large as CT Water should have short-term debt costs lower than that of smaller companies like Avon Water and Hazardville Water. According to the OCC, using the current short-term debt cost of 2.384% is the same as using the Company's 5.37% in its last rate case. Since interest rates have declined since the last rate case, it is expected that the Company's financing costs should reflect these lower interest rates. The 2.384% rate is the Company's actual rate and applying any other rate to the Short-term Debt Equivalent would result in a higher bogus rate of return on rate base for the Company. OCC Reply Brief, p. 5.

The Company described how it believed its situation was different from the other cases where a Short-term Debt Equivalent was imposed by the Department. For example, at page 51 of the Birmingham Utilities Rate Case Decision, the Company states that Birmingham Utilities proposed using a Short-term Debt Equivalent because short-term debt caused the difference between Birmingham Utilities' capitalization and rate base. Likewise, Birmingham Utilities used short-term debt as a significant financing source for capital projects and expected to continue using it. Company Brief, p. 25. Other instances where a Short-term Debt Equivalent was used are in two settled rate cases. [FN10]According to the Company, in those settlements, the Short-term Debt Equivalent was part of an entire settlement process and as such not carved out as a rule making process. Company Brief, p. 26. Lastly, the Company distinguished itself from the most recent Avon Water Company rate case wherein it proposed use of the rate base true-up while CT Water had not made such a request. [FN11]

5. OCC Position on Capital Structure and

*63 Short-term Debt

The OCC provided guidance as to the overall fairness of CT Water's proposed capitalization mix, cost of capital components and overall ROR on rate base. According to the OCC's expert witness, Dr. Woolridge, the proposed Company capital structure consisting of 50% Common Equity and 50% Long-term Debt raises concern. Dr. Woolridge stated that the proposed ratemaking capital structure has no short-term debt and includes more common equity than the capitalization of the Parent Company and other water utility companies. Woolridge PFT, p. 14; Exhibit JRW-5; OCC Brief, p. 14. Dr. Woolridge also indicated that the assumption that rate base and ratemaking capitalization should be approximately equal for ratemaking to properly reflect the revenue requirement is one commonly known in the regulated utility industry. Tr. 3/29/10, p. 1357.

The OCC indicates that another problem with the Company's proposed ratemaking capitalization mix is that it is less than CT Water's proposed rate base. The Company had proposed that, at December 31, 2009, rate base of $222,685,316 be used for ratemaking. However, the total amount of Long-term Debt and Common Equity as proposed by the Company only added up to $213,838,989 [$112,150,000 + 101,688,989]. According to the OCC, a shortfall of $8,846,327 results between rate base and total capital in the Company's recommendations. In order to rectify the shortfall, the OCC proposes to include a Short-term Debt equivalent to plug the shortfall. Hence, Dr. Woolridge included $8,846,327 in Short-term Debt in the capital structure for ratemaking purposes. Woolridge PFT, p. 14, Exhibit JRW-5; OCC Brief, p. 14.

As a result of the proposed higher proportion of Common Equity in the proposed capitalization mix and the shortfall between capitalization and rate base, Dr. Woolridge initially recommended a hypothetical capital structure of 3.97% Short-term Debt, 50.36% Long-term Debt and 45.66% Common Equity. Woolridge PFT, p. 14; OCC Brief, p. 14. Dr. Woolridge accepts the Company's proposed cost of Long-term Debt of 5.74% and the Company's computation of 2.38% for its cost of Short-term Debt. Woolridge PFT, p. 15. The table below represents the OCC's initial position regarding the ratemaking capital structure:

Class of Capital	% of Total	Cost	Weighted Cost
Short-term Debt Equivalent	3.97%	2.38%	0.09%
Long-term Debt	50.36%	5.74%	2.89%
Common Equity	45.66%	9.40%	4.22%
Total	100.00%	-	7.21%

OCC Brief, p. 15.

According to the OCC, the fact that rate base and capitalization are out of balance is not new. In fact, this was an issue raised during the last rate case proceeding. As part of its Settlement Agreement with the OCC, the Company agreed to an accounting plug matching ratemaking capitalization and ratemaking rate base, the Short-term Debt Equivalent, which was incorporated at a rate of return equal to the Company's cost of Short-term Debt. OCC Brief, pp. 15 and 16.

***64** Based upon revisions by the Company during the course of this proceeding, the OCC revised its proposed ratemaking capital structure and ratemaking rate base to the end of calendar year 2009. The OCC used the Company's data from CT Water Late Filed Exhibit No. 62a and CT Water Late Filed Exhibit No. 62b to incorporate $101,862,783 Common Equity and $104,188,823 Long-term Debt for a total capitalization of $206,051,606. The OCC indicates that CT Water revised *pro forma* rate base upward to $225,381,185 to reflect actual December 31, 2009 end of year balances. CT Water Late Filed Exhibit No. 8. The difference between proposed rate base and proposed capitalization is revised to $19,329,579 [$225,381,185-$206,051,606]. OCC Brief, p. 17. Combining the effects of these Company revisions, the OCC revised its proposed ratemaking capital structure to the following:

Class of Capital	Amount ($)	% of Total	Cost	Weighted Cost
Short-Term Debt Equivalent	$19,329,579	8.58%	2.38%	0.20%
Long-Term Debt	$104,188,823	46.23%	5.74%	2.65%
Common Equity	$101,862,783	45.20%	9.25%	4.18%

Total	$225,381,185	100.00%	7.03%

OCC Brief, pp. 17 and 18.

The OCC indicates that approximately $7 million of the rate base to capitalization differential is a result of CT Water's acquisition of Eastern's assets. According to the OCC, the Birmingham Utilities Rate Case Decision provided no guarantee of future ratemaking treatment for those assets. The OCC asserts that the Department's cost benefit analysis in that Decision directly discussed the potential use of a Short-term Debt Equivalent. The OCC quotes the following language from the Birmingham Utilities Rate Case Decision as indicating the distinct possibility that the excess rate base above capitalization arising from the Birmingham Utilities negative acquisition premium could earn a lower return. For example:

In the instant docket, the Department finds that ratepayers interests are being served by the 10-year amortization of the negative premium with the distinct possibility that excess ratebase above capitalization will earn a lower return in future rate cases. The Department therefore approves the amortization of the negative premium as proposed by [CT Water].

Birmingham Utilities Rate Case Decision, p. 8.

The AG agrees with the OCC's finding that the Company's proposal of 50% Long-term Debt to 50% Common Equity is unduly burdensome for ratepayers. The AG reiterated the OCC's stance that the proposed capitalization mix is higher than that of the Parent Company and the water industry as a whole. Additionally, the AG supports the OCC's concept of transforming the shortfall between proposed rate base and proposed capitalization to Short-term Debt Equivalent. AG Brief, p. 6. As an alternative, the AG recommends a minimum of 50 basis point (bps) downward adjustment to the allowed ROE should the Department accept the Company's proposed ratemaking capitalization mix of 50% Long-term Debt to 50% Common Equity.*Ibid.*, pp. 6 and 7.

6. Department Analysis of Capital

*65 Structure

a. Long-term Debt

[67-73] In general, the Department requires that ratepayers benefit from any opportunity that company management may have to reduce expenses, such as lowering interest rate payments by refinancing at lower rates during periods of declining interest rates. Given that CT Water has consistently financed Long-term debt issues through the CDA, the Department finds that the Company has made reasonable efforts to obtain low debt costs given market conditions. Consequently, the Department incorporates CT Water's 11 long-term issues at an embedded cost of 5.74%. The Department incorporates this as the cost of Long-term Debt into its final determination of the Weighted Average Cost of Capital (WACC) in Section II.J.8.g.

b. Short-term Debt

The Department reviewed the Company's composite cost of Short-term Debt of 2.384% and finds it reasonable for ratemaking. The main issue of contention between the Company and the OCC is the imposition of a rate base true-up or Short-term Debt Equivalent, and the cost of common equity.

The role of an economic regulator is to ensure a company's proposals are in line with industry practice and are reasonable. In several recent Decisions, the Department has recognized that Connecticut's regulated utilities must operate with an eye to industry practice with regards to the capitalization mix used for ratemaking. Avon Rate Case Decision; Hazardville Rate Case Decision; 2007 CT Water Rate Case Decision; Decision dated March 13, 2008, in *Docket No. 07-05-44, Applic-*

ation of United Water Connecticut, Inc. to Amend Rates Schedules; Decision dated December 12, 2007, in *Docket No. 07-05-19, Application of Aquarion Water Company of Connecticut for Amended Water Service Rate Schedules*.When a company's proposed capitalization mix deviates from the industry average, the Department has imposed a ratemaking capitalization mix such that it is closer to the average industry mix at the time of the proceeding. In this case, the Company was clearly cognizant of this authority, and it acted in advance by proposing the 50%-50% hypothetical.

The Department needs to answer the question if it is sufficient to breakout the ratemaking capital structure between Total Debt and Common Equity or should it further breakdown Total Debt to Long-term Debt and Short-term Debt. The Department examined the breakdown of permanent capital of the six *AUS Utility Reports* water companies reviewed by Ms. Ahern, the Company's cost of capital witness, and finds that the average capitalization mix consists of 50.60% Common Equity to 0.35% Preferred Stock to 49.05% Long-term Debt. Ahern PFT, Schedule PMA-4. Looking solely at these two capitalization component, the Company's 50%/50% proposal would approximate the average use of capital.

On the other hand, evidence shows that the Company's Short-term Debt use ranges from 7.33% to 9.34% through March 31, 2010. CT Water Late Filed Exhibit No. 15. Examining the Company's use of Short-term Debt compared to that of the industry, the Department finds the Company's use to be somewhat higher than the industry average of 5.99%. Woolridge PFT, Exhibit JRW-5.

***66** In stark contrast to this evidence is the Company's statement that it does not use Short-term Debt to finance rate base. Tr. 3/12/10, p. 409; Company Brief, p. 26. The Department finds this statement particularly misleading. Water companies do not track how short-term vs. long-term debt dollars are spent. Typically, water companies amass a pool of dollars consisting of various sources of Long-term Debt, Short-term Debt, Retained Earning, capital infusions and so forth. Some of these dollars are used to purchase items which are expensed in the year and other dollars are used to buy items that finance rate base. Water companies do not willingly exclude Short-term Debt dollars from purchasing plant capital. In fact, many Long-term Debt financing applications before the Department are the result of a water company needing to refinance its unpaid Short-term Debt balance or to draw on its LOC facility to a long-term issue simply due to the company not being able to pay off the LOC at the end of the year. [FN12]

The Department reviewed the water industry's use of short-term debt. According to Dr. Woolridge, the average capitalization mix for the nine water companies in his water proxy group is 5.99% Short-term Debt, 48.83% Long-term Debt, 0.17% Preferred Stock and 45.01% Common Equity. Woolridge PFT, Exhibit JRW-5. Clearly, the water industry makes use of short-term financing as a course of doing business. Given CT Water's greater reliance on Short-term Debt than the industry, this provides evidence to include this component in the ratemaking capitalization.

The Company has offered several reasons why the OCC's Short-term Debt Equivalent recommendation should be rejected. The first reason can be summarized as the Company did not agree that the Eastern assets could be treated as an offset to rate base. Reviewing the noted Decision clearly suggests that the excess rate base arising from the Birmingham Utilities' negative acquisition premium could earn a lower return in a future rate case. Thus, the Company clearly knew or should have known that this was a possibility. This possibility was likely a contributing factor that weighted in the Company's favor with respect to the Department allowing the transaction to take place.

The second justification offered by the Company is that Short-term Debt Equivalents appear in settlements and should not be viewed as precedent. The Department is not aware of what transpires in a settlement process, but believes that the issue of inequality between proposed rate base and ratemaking capitalization has been an issue addressed in numerous rate cases besides those that have been settled. The outcome has included the Department imposing a hypothetical capital structure, utilizing a net income approach instead of a rate base ap-

proach and, most recently, as in the Avon Water Rate Case Decision, a company requesting a rate base true-up on its own accord. Lastly, the Company suggests that since it has not made the request for a rate base true-up, it should not have one imposed. The Department's role is to balance the interest of shareholders and ratepayers.

*67 The difference between approved rate base and capitalization is $15,958,090 [$222,009,696-$206,051,606]. The Department believes ratemaking capitalization and ratemaking rate base should be approximately equal. Therefore, the Department will incorporate a Short-term Debt Equivalent in the amount of the shortfall. The Department approves a ratemaking capital structure consisting of 7.19% Short-term Debt Equivalent, 46.93% Long-term Debt and 45.88% Common Equity acceptable for ratemaking. [FN13]

Given the incorporation of the Short-term Debt Equivalent, the Department must assign it a cost. The OCC recommended CT Water's Short-term Debt cost of 2.384%. The Department's review of prior rate cases incorporating this concept shows that this component is assigned a company's short-term borrowing rate. In the 2007 CT Water Rate Case Decision and the Decision dated February 16, 2007, in Docket No. 06-09-03,*Application of Jewett City Water Company to Amend Rate Schedules* (Jewett City Rate Case Decision), a Short-term Debt Equivalent was incorporated. In the Jewett City Rate Case Decision, the Short-term Debt Equivalent was 8.24% of the total capital structure and was assigned a short-term rate of 5.62%. In that Decision, the Short-term Debt Equivalent was 7.21% of the total capital structure at a short-term rate of 8.25%. To be consistent with past practices and to reduce the ratepayers' burden related to the Short-term Debt Equivalent, the Department applies the Company's current embedded cost of Short-term Debt rate of 2.384%.

Although approximately a small portion ($7 million) of the rate base to capitalization differential can be traced to the acquisition of Birmingham Utilities' Eastern asset, the remainder of the $15.96 million, or $8.96 million [$15.96 million-$7 million], is associated with the CIAC accounting treatment. The Department believes that the CIAC accounting treatment instituted in 1986 has been the cause of the growing disparity between rate base and capitalization not just for CT Water but for most, if not all, Class A water companies. At this time, the Department cannot suspend that treatment to remedy the growing disparity issue in this case, but will consider it in the future. One observation the Department has noted over time is that water companies with a growing disparity between ratemaking rate base and capital structure tend to achieve high actual ROE and cash flow.

c. Capital Structure Written Exceptions

The Company indicates that its plan set forth at hearing on April 9, 2010 and in Late Filed Exhibit No. 62a is to make an equity infusion raising common equity to $115.8 million. The Company subsequently argued that the Department, in error, has used lower equity levels based upon six months prior to the start of Rate Year 1. The Company suggests that its corrected rate base and capitalization are in Late Filed Exhibit No. 62a. Company Written Exceptions, p. 13.

Upon review of the portion of the noted transcript, the Department finds the following language:
*68 3 Q. (Scuris) A capital contribution to 4 equity? 5 A. (Benoit) Correct. 6 Q. (Scuris) So that would raise the 7 equity portion? 8 A. (Benoit) Correct. 9 Q. (Scuris) When would you do that? 10 A. (Benoit) In 2010 if that was 11 determined to be appropriate. 12 Q. (Scuris) That's not part of this 13 application, is it? 14 A. (Benoit) Well, it's now part of it 15 as part of responding to a Late-File. 16 Because there was so much discussion about 17 the actual capital structure, the company 18 would consider doing that to in effect take 19 that issue away from being a concern. 20 Q. (Scuris) How would that take that 21 issue away because just off the cuff raising 22 the equity portion would raise the weighted 23 average cost of capital straight away, 24 assuming all else is equal in that 25 computation? 1 A. (Benoit) If there was a capital 2 contribution that in effect equated the debt 3 and equity levels at 50/50, it would result 4 in not a need for discussion about some of 5 the things that we've been talking about. 6 The

company is perfectly comfortable with its 7 application and believe it's appropriate to 8 use a *pro forma* capital structure of 50/50, 9 and it seems like through a lot of 10 discussions that has been a sticky point of 11 concern and one of the options that we have 12 before us is to potentially in effect put 13 that capital structure actually in place. 14 Q. (Scuris) I believe the alternative 15 proposal is to incorporate a short-term debt 16 equivalent, correct? 17 A. (Benoit) Not by the company. 18 Q. (Scuris) That's the alternative of 19 the OCC, that's their solution to the issue? 20 A. (Benoit) I've seen them do that 21 calculation, but we think that is completely 22 inappropriate just based upon the example I 23 gave you before with the Birmingham 24 acquisition. Tr. 4/9/10, pp. 1642-1644.

Based upon that discussion, the Company clearly states that it is comfortable with its proposed 50/50 hypothetical ratemaking capital structure and indicates that it would *consider* (Department Emphasis) making an equity infusion to 'take away the issue.' Tr. 4/9/10, p. 1642. Prior to its Written Exceptions to the June 11, 2010 draft Decision, the Company did not revise its Application and its proposed ratemaking capital structure to include the possible equity infusion. Therefore, the Department finds the Company's statement suggesting an error was made to be without merit.

The Company also urges the Department to reconsider the approximate $7 million portion of rate base created by the excess of book value from the Eastern acquisition. The Company believes that the proposed treatment of the below book acquisition is a penalty. The Company estimates that it will be losing $541,973 on the Birmingham acquisition as postulated by the June 11, 2010 draft Decision. Company Written Exceptions, pp. 13 and 14.

Additionally, the Company believes that setting rates with a 50/50 capitalization mix is still prudent. Its proposed solution to accomplish this is to set rates based on the capital structure as of the mid point of the rate year as described in Late Filed Exhibit No. 62a consisting of $115,803,941 Common Equity, $104,613,358 debt and either exclude the Eastern acquisition's ($7,064,809) unfunded rate base from the computation of the Short-term Debt Equivalent or release the Company from the $706,481 annual rate reduction. Company Written Exceptions, p. 15. The Company's revised rate making capitalization, with the exclusion of the Eastern acquisition's unfunded rate base, would result in a proposed Short-term Debt Equivalent of $2,621,317. [FN14]The Company claims that its proposed solution is reasonable even though its capital infusion would actually result in an approximately 52% [$115,803,941 / $223,038,618] Common Equity percentage.*Ibid.*

***69** The Company's suggestion is to calculate the percent to total using the Revised Rate Base of approximately $230 million instead of the revised $223 million Total Capitalization. Using the Department's allowed cost components and CT Water's proposed solution, the Company's suggestion would result in the following capitalization mix:

Class of Capital	Amount ($)	% to Revised Rate Base	Cost	Weighted Cost
Short-Term Debt Equivalent	$2,621,317	1.14%	2.38%	0.027%
Long-Term Debt	$104,613,358	45.46%	5.74%	2.609%

Common Equity	$115,803,941	50.33%	9.75%	4.907%
Total Capitalization	$223,038,616			
Revised Rate Base	$230,103,427			7.543%

The Department has considered the Company's proposal and will address the components separately. The Company suggests setting the ratemaking capital structure at the mid-point of Rate Year 1. The Department does not set rates based upon something a company might do in the future. Second, the Company's suggestion would result in a Common Equity portion of approximately 52%, yet the Company finds it acceptable to compute the weighted percentage of Common Equity using its proposed revised Rate Base instead of the revised Capitalization total. This recommendation disregards traditional rate making computations. The Department rejects this based upon the fact that the $115,803,941 in proposed Common Equity is reliant on the Company making an equity infusion after the revenue requirement and rates are set.

The Department accepts the Company's suggestion to exclude the Eastern acquisition's ($7,064,809) unfunded rate base from the computation of the Short-term Debt Equivalent. The Department will also accept the Company's proposed changes to the timing of rate base additions, accumulated Depreciation and Deferred Income Taxes. The net effect of these changes is to raise the Short Term Debt Equivalent by approximately $770,000 as compared to the Draft Decision. The Company's revised ratemaking capitalization is below and is used for ratemaking in Section II.8.g.

Class of Capital	Amount ($)	% of Total	Cost	Weighted Cost
Short-Term Debt Equivalent	$16,728,001	7.51%	2.38%	0.18%
Long-Term Debt	104,188,823	46.77%	5.74%	2.68%
Common Equity	101,862,783	45.72%	9.75%	4.46%

Total	$222,779,607	100.00%	7.32%

7. Cost of Common Equity

a. Introduction

[74] The Company retained the services of a cost of capital expert (Ms. Ahern or Company Witness) to review changes in financial and economic markets and to provide a recommended ROE. The Company retained Ms. Ahern with the knowledge there are only a limited number of cost of capital witnesses with experience in Connecticut. Response to Interrogatory WA-7. Cost was a factor in selecting Ms. Ahern, and the Company was pleased the Ms. Ahern's fees closely matched those of the cost of capital witness used in its last rate case.*Ibid.*

***70** The Company requested an 11.3% ROE based upon the testimony prepared by Ms. Ahern and its own downward adjustment to her initial recommendation in order to be conservative. Ahern PFT, p. 3. The methods employed by Ms. Ahern include the Discounted Cash Flow Model (DCF), the Risk Premium Model (RPM), the Capital Asset Pricing Model (CAPM), and the Comparable Earnings Model.*Ibid.*, p. 4.

Ms. Ahern's analysis indicated her ROE recommendation to be 11.60% if the WCAM is adopted and 11.80% if WCAM is not adopted. Ms. Ahern believes the Company's requested 11.3% ROE recommendation provides for an overall fair rate of return affording CT Water the opportunity to earn an appropriate return on its investment.*Ibid.*

Overall the OCC believes the Company's 11.3% ROE request is excessive and should be reduced within the range of 9.0% to 9.5%. Likewise, the Company's overall return on rate base (ROB) of 8.52% is excessive and should be reduced to 7.03%. OCC Brief, p. 6. The OCC finds several major issues of contention with the Company's proposal. These include: (1) the appropriate capital structure previously discussed; (2) the growth rate in the DCF model; (3) the measurement and magnitude of the risk premium used in the CAPM and Risk Premium methodologies; (4) the use of the Comparable Earnings approach; (5) adjustments for business risk or size premium; and (6) the Company's WCAM proposal. OCC Brief, pp. 9 and 10, 30.

According to the OCC, long-term capital cost rates for U.S. corporations are a function of the required returns on risk-free securities plus a risk premium. Woolridge PFT, pp. 7-10. The long-term U.S. Treasury yields have been below 5.0% since 2002. Woolridge PFT, Exhibit JRW-2; OCC Brief, p. 10. Dr. Woolridge indicates yields on thirty-year A, BBB+, and BBB rated public utility bonds peaked in November 2008 and have since declined by over 200 basis points. The yields on 'A' rated utility bonds, which peaked at over 7.50% in November of 2008, have declined to below 6.0% in early 2010. Likewise A, BBB+, and BBB rated public utility bond yields relative to U.S. Treasury bonds have yield spreads that dramatically increased during the financial crisis and have now decreased by 200-250 bps. OCC Brief, pp. 11 and 12. In his analysis, Dr. Woolridge uses the DCF and CAPM methods only.

b. Peer Groups

In selecting the proxy group companies, Ms. Ahern used the following criteria for the AUS Water Group companies: (1) the company is included the AUS Utility Reports; (2) the company has *Value Line* five-year EPS growth rate projections or Reuters Consensus five-year EPS growth projections; (3) the company has *Value Line* five-year DPS growth rate projections; (4) published *Value Line* adjusted beta; (5) the company has not cut or omitted common dividends during the five years ending 2008 or through the testimony preparation time; (6) the company has more than 60% or greater 2008 total net operating revenue derived from water operations and 60% or greater of 2008 total assets devoted to regulated water operations; and (7) the company was not involved in any major merger or acquisition operation. Ahern PFT, p. 23, Schedule PMA-4, p. 2.

*71 For the AUS Gas Group, the bases for selection were: (1) the company is included the AUS Utility Reports; (2) the company has *Value Line* five-year EPS growth rate projections or Reuters Consensus five-year EPS growth projections; (3) the company has *Value Line* five-year DPS growth rate projections; (4) published *Value Line* adjusted beta; (5) the company has not cut or omitted common dividends during the five years ending 2008 or through the testimony preparation time; (6) the company has more than 60% or greater 2008 total net operating revenue derived from regulated gas operations and 60% or greater of 2008 total assets devoted to regulated gas operations; and (7) the company was not involved in any major merger or acquisition operation. Ahern PFT, p. 24, Schedule PMA-5, p. 2.

CT Water's ROE was measured by using company data for a proxy group consisting of companies with risk as similar as possible, then adjusting those results to reflect CT Water's relative business risk as compared with the proxy group companies. Ahern PFT, p. 5. Ms. Ahern used two proxy groups of companies and evaluated market data for those companies with respect to the cost of capital models employed (*i.e.*, DCF, Equity Risk Premium, CAPM, Comparable Earnings Model). Ms. Ahern examined CWS separately and two proxy groups of utility companies, the AUS Water Group and the AUS Gas Group. Ahern PFT, pp. 25 and 27, Schedule PMA-4, p. 2, Schedule PMA-5, p. 2.

The AUS Water Group includes six water companies followed by *AUS Utility Reports:* American States Water Company, Aqua America, Inc., California Water Service Group, Middlesex Water Company, SJW Corporation and York Water Company. The AUS Gas Group includes eight gas distribution companies followed by AUS Utility Reports: AGL Resources, Inc., Atmos Energy Corp., Delta Natural Gas Company, Laclede Group, Inc., Northwest Natural Gas Company, Piedmont Natural Gas Co., Inc., Southwest Gas Corporation and WGL Holdings, Inc.

When questioned about her peer group selection, Ms. Ahern indicated that the criteria requiring: (1) a credit rating from both Standard & Poor's (S&P) and Moody's Investor Service (Moody's) that is approximately the same as the target company; and (2) revenues approximately the same as the target company, would not garner any companies for the peer group. Responses to Interrogatories WA-51 through WA-54. The reason for this is due to the fact no companies tend to be rated both by S&P and Moody's. Tr. 3/29/10, pp. 1232-1237.

During the five year period ending in 2008, the AUS Water Group companies on average had an ROE of 9.91%, permanent investor capital 50.60% to 49.40% Long-term Debt, and an average five year dividend payout of 69.21%. Total debt as a percentage of earnings before interest, taxes, depreciation and amortization (EBITDA) averaged 3.71x, and Funds from Operations to total debt averaged 19.21%. Ahern PFT, p. 24. Likewise, the AUS Gas Group companies on average had an ROE of 10.90%, permanent invested capital of 49.87% to 50.13% Long-term Debt, and an average five-year dividend payout of 64.7%. Total debt as percentage of EBITDA averaged 3.67x and Funds from Operations to total debt averaged 19.13%. Ahern PFT, p. 26.

*72 Dr. Woolridge also proposed two proxy groups. His water proxy group consisted of nine water utility companies covered in *AUS Utility Reports*. The Woolridge water proxy group (Woolridge Water Group) included: American States Water Co., Aqua America, Artesian Resources Corp., California Water Service Group, Connecticut Water Service, Inc., Middlesex Water Company, Pennichuck Corporation, SJW Corporation and York Water Company. Woolridge PFT, p.13, Exhibit JRW-4; Tr. 3/29/10, pp. 1351-1354.

Dr. Woolridge's gas proxy group consisted of nine natural gas distribution companies followed by the standard edition of *Value Line*. The Woolridge gas proxy group (Woolridge Gas Group) included: AGL Resources, Inc., Atmos Energy Corporation, Laclede Group, Inc., NICOR Inc., Northwest Natural Gas Co., Inc., New Jersey Industries, Inc., Southwest Gas Corporation and WGL Holdings, Inc. Woolridge PFT, p. 13, Exhibit JRW-4; Tr. 3/29/10, pp. 1354 and 1355.

c. Risk Factors

Ms. Ahern indicated that the water utility industry faces significant business risk related to replacing aging transmission and distribution systems and is more capital intensive than electric, natural gas or telephone industries. Ahern PFT, p. 10. Additionally, the water utility industry faces greater risk from inflation since it has longer lived assets and longer capital recovery periods resulting in higher replacement cost per dollar of net plant than the other utilities. Ahern PFT, p. 13. Compounding risk is the relative low depreciation rates of the water and wastewater industry which results in less internally generated cash as compared to other utilities. *Ibid.* Based upon her review, Ms. Ahern suggests that the water utility industry's high degree of capital intensity, coupled with substantial infrastructure capital spending and increased security spending, requires adequate and timely rate relief.*Ibid.*, p. 16.

(I) Size Premium

In evaluating the overall risk of CT Water as compared to the water utility industry, Ms. Ahern suggests that CT Water has more risk than the companies in her proxy groups due to its smaller size. Ahern PFT, p. 16. Size has a bearing on risk as smaller companies are less capable of coping with significant events impacting sales, revenue and earnings.*Ibid.* Total capital as of November 2009 for CWS was $192.116 million or 1.1x that of the Company. Total capital of CT Water to that of the AUS Water Group was $721.503 million or 4.1x that of CT Water. Total capital for CWS to that of the AUS Gas Group was $1.440.889 million or 10.1x that of CT Water. Ahern PFT, p. 17, Schedule PMA-1. According to Ms. Ahern, smaller companies tend to be more risky, thereby causing investors to expect greater returns as compensation for that risk. This concept is borne out by a number of researchers who observe that portfolios comprised of smaller firms tend to have yield greater than portfolios of large-sized firms. This small firm effect suggests that capital markets require higher returns from small-sized companies than large-sized companies, all else equal. Ahern PFT, pp. 17-19. Ms. Ahern indicates that if there were evidence suggesting that the size effect is reduced or eliminated for regulated utilities by the oversight of regulation, it would be irrelevant in this proceeding as CT Water is being compared to proxy groups of public utility holding companies. Response to Interrogatory WA-50a; Tr. 3/29/10, pp. 1226-1229; Response to Interrogatory WA-50c.

***73** Given that the Company achieved an Excellent Business Risk Profile by S&P, Ms. Ahern believes this is comparable to the water and gas distribution proxy groups. Thus, no explicit adjustment is incorporated for business risk. Response to Interrogatory WA-55. Ms. Ahern's adjustments (identified as business risk adjustments) are based exclusively upon the Company's small size relative to that of the average company and to the adoption or rejection of the WCAM.*Ibid.* Based upon this clarification, her results summary indicates the following size adjustments were included: CT Water Service - 0 bps, AUS Water Group - a positive 15 bps, and AUS Gas Group - a positive 20 bps. Ahern PFT, p. 6, Table 2. Ms. Ahern indicates that there would be a need for a size premium even if it were deemed that total risk was similar among public utilities regardless of size. Response to Interrogatory WA-85.

Dr. Woolridge disagrees with Ms. Ahern's application of 15 to 20 bps for size premium. Dr. Woolridge cites several reasons why such an adjustment must be rejected. Woolridge PFT, pp. 89-91. First, he suggests that business risk relates to the risk associated with variation in operating revenues and expenses, not from the size of the business. OCC Brief, p. 42. Dr. Woolridge also disagrees with the notion that a smaller firm is necessarily more risky. He cites a recent S&P publication which reviewed 26 western water and sewer companies that received a ratings upgrade. According to this publication, a small and/or rural firm does not necessarily receive a weaker credit quality than a larger or more urban issuer. Woolridge PFT, p. 87; OCC Brief, p. 42.

Another finding Dr. Woolridge recounts in his disagreement with the size premium is the work of Dr. Anne Wong, who has tested for a size premium in utilities and concluded that, unlike industrial stocks, utility stocks do not exhibit a significant size premium. [FN15]According to Dr. Wong's article, there are several reasons why such a size premium would not be attributable to utilities. One reason is that utilities are regulated closely by

state and federal agencies and by commissions. Hence, their financial performance is monitored on an ongoing basis by both the state and federal governments. Also, a regulated utility's earnings are predetermined to a certain degree through the ratemaking process in which performance is reviewed by state commissions and other interested parties. Overall, in terms of regulation, government oversight, performance review, accounting standards, and information disclosure, utilities are much different than industrials, which could account for the lack of a size premium. Woolridge PFT, p. 88; OCC Brief, p. 43.

Dr. Woolridge also cites a more recent paper by Ching-Chih Lu (Lu) who estimated the size premium over the long-run. [FN16]Lu acknowledges that many studies have demonstrated that smaller companies have historically earned higher stock market returns. However, Lu highlights that these studies rebalance the size portfolios on an annual basis. This annual rebalancing creates the problem. Lu finds that the size premium disappears within two years. Lu's conclusion with respect to the size premium is that it is inappropriate. Lu suggests that a small firm should not be expected to have a higher size premium going forward because it is small now. Woolridge PFT, p. 89; OCC Brief, p. 44.

(2) Financial Risk

*74 In addition to business risk, Ms. Ahern considered financial risk, which is the additional risk a company bears by the introduction of debt and preferred stock into the capital structure. Ahern PFT, p. 19. According to S&P's credit rating criteria, the AUS Water Group has an average S&P Bond rating of A+, issuer credit rating of A, and the business profile and financial risk is Excellent-Intermediate. The AUS Gas Group has an average S&P Bond rating of A, an issuer credit rating of A, and the business profile is Excellent-Significant. Ahern PFT, pp. 19 and 20, Schedule PMA-11, p. 2. Neither CT Water nor its Parent Company is credit rated by Moody's Investors Service and by Fitch Ratings. Response to Interrogatory WA-49.

The Company indicates that during the period that rates set from this proceeding are to be in effect, the interest rates are projected to increase. Yet, CT Water will need to continue to attract capital. The Company cites the April 1, 2010 *Blue Chip Financial Forecasts* and states that interest rates are projected to increase through the third quarter of 2011, by approximately 0.89%. Company Reply Brief, pp. 13 and 14. The Company advocates for its proposed 11.3%. While the difference between an ROE of 10.5% and 11% is less than $1 per month for customers, it is CT Water's opinion that this extra $1 per month from customers would strengthen the Company financially.*Ibid.*, p. 15.Dr. Woolridge did not make an adjustment for financial risk.

(3) WICA and WCAM

According to Ms. Ahern, the WICA program only provides an opportunity, not a guarantee, for the Company to speed recovery of pipeline replacement costs and to reduce the frequency of rate case filings. Response to Interrogatory WA-45; Tr. 3/29/10, p. 1217. But, all else equal, Ms. Ahern believes that the WICA program would somewhat reduce the Company's risk. Response to Interrogatory WA-81; Tr. 3/29/10, p. 1218.

Ms. Ahern's ROE recommendation is 11.60% if the WCAM is adopted and 11.80% if not. She believes that the adoption of the WCAM, all else equal, would somewhat reduce the Company's risk. Response to Interrogatory WA-81. Based on her findings, the Department estimates Ms. Ahern's downward ROE adjustment for the adoption of WCAM would be about 20 bps. Only California has adopted a WCAM-type program. Response to Interrogatory WA-82.

The Company indicates that WCAM is far more limited than the typical decoupling measure addressed by other commissions; the majority of commissions that address full decoupling make no explicit ROE adjustment, and a large portion of the proxy companies used in the ROE analysis have some form of decoupling. Company Brief, p. 31. The Company believes Dr. Woolridge's examples showing explicit downward adjustments to ROE with decoupling are antiquated. According to the Company, the current trend is for no explicit adjustment for de-

coupling. Company Brief, pp. 32 and 33.

Dr. Woolridge suggests a downward adjustment of up to 50 bps to be appropriate if the Department accepts the Company's decoupling proposal. Woolridge PFT, p. 56. This recommendation is based on the fact that several state regulatory commissions that adopted such ratemaking mechanisms for electric and gas companies also recognized the risk reduction associated with the decoupling mechanism and made explicit reductions to the ROE. Woolridge PFT, p. 56.

(4) Efficient Market Hypothesis and

*75 Equity Analysis

The semi-strong form of the Efficient Market Hypothesis asserts that all publically available information is fully reflected in securities prices and that fundamental analysis cannot enable an investor to outperform the market. Ahern PFT, p. 27; Response to Interrogatory WA-43; Tr. 3/29/10, pp. 1213-1215. According to Ms. Ahern, the semi strong form of the Efficient Market Hypothesis is generally held to be true because of the observation that the use of insider information often enables investors to outperform the market and earn excessive returns.*Ibid.*

Ms. Ahern asserts that financial literature supports the use of multiple methods. Three methods are typically used: (1) the CAPM; (2) the DCF method; and (3) the bond-yield-plus-risk-premium approach. Ahern PFT, p. 28. According to the Efficient Market Hypothesis, it is evident that investors are aware of these models, thus investors consider all of these methods. Ahern PFT, pp. 28-30.

d. Discounted Cash Flow Model

Separately, Ms. Ahern and Dr. Woolridge performed a DCF analysis. Valuation theory states that the value of a financial asset is determined by its ability to generate future cash flow. The premise of the DCF model is that the intrinsic value of common stock can be estimated as the present value of future cash that flows to the investor plus the expected growth in selling the stock discounted to the present. In its simplest form, the DCF consists of a current cash dividend cash yield (dividend) and a future price appreciation (growth) of the investment. Ahern PFT, p. 37. Ms. Ahern used the single-stage, constant growth DCF model as it is the most widely used version in public utility rate regulation.

The single-stage, constant growth form of the DCF model is
K = D1 /Po + G, where:

K is the market-required return on equity;

D1 is the anticipated dividend paid one period into the future, D0 * (1+G);

Po is an estimate to the current market price of the stock, and

G is the long-run expected growth in the rate of dividends or earnings.

Ahern PFT, Schedule PMA-7.

Typically for rate regulation, the simplified version is used. According to Ms. Ahern, the simplified version assumes a market-to-book ratio of one. As a result, the simplified DCF under/overestimates investors' required rate of return when market value exceeds/is less than book value. Ahern PFT, p. 35. According to Ms. Ahern, the Pennsylvania Public Utility Commission explicitly recognizes the alleged tendency of the DCF model to under/overestimate the cost of equity.*Ibid.*, p. 34.She is not aware of any commission other than the Pennsylvania Commission to explicitly reflect financial risk differences between a market value capital structure and book value capital structure. Response to Interrogatory WA-56; Tr. 3/29/10, pp. 1240-1244. The impact of the observed deviation in market-to-book ratio from one should be to influence the extent to which the DCF can be relied upon for determining the overall allowed cost of capital. Overall, it is recommended that relying solely on the results of any one cost of capital model should be avoided; instead multiple costs of equity models should be used to estimate the cost of capital.

Ahern PFT, pp. 35-37; Tr. 3/29/10, p. 1244.

*76 Ms. Ahern indicates that the extent of the misspecification of investors' required common equity return when the market value of the common stock differs from the book value is a function of the extent to which market value differs from book value. Response to Interrogatory WA-56. Ms. Ahern contends that commissions cannot predict the effect of their rate orders on stock market prices. Subsequently, one cannot interpret the observation that utility stock prices trading above book value as evidence suggesting that commissions allowed returns greater than the utilities' long-run true cost of capital. Likewise, there are a variety of factors besides regulators' allowed returns that affect stock market prices. Ahern PFT, p. 35; Response to Interrogatory WA-57.

Dr. Woolridge also performed a DCF analysis on his two peer groups. He indicates that the DCF provides the best measure of equity cost rates for public utilities. Woolridge PFT, p. 23. The DCF analysis was performed using the constant-growth version of the DCF model which simplifies the formula to P = D1 / (K-G). Woolridge PFT, p. 25. Dr. Woolridge finds the constant-growth version appropriate due to the regulated nature of the water industry. This formula is rearranged to solve for the cost of equity, K = D1/P0 + G. Woolridge PFT, p. 26. The results of his DCF analysis show that the Woolridge Water Group cost of equity should be 10% and the Woolridge Gas Group cost of equity should be 9%. Woolridge PFT, p. 38, Exhibit JRW-10, p. 1; OCC Brief, p. 24.

The Company believes Dr. Woolridge's ROE recommendation is flawed due to his reliance on the DCF model which the Company believes has a tendency to understate investors' expected cost of common equity when market values are significantly below book values. Company Brief, p. 30.

(1) Dividend Yield

Ms. Ahern used the constant growth version of the DCF model. Ahern PFT, p. 39. In developing the spot dividend yield (Do), Ms. Ahern began with unadjusted dividends yields based upon an average of a spot date (November 30, 2009) and an average of the last three months ended November 30, 2009. Her unadjusted dividend yields are 4.04% for CWS, 3.45% for the AUS Water Group and 4.53% for the AUS Gas Group. Ahern PFT, p. 39. In estimating the forecasted dividend yield (D1), Ms. Ahern used a conservative assumption reflecting one-half the annual dividend growth rate (*i.e.*, D1 = Do * [1 + G/2]). Ahern PFT, p. 39, Schedule PMA-7; Response to Interrogatory WA-60; Tr. 3/29/10, pp. 1246-1248.

In computing the forecasted dividend yield (D1/Po), Dr. Woolridge used the six-month period ending February 2010 for dividend yields. The DCF dividend yields are 3.4% and 4.4% for the Woolridge Water Group and Woolridge Gas Groups, respectively. Woolridge PFT, p. 28; OCC Brief, p. 21. It is common for analysts to adjust the dividend yield by some fraction of the long-term expected growth. A full year of growth is excessive as companies announce dividend increases at different times during the year. Woolridge PFT, p. 28 and 29; OCC Brief, p. 21. The dividend yield was inflated by one-half the expected growth rate so as to reflect the expect growth in dividends over the coming year, that is, to estimate D1/P0 component required by the DCF. Woolridge PFT, p. 28 and 29; OCC Brief, p. 21

(2) Growth Rate

*77 In developing her recommended growth rates, Ms. Ahern only considered security analysts' five-year projected growth rates in earnings per share (EPS). Ahern PFT, p. 43. The sources of her projected growth rates were *Value Line*, the projected 2008 to 2012-2014 estimates, and Reuters Mean Consensus Five Year EPS. Ahern PFT, Schedule PMA-10. In her evaluation of growth rates, there is greater emphasis placed on research analysts' growth rates as investors realize that analysts have greater insights into the companies they cover. Ahern PFT, p. 43. According to Ms. Ahern, the influence security analysts have over investors and, hence, market prices paid for stocks is important, not the accuracy of those analysts' EPS forecasts. Ahern

PFT, p. 40 and 42; Response to Interrogatory WA-62; Tr. 3/29/10, pp. 1253-1258. Therefore, the analysts' forecasts should be relied upon in cost of capital analysis. This is also consistent with Efficient Market Hypothesis.*Ibid.*

Ms. Ahern did not use historic growth rates or growth rates from Dividends Per Share (DPS). Historic growth rates are excluded because the proper growth rate used in the DCF is that embedded in the market prices paid by investors, which are, according to Ms. Ahern, security analysts' EPS forecasts. Response to Interrogatory WA-63. DPS growth was excluded because there can be no growth in the dividend without growth in EPS. Thus, it is the earnings that matter. Response to Interrogatory WA-61; Tr. 3/29/10, pp. 1249 and 1260.

Ms. Ahern indicates that her analysis yields average growth rates of 7.97% for the AUS Water Group and an average of 4.39% for the AUS Gas Group when applying her projected EPS growth rates. Examining median growth rates, Ms. Ahern finds 7.50% for the AUS Water Group and 4.38% for the AUS Gas Group when applying her projected EPS growth rates. Ahern PFT, Schedule PMA-10. Ms. Ahern suggests that the median computation, which represents the statistic where half of the observations are higher and half are lower, has increased in use during her experience as a rate of return expert. Ms. Ahern believes the reason for the median's popularity is that it provides a better measure than the average as the median gives less weight to outliers. Response to Interrogatory WA-66; Tr. 3/29/10, pp. 1270 and 1271.

In estimating forecasted growth rates, *Value Line* computes its own growth estimates for per share sales, cash flow, earnings, dividends and book value by taking the most recent three-year average to average the next three-year period. Response to Interrogatory WA-65, Attachment. Reuters surveys the security analysts' estimates of their five-year projected growth rates in EPS, and reposts the mean, the number of estimates, and standard deviation of the estimates. Response to Interrogatory WA-65. Ms. Ahern indicates Reuters is the only source that indicates the number of analysts surveyed; therefore, she prefers it to other sources of analyst EPS growth. Tr. 3/29/10, p. 1260. The Company finds Dr. Woolridge's growth rates to be subjective. According to the Company, Dr. Woolridge's growth rates are arbitrary and are not based upon algorithms or formulas. Company Brief, pp. 30 and 31.

***78** Dr. Woolridge considered five-year and ten-year historical growth rates in EPS, DPS and book value per share (BVPS). Historic growth rates must be included as investors have access to them, but Mr. Woolridge indicates these must be used with caution. In addition, he reviewed *Value Line*'s historical and projected growth rate estimates for EPS, DPS, and BVPS. Likewise, five-year EPS forecasts by Wall Street analysts including First Call, Zacks, and Reuters were incorporated into his overall growth rate estimate. Lastly, he assessed prospective growth as measured by prospective earnings retention rates and earned returns on common equity. Therefore, he evaluates the sustainable growth rate approach to the DCF model. Woolridge PFT, p. 30 and 31; OCC Brief, p. 22. Since the historical figures are published by investor sources like *Value Line* and Yahoo, Dr. Woolridge believes these are relevant to investors and are thus influencing investor expectations. Therefore, to review historic numbers is to develop some type of expectation for the future. Tr. 3/29/10, pp. 1361 and 1362. Dr. Woolridge also confirmed that the theory of the DCF model is based on dividends as an estimate of future case. According to the theory, dividends, earnings, and book value should all grow at the same rate, but in actuality they do not. As such, the DCF model has come to be expressed in combination of dividends, earnings and book value growth rates. Tr. 3/29/10, p. 1364.

Dr. Woolridge is not convinced that the analysts' five-year consensus forecasts of EPS growth are a suitable proxy for the long-term sustainable growth that is required by the constant form of the DCF model. Woolridge PFT, pp. 33-36. EPS forecasts are not meant to represent the growth in DPS, BVPS, or stock price. Additionally, security analyst EPS forecasts including *Value Line*' s tend to be overstated as the analysts tend to be overly optimistic which results in an upward bias. Woolridge PFT, p. 35 and 36; Tr. 3/29/10, pp.

1365-1367. Dr. Woolridge states that for the most part these highly paid Wall Street analysts' predictions tend to falter, and that on average the analysts' recommendations underperform the S&P 500. Tr. 3/29/10, p. 1367. Dr. Woolridge believes that although the new regulations regarding the security analysts' interaction with investment banking has reduced the magnitude of the optimism in estimating EPS, it has not eliminated the overestimation. Tr. 3/29/10, p. 1372. The best estimate to the cost of equity using the conventional DCF is to look to long-term growth rate expectations. Dr. Woolridge believes that investors are likely to consider historical growth rates given the well known upward bias of the analysts' growth estimates. Although Dr. Woolridge cautions the Department regarding exclusive reliance on the analysts' EPS growth estimates, he still uses these estimates in his analysis combined with the historic figures. Tr. 3/29/10, pp. 1376-1378.

In order to circumvent the problems associated with sole reliance on the ESP estimates, Dr. Woolridge recommends calculating the constant DCF model's growth rate by using the sustainable growth formula to compute the growth input. Internally generated growth is a function of the percentage of earnings retained with the firm (earnings retention rate) and the rate of return earned on those earnings. The sustainable growth formula is ROE times the retention rate. Woolridge PFT, p. 31; Tr. 3/29/10, pp. 1374-1376.

*79 In developing his overall growth rate recommendation, Dr. Woolridge gave more emphasis to the projected growth rate fignres and suggested that the growth rates be 6.5% and 4.5% for the Woolridge Water Group and the Woolridge Gas Group, respectively. Woolridge PFT, p. 38. The table below provides a summary of the growth rates reviewed by the OCC witness:

Dr. Woolridge's DCF Growth Rate Indicators

Growth Rate Indicator	Woolridge Water Group	Woolridge Gas Group
Historic Growth in EPS, DPS, and BVPS	4.4%	4.0%
Historic Value Line Growth in EPS, DPS, and BVPS	3.9%	4.4%
Projected Value Line Growth in EPS, DPS, and BVPS	6.0%	3.8%
Sustainable Growth ROE times Retention rate	6.2%	4.6%
Projected EPS Growth from First Call,		

Zacks, and Reuters	8.4%	5.0%
Average of Historic and Projected Growth Rates	5.8%	4.4%
Average of Sustainable and Projected Growth Rates	6.9%	4.5%

Woolridge PFT, p. 34-38, Exhibit JRW-10, p. 7; OCC Brief, p. 22.

According to Dr. Woolridge, the primary error in Ms. Ahern's DCF approach is her excessive reliance on the projected EPS growth rate forecasts of Wall Street analysts and *Value Line*. Woolridge PFT, p. 61. Dr. Woolridge cites several problems with exclusively using the EPS growth rate forecasts of Wall Street analysts as DCF growth rates. First, the appropriate growth rate in the DCF model is the dividend growth rate, not the earnings growth rate. Dr. Woolridge states that over the very long term, dividend and earnings will have to grow at a similar growth rate. Therefore, consideration must be given to other indicators of growth, including prospective dividend growth, internal growth, as well as projected earnings growth. Second, and most significantly, Dr. Woolridge contends that it is well known that the long-term EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. A number of academic studies over the years support this claim. Dr. Woolridge cited his own review of this matter and suggested that examining EPS projections for 1,281 companies found that the forecast errors for long-term EPS estimates are positive, which suggests an upward bias in EPS growth rate estimates. Hence, Dr. Woolridge contends that exclusively using EPS growth rates as a DCF growth rate will provide an overstated equity cost rate. According to Dr. Woolridge, the concept of overstated EPS growth rates also applies to utility companies. Woolridge PFT, pp. 62-65 and 69-71; OCC Brief, pp. 31-33. Dr. Woolridge explored the concept of overstated EPS growth rates under various circumstances including a review of the impact of new securities legislations such as Regulation Fair Disclosure (Reg-FD) and Global Analysts Research Settlements (GARS). [FN17] His bottom line is that Wall Street analysts view future company earnings through rose-colored glasses and provide overly-optimistic forecasts of future growth until proven otherwise. OCC Brief, p. 37.

(3) DCF Result

***80** In developing the recommended DCF results, Ms. Ahern relied upon the median due to the wide range of DCF results and her opinion that the median is the more accurate and reliable measure of central tendency. Ms. Ahern indicates that her DCF analysis yields ROEs of 13.22% for CWS, 11.50% for the AUS Water Group and 8.76% for the AUS Gas Group. Ahern PFT, p. 44, Schedule PMA-7.

Dr. Woolridge finds Ms. Ahern's approach to the DCF model invalid as she violates the assumption of the constant-growth DCF model. Dr. Woolridge indicates Ms. Ahern's growth rates are overstated as she relied solely on securities analysts estimates of five-year EPS growth rates. Dr. Woolridge's growth rate review recommends examining both historic and projected growth rates for EPS, DPS, BVPS and retention growth rates. Based upon his analysis, the results of Dr. Woolridge's application of the DCF model are:

	Dividend Yield	1/2 Growth Adjustment	DCF Growth Rate	Equity Cost Rate
Woolridge Water Group	3.4%	1.03250	6.5%	10.0%
Woolridge Gas Group	4.4%	1.02250	4.5%	9.0%

Woolridge PFT, p. 37, Exhibit JRW-10; OCC Brief, p. 24.

e. Risk Premium Model

Only Ms. Ahern performed an explicit Risk Premium analysis. Risk Premium theory suggests that the cost of equity for a company is greater than that company's cost of long-term debt. In other words, the cost of equity equals the expected cost of long-term debt plus a risk premium to compensate the shareholder for the added risk of being unsecured and last-in-line for a claim on a corporation's assets. Ahern PFT, p. 45.

The Risk Premium model simply adds a premium above the prospective current cost of long-term corporate debt. The traditional form of the Risk Premium model is:
K = I + Risk Premium, where

K is cost of capital;

I is interest rate on long-term capital, and

Risk Premium is risk premium in recognition of higher risk of common stock.

The primary difference between the Risk Premium Model and Capital Asset Pricing Model is that unsystematic risk (company-specific risk) is fully captured in the Risk Premium Model through the use of the prospective long-term bond yield, while the Capital Asset Pricing Model does not reflect unsystematic risk. Ahern PFT, p. 45.

In estimating the Risk Premium, the first step is to determine the expected bond yield. Ms. Ahern indicates that the average Moody's bond rating for the AUS Water Group is A2 and for the AUS Gas Group is A3. Ahern PFT, p. 46, Schedule PMA-11, p. 2. In estimating the average yield on Moody's A2 bond, Ms. Ahern began with *Blue Chip Financial Forecast's* estimate of Moody's Aaa rated corporate bond yield of 5.47% and adjusted that to be a Moody's A2 rated public utility bond. Ms. Ahern believes that adjustment is approximately 0.47% upwards based upon the average yield spread of an A rated public utility bonds over an Aaa rated corporate bond with an applicable rate of 5.89%. Ahern PFT, Schedule PMA-11, p. 4; Response to Interrogatory WA-78.

***81** Since CWS and the AUS Water Group are both rated A2, no adjustment is necessary to make the prospective bond yields also A2. However, the AUS Gas Group is rated A3, thus requiring a 20 bps upward adjustment to achieve the prospective bond yields applicable to A3 public utility. The expected bond yields are 5.89% for CWS and the AUS Water Group and 6.09% for the AUS Gas Group. Ahern PFT, p. 47.

In estimating the Equity Risk Premium, Ms. Ahern took two approaches. First, she calculated the Equity Risk Premium based on the total market using the beta approach. Second, she computed a mean Equity Risk Premium based on a study of using various holding period returns for public utilities with A rated bonds. Her analysis indicated the forecasted Equity Risk Premium to be 8.03%. This is calculated as the differ-

ence between forecasted 3-5 years Total Annual Market Return of 13.50% less the 5.47% prospective yield on Aaa Rated Corporate debt. Ahern PFT, p. 51, Schedule PMA-11, p. 6.

According to Ms. Ahern, the purpose of adjusting beta is to reflect the risk of the market as a whole relative to corporate bonds. Response to Interrogatory WA-70. For the beta adjusted approach, she finds the beta adjusted Equity Risk Premium to be 5.80 for CWS, 5.32% for AUS Water Group and 4.43% for the AUS Gas Group. For the holding period approach, she finds the Equity Risk Premium to be 4.15%. Ahern PFT, pp. 48-50 and 54, Schedule PMA-11, pp. 6 and 7.

Ms. Ahern then averaged the results of both approaches and recommended an Equity Risk Premium of 4.98% for CWS, 4.74% for the AUS Water Group and a 4.29% Equity Risk Premium for the AUS Gas Group. Ahern PFT, p. 55, Schedule PMA-11, p. 8. The results of her analysis indicate that the Equity Risk Premium approach yields an ROE of 10.87% for CWS [5.89% + 4.98%], 10.63% [5.89% + 4.74%] for the AUS Water Group and 10.38% [6.09% + 4.29%] for AUS Gas Group. Ahern PFT, p. 55, Schedule PMA-11, p. 1.

According to Ms. Ahern, the Equity Risk Premium varies inversely with interest rate changes. One should not presume a constant Equity Risk Premium but the model assumes it to be a constant component. Likewise, the use of the arithmetic mean and not the geometric mean is appropriate. Ahern PFT, pp. 55 and 56. When questioned by the Department, Ms. Ahern indicated that her Equity Risk Premium of 4.15% is based upon a long-term study of the holding period returns on the S&P Public Utility Bond Index relative to yields on Moody's Aa, A and Baa rated public utility bonds. The 4.15% is the risk premium relative to Moody's A rated public utility bonds which approximates the average Moody's bond rating for the AUS Water Group and AUS Gas Group. Response to Interrogatory WA-72.

Dr. Woolridge did not perform an Equity Risk Premium analysis, but his recommendation for the Equity Risk Premium is contained in his CAPM analysis discussed below in Section II.J.7.f. Dr. Woolridge argues that Ms. Ahern's Risk Premium and CAPM equity cost rates are excessive primarily due to overstated equity risk premiums. OCC Brief, p. 37.

***82** Dr. Woolridge indicates that the equity risk premium approaches in Ms. Ahern's Risk Premium and CAPM methods are very similar. He also highlights the two primary errors in the approaches. First, there are errors associated with computing an expected equity risk premium using historical stock and bond returns. According to Dr. Woolridge, there are a myriad of empirical problems, which result in historical market returns producing inflated estimates of expected risk premiums. Among the errors are the U.S. stock market survivorship bias (the Peso Problem), the company survivorship bias (only successful companies survive, whereas poor companies do not survive), and unattainable return bias (the Ibbotson procedure presumes monthly portfolio rebalancing). Woolridge PFT, p. 73; OCC Brief, pp. 38-39; Tr. 3/29/10, pp. 1403-1406.

Ms. Ahern's expected Equity Risk Premium is based on an expected stock market return of 13.50% as computed using *Value Line*'s 3-5 year projected market price appreciation potential. Dr. Woolridge indicates that the problem with this approach is that *Value Line* has consistently overstated market price appreciation potential in the past. On average, *Value Line*'s projected 3-5 year annual return has been 4.89% above the actual 3-5 year annual return thus resulting in excessive Equity Risk Premiums. Woolridge PFT, pp. 81 and 82; OCC Brief, p. 40.

Overall Dr. Woolridge states Ms. Ahern's Equity Risk Premium used in her Risk Premium and CAPM approaches should be ignored because they are totally out of line with the equity risk premium estimates that were discovered in recent academic studies by leading finance scholars, and employed by leading investment banks, management consulting firms, financial forecasters and corporate chief financial officers. Dr. Woolridge suggests a more realistic market risk premium for both the Risk Premium and CAPM approaches is in the 4.0%-5.0% range above Treasury yields. Woolridge PFT, p. 85; OCC Brief, p. 40.

(1) Arithmetic and Geometric Mean

In performing the total market approach using beta, and in deriving the mean Equity Risk Premium using holding period returns, Ms. Ahern relied upon the arithmetic mean returns because in her opinion these are appropriate for cost of capital purposes. Ahern PFT, Schedule PMA-11, p. 6. According to Ms. Ahern, the arithmetic mean is not biased by the measurement period over long-terms. Response to Interrogatory WA-69b. According to Ms. Ahern, the arithmetic mean captures the prospect for variance in returns and equity risk premiums and provides insight to estimate future risk in making future investment. Response to Interrogatory WA-69a. Ms. Ahern points out that the arithmetic choice is recommended by Ibbotson Associates as well for discounting future cash flows. Response to Interrogatory WA-69, Attachment, p. 6.

Ms. Ahern does not recommend using the geometric average as it is more appropriate for reporting past performance, since it represents the compound average return. Geometric means are inappropriate for cost of capital purposes. Response to Interrogatory WA-69.

***83** Dr. Woolridge believes the use of the historic arithmetic mean approach to calculating the Equity Risk Premium poses a problem of overestimation. According to Dr. Woolridge, the arithmetic mean always results in a higher estimate than the geometric mean. His position is that, in examining a time series of data, the best measure of investment performance over time is the geometric mean. Accordingly, the geometric return takes into account base return from one year to the next. Tr. 3/29/10, pp. 1397-1399.

(2) Survivorship Bias and Peso Problem

Survivorship bias is tendency for market returns to be overstated as only the returns of the companies that survive are measured. The Peso Problem or U.S. market survivorship bias involves the fact that past stock market returns were higher than expected in the U.S. because despite war, depression and other social, political and economic events, the U.S. economy survived, did not hyper-inflate and resisted invasion and calamities that befell other countries. Woolridge PFT, p. 78.

Survivorship bias and/or the Peso Problem could reduce the size of the Equity Risk Premium. Based upon her review of Ibbotson, Ms. Ahern neither finds survivorship bias nor the Peso Problem to be an issue to the development of the historical Equity Risk Premium as CT Water is a U.S. company. She quotes a portion of Ibbotson Associates which states, 'If the entity being valued is a US Company, then the relevant data set should be the performance of equities in the US market.' Response to Interrogatory WA-71.

In reviewing the relevant portion of Ibbotson, the Department found the following statement in addition to Ms. Ahern's quoted portion:
[O]nce survivorship bias is taken into consideration; the US equity risk premium is overstated by approximately 60 basis points. The non-US Equity Risk Premium was found to contain significantly more survivorship bias. While the survivorship bias evidence may be compelling on a worldwide basis, one can question its relevance to a purely US analysis. If the entity being valued is a US company, then the relevant data set should be the performance of the equities in the US market.
Response to Interrogatory WA-41i; Ibbotson Associates, *Stocks, Bonds, Bills and Inflation - 2009 Yearbook*, p. 65; Tr. 3/29/10, pp. 1286-1288.

f. Capital Asset Pricing Model

Ms. Ahern also performed a CAPM, which is based upon the assumption that all non-market risk (unsystematic risk) can be eliminated through diversification. The risk that cannot be eliminated through diversification is called systematic risk. Systematic risk is the risk for which investors require compensation since diversification cannot eliminate it. Ahern PFT, p. 56. The CAPM is applied by adding a risk-free rate of return to a market risk premium which is adjusted proportionately to reflect the systematic risk of the individual security relative to the market. Ahern PFT, pp. 56-58. The measure of relative risk of the security to the mar-

ket is beta.*Ibid.*

***84** Mathematically, the following represents the simple CAPM:
$R_s = R_f + b X (R_m - R_f)$, where:

R_s is the required return on stock;

b is the beta of the individual stock, *i.e.*, measure of systematic risk;

R_m is the return on the market; and

R_f is the return on risk free asset (*i.e.*, treasury secur- ity).

Ahern PFT, p. 57.

In applying the CAPM, Ms. Ahern points to the observation that the empirical Security Market Line (SML) described by the CAPM formula ($R_f + b X (R_m-R_f)$) is not as steeply sloped as it is expected to be. Ahern PFT, p. 57. In order to correct for this observation, empirical evidence suggests that the CAPM formula should be revised to reflect this observation.

The following equation is an approximation of the Empirical CAPM or ECAPM: $K = R_f + X * b * (R_m-R_f) + (1-X) * (R_m-R_f)$ where X is a fraction to be determined empirically. Assuming X is 0.25, then the Empirical CAPM reduces to $K = R_f + 0.25 * b * (R_m-R_f) + 0.75* (R_m-R_f)$. Ahern PFT, p. 57. The selection of the beta weighting or 'X' factor in the empirical CAPM is based upon the work of Dr. Roger Morin. Response to Interrogatory WA-74c, Attachment. Ms. Ahern believes the Empirical CAPM methodology was develop outside the regulatory finance area and cites the work of Dr. Morin as support. Response to Interrogatory WA-76; Tr. 3/29/10, pp. 1290.

Ms. Ahern used the .25/.75 beta weighting factors based upon the convention established by Dr. Morin. According to the Empirical CAPM approach, 'X' or the beta weighting factor is to be determined empirically, but Ms. Ahern could not specifically point out how the .25/.75 weighting factors were determined. Tr. 3/29/10, pp. 1291-1295. Ms. Ahern applied both the traditional CAPM and Empirical CAPM to her proxy group of companies and averaged the results. Ahern PFT, p. 58. Ms. Ahern relied upon the median of results of the CAPM and Empirical CAPM due to the extremely volatile capital markets. The results of her CAPM methodologies indicate 11.3% for CWS, 10.8% for the AUS Water Group and 9.96% for the AUS Gas Group. Ahern PFT, pp. 60 and 61, Schedule PMA-13.

Dr. Woolridge also provided a CAPM analysis using essentially the same formula as Ms. Ahern. This witness used the form of the CAPM where:
K is equal to $R_f + b * [E(R_m)-R_f]$, where:

K represents the estimated rate of return on the stock;

$E(R_m)$ represents the expected return on the overall stock market (frequently, 'market' refers to the S&P 500);

(R_f) represents the risk-free rate of interest;

$[E(R_m)-(R_f)]$ represents the expected equity or market risk premium - the excess return that an investor expects to receive above the risk-free rate for investing in risky stocks; and

Beta is a measure of the systematic risk of an asset.

Woolridge PFT, p. 39; OCC Brief, p. 24.

Dr. Woolridge did not apply the Empirical CAPM approach and disagrees with its use in cost of equity analysis. Ms. Ahern supports her use of the Empirical CAPM with reference to Dr. Morin's book. Dr. Woolridge states that Dr. Morin's book merely provides anecdotal evidence on the Empirical CAPM and the weights to be used in its application, but does not develop or empirically test the Empirical CAPM. Dr. Woolridge also claims that the results presented in Dr. Morin's book do not necessarily support Ms. Ahern's application since Ms. Ahern has used *Value Line* betas. In addition, Dr. Woolridge states that *Value Line* betas are adjusted to reflect the fact that historically, betas tend to regress toward 1.0 over time. Using adjusted betas, therefore,

increases the return for stocks with betas less than 1.0, and decreases the return for stocks with betas greater than 1.0. Based on the fact that utility betas are less than one, the application of Empirical CAPM would further inflate the resultant ROE. Woolridge PFT, pp. 83 and 84; OCC Brief, p. 40; Tr. 3/29/10, pp. 1406-1407.

***85** The following discussions represent the debates surrounding the various mathematical inputs to the CAPM.

(1) CAPM Risk Free Rate

In selecting the risk free rate (R_f), Ms. Ahern adopted 4.62% in both versions of CAPM. Her selection was based upon the average consensus forecast from the December 1, 2009 edition of *Blue Chip Financial Forecasts* estimate for yields on 30-year U.S. Treasury bonds for the six quarters ending 2011. Ahern PFT, p. 58.

Ms. Ahern's choice of the 30-year U.S. Treasury bond as the proxy for CAPM's risk free rate is based on the contention that the yield on long-term Treasury Bonds is almost risk free, consistent with the long-term cost of capital to public utilities, and is consistent with the long-term investment horizon faced by public utilities. Overall, the 30-year U.S. Treasury Bond best approximates the risk free rate in the CAPM as it is less volatile than U.S. Treasury Bills, is almost risk free, and is consistent with the utility companies' long-term investment horizon. Ahern PFT, p. 58.

Dr. Woolridge states that the yield on long-term U.S. Treasury rates is usually viewed as the risk-free rate of interest on the CAPM. Woolridge PFT, p. 40. In developing his CAPM approacb, Dr. Woolridge used the yield of a 30-year U.S. Treasury bond as the benchmark for the risk-free rate of interest (R_f). According to Dr. Woolridge, his review of the recent trend in interest rates indicated that the yield on 30-year Treasury bonds has been in the 4.5% range over the last several months. As of February 15, 2010, Dr. Woolridge found the rate on 30-year U.S. Treasury Bonds was 4.65%, and he used 4.65% as R_f in his CAPM. Woolridge PFT, p. 42, Exhibit JRW-11, p. 2; OCC Brief, p. 25.

(2) Equity Risk Premium

In computing the Equity Risk Premium, Ms. Ahern began with an estimate of investors' expected total return on the market and subtracted from that an estimate of the risk free rate. Her estimate of the Equity Risk Premium averages 7.69%. Ahern PFT, p. 60, Schedule PMA-13.

The basis of the projected median Equity Risk Premium is computed by averaging the results of two methods. The projected method uses *Value Line* data and computes the Equity Risk Premium by subtracting the average risk free rate of 4.62% from *Value Line*'s total market return projections of 13.5% for an Equity Risk Premium of 8.88%. Ahern PFT, p. 60, Schedule PMA-13, p. 3. The other method uses Ibbotson Associates' data and computes the Equity Risk Premium by subtracting the long-term historical income return on U.S. Government Securities of 5.2% from Ibbotson Associates'*SBBI* long-term historical total rate of return on the market of 11.7% for an Equity Risk Premium of 6.5%. Ahern PFT, p. 60, Schedule PMA-13, p. 3. The average of these two approaches, 7.69% [(6.5% + 8.88%) / 2], is Ms. Ahern's approximation of the Equity Risk Premium. Dr. Woolridge finds Ms. Ahern's Equity Risk Premium of 8.88% to be unrealistic given it is derived from an expected market return of 13.5%. He puts his comments into perspective by indicatmg that the long-term projected stock market return for the Company's pension plan is 8.75%, significantly below Ms. Ahern's 13.5% figure. Tr. 3/29/10, p. 1386.

***86** Dr. Woolridge indicated that there are three ways to measure the Equity Risk Premium. They include: Historic Ex Post Returns, Surveys, and Ex Ante Models and Market Data. Woolridge PFT, pp. 43-44, Exhibit JRW-11, p. 4. A brief summary of each approacli is as follows:

1. Historic Ex Post Returns - uses the difference between historic average stock and bond returns. Most historic assessments of the equity risk premium suggest

an Equity Risk Premium of 5-7 percent above the rate on long-term Treasury bonds. Dr. Woolridge states that this approach has been criticized as the large Equity Risk Premium discovered in historic stock and bond returns cannot be justified by the fundamental data. 2. Surveys - use surveys of investors and financial professionals. However, there are a limited number of surveys of investors' required rates of return. 3. Ex Ante Models and Market Data - use of studies to compute ex ante expected returns using market data such as expected earnings and dividends to arrive at an expected Equity Risk Premium.

Woolridge PFT, pp. 44-52; OCC Brief, pp. 25 and 26.

To determine an Equity Risk Premium, Dr. Woolridge reviewed the results of over 30 Equity Risk Premium studies and surveys performed over the past decade. These are presented on page 5 of Exhibit JRW-11 and include the summary Equity Risk Premium results of: (1) the annual study of historic Equity Risk Premiums as provided by Morningstar (formerly Ibbotson Associates); (2) *ex ante* Equity Risk Premium studies commissioned by academics, consulting firms, and the Social Security Administration; (3) Equity Risk Premium surveys of CFOs, Financial Forecasters, as well as academics; and (4) Building Block approaches to the Equity Risk Premium. The overall average Equity Risk Premium of these studies is 4.36%. Due to the financial crisis, Dr. Woolridge also separately examined Equity Risk Premiums published in the last two years. The most recent Duke CFO survey indicates that the expected 10-year Equity Risk Premium was 4.38%. According to McKinsey & Co.'s recent update to its study 'The Real Cost of Equity,' the Equity Risk Premium is reaffirmed to be between 3.5% and 4% in light of the financial turmoil. As a result of all these approaches, Dr. Woolridge uses an Equity Risk Premium of 4.40% in his CAPM. Woolridge PFT, pp. 51-53; OCC Brief, 26; Tr. 3/29/10, pp. 1384-1386, 1388-1391.

(3) Beta Selection

In selecting the beta for the traditional and empirical CAPM, Ms. Ahern used *Value Line*'s Adjusted Betas from the September 11, 2009 and October 23, 2009 editions. Ahern PFT, Schedule PMA-11, p. 9. Based upon this data set, the betas range from 0.65 to 0.95 for the AUS Water Group and 0.60 to 0.75 for the AUS Gas Group. The beta for CT Water Service is 0.85. The average beta for the AUS Water Group is 0.77 and the median is 0.78, while that of the average and median of the AUS Gas Group are 0.66 and 0.65, respectively.*Ibid.* The water company betas on inspection, appear to be higher than in previous years. Ms. Ahern did not concur with this observation and offers an exhibit showing the water peer companies' beta have actually declined about 14 bps over the last year. Response to Interrogatory WA-75.

**87 Dr. Woolridge also recommended that 0.74 and 0.64 be used as the beta estimates for the Woolridge Water Group and Woolridge Gas Group, respectively. These are average betas and are provided in *Value Line*. Woolridge PFT, pp. 42; Exhibit JRW-11, p. 2; OCC Brief, p. 25.

(4) CAPM Applications' Results

Ms. Ahern's application of the CAPM yields the following results: for the traditional approach 11.16% for CWS, 10.58% for the AUS Water Group and 9.62% for the AUS Gas Group; and for the Empirical CAPM 11.44% for CWS, 11.02% for the AUS Water Group and 10.29% for the AUS Gas Group. Ahern PFT, p. 60, Schedule PMA-13. In similar fashion to the DCF model, Ms. Ahern relies upon the median computation. The overall conclusion of her CAPM approaches are 11.30% for CWS, 10.8% for the AUS Water Group and 9.96% for the AUS Gas Group. Ahern PFT, p. 61, Schedule PMA-13, p. 1.

Dr. Woolridge's CAPM analysis results in equity cost rates of 7.9% for the Woolridge Water Group and 7.6% for the Woolridge Gas Group. Woolridge PFT p. 54; OCC Brief, p. 27. A summary of his CAPM application is provided in the table below:

Woolridge CAPM Results

	Risk-Free Rate	Beta	Equity Risk Premium	Equity Cost Rate
Woolridge Water Group	4.65%	0.74	4.40%	7.9%
Woolridge Gas Group	4.65%	0.67	4.40%	7.6%

Woolridge PFT, p. 54; OCC Brief, p. 27.

g. Comparable Earnings Model

Ms. Ahern included a Comparable Earnings Model which she finds consistent with the Hope vs. Bluefield doctrine. This doctrine indicates that the return to the equity investor should be commensurate with returns on investment in firms with similar risk. Ahern PFT, p. 64. The Comparable Earnings Model is designed to measure the returns expected to be earned on book common equity of similar risk enterprises. Ms. Ahern believes the benchmarking risk of similar enterprises should not be regulated utilities but the risk of non-price regulated firms.*Ibid.* According to Ms. Ahern, the difficult part of applying the Comparable Earnings Model is selecting a proxy group of non-price regulated firms with similar risk to the regulated utility in question.*Ibid.*

In choosing the non-regulated proxy group companies, Ms. Ahern chose three proxy groups of domestic, non-price regulated firms to reflect the systematic and unsystematic risks of CWS and of her two proxy groups, the AUS Water Group and AUS Gas Group. Ahern PFT, p. 65. The selection criteria for the non-regulated companies were that they be domestic non-utility companies, have meaningful rate of return, net worth or partner's capital reported in the Standard Edition of *Value Line* projected for 2012-2014.*Ibid.Value Line* betas were used as the measure for systematic risk and the standard error of the regression was used as the measure for unsystematic risk (*i.e.*, firm specific risk).

Ibid.

***88** In developing the non-utility comparables, Ms. Ahern selected three proxy groups of 95, 112 and 25 non-price regulated companies based upon an unadjusted beta and standard error of the regression. Ahern PFT, p. 66, Schedule PMA-14. In selecting the comparison factors to choose the peer non-utility companies, Ms. Ahern focused on total risk which encompasses diversifiable and non-diversifiable risk. Ms. Ahern indicates total risk encompasses unidentified standard deviation as well as credit rating. By using plus and minus three standard deviations, she captures 99.73% of the distribution of unadjusted betas and standard error of the regression. Response to Interrogatory WA-79. According to Ms. Ahern's Comparable Earnings approach and using the median approach, the results of Comparable Earnings Model are a return of 14.0% for CWS, a return of 14.25% for the AUS Water Group and a return of 21.25% for the AUS Gas Group. Ahern PFT, p. 67.

Ms. Ahern is not aware of the Department's position on the Comparable Earnings Model as she did not perform an extensive search of the Department's Decisions. Response to Interrogatory WA-78. The Comparable Earnings Model is an approach Ms. Ahern typically includes in her testimony before various jurisdictions but she is not aware of any jurisdiction which has explicitly adopted the Comparable Earnings Model. Response to Interrogatory WA-80; Tr. 3/29/10, pp. 1300-1302.

Dr. Woolridge believes that the Comparable Earnings Model is flawed and should be ignored. First, the risk ratings ranges are extremely broad and makes one ques-

tion how comparable the Comparable Earnings Model companies are in terms of risk to the water and gas groups. Secondly, Ms. Ahern did not evaluate the market-to-book ratios for these companies and cannot indicate whether the past and projected returns on common equity are above or below investors' requirements. Woolridge PFT, p. 85; OCC Brief, p. 41.

h. Parties' Summary Results

The table below provides a summary of Ms. Ahern's various cost of capital methods results with respect to the two proxy groups employed:

	CWS	AUS Water Group	AUS Gas Group
DCF	13.22%	11.50%	8.76%
Equity Risk Premium Model	10.87%	10.63%	10.38%
CAPM	11.30%	10.80%	9.96%
Comparable Earnings Model	14.00%	14.25%	NMF%
Indicated ROE	12.40%	12.10%	9.73%
Business Risk Adjustment	0.00	0.15	0.20
Indicated ROE after Adjustment for Business Risk	12.18%	12.25%	9.93%
Adjustment for WCAM	(0.22)	(0.11)	(0.03)
Indicated ROE after Adjustment for WCAM		12.14%	9.90%
Recommendation based on two Proxy Groups with WCAM			11.02%
Recommended ROE	11.60%		

Ahern PFT, p. 6, Table 2.

Ms. Ahern's ROE recommendation is 11.60% if the WCAM is adopted and 11.80% if not. In making her overall ROE recommendation, Ms. Ahern suggests that the results of one model should not be emphasized over the others. She recommends that the Department incorporate the results of all four models she evaluated in setting the allowed return. Ahern PFT, p. 68. She especially cautions the Department to avoid exclusive reliance on any one model.*Ibid.*, p. 69.

*89 Dr. Woolridge recommends an ROE for CT Water in the 7.6%-10.0% range. He relied primarily on the DCF results. He believes that the DCF results for the Woolridge Gas Group provide a better indicator as to the equity cost rate. As a result, he revises his cost of equity range to 9.0%-9.5% range. He finds this range reasonable given the lower CAPM results for the two groups. Dr. Woolridge recommends the midpoint of this range, 9.25%, as the equity cost rate for CT Water. Woolridge PFT, pp. 54 and 55; OCC Brief, p. 28.

The table below shows a summary of Dr. Woolridge's cost of equity results:

Method	Woolridge Water Group	Woolridge Gas Group
DCF	10.0%	9.0%
CAPM	7.9%	7.6%

Woolridge PFT, 54, Exhibits JRW-10, p. 1; JRW-11, p. 1; OCC Brief, p. 28.

Dr. Woolridge indicates his recommendation is consistent with authorized ROEs for water companies. He states that the most recent authorized ROE for water companies averages 10.06% as reported by AUS Utilities Reports. Likewise, for the broader group of small water companies followed by the National Association of Water Companies, Financial and Operating Data Report indicates the average ROE is 9.9%. Woolridge PFT, pp. 58 and 59; OCC Brief, pp. 28 and 29. Dr. Woolridge further commented that his 9.25% recommendation only applies if the Department does not accept the Company's decoupling mechanism (WCAM). In that case, he recommends a downward adjustment to the ROE as compensation for the lower risk the Company would face with decoupling. In this case, Dr. Woolridge suggests a downward adjustment of up to 50 bps to be appropriate. Woolridge PFT, p. 56; OCC Brief, p. 28.

8. Department Analysis of Cost of Equity

a. Overview: Economic Changes and

Survey of Allowed Returns

[75-78] The Company requests an 11.3% ROE based upon the review performed by Ms. Ahern, while OCC recommended a 9.25% ROE based upon Dr. Woolridge's analysis.

The Company provided the following financial and economic statistics related to Gross National Product (GNP), Consumer Price Index (CPI), U.S. Treasury rates and other relevant information covering the changes in these indices from the time of its last rate case through most recent quarter or month, whichever is most relevant. This information is contained in the table below:

Financial/Economic Indicator	2007 (4th Qtr)*	2009/2010 (latest month or quarter)*	Change 2007 to 2009/2010
Gross Domestic Product (GDP) (Trillions)	14.338	14.463	(0.87%)
Consumer Price Index (CPI)	207.342[18]	214.537[19]	3.47%
U.S. Treasury Bills (90-day)	3.5%	0.1%	(3.4%)
U.S. Treasury Bills (180-day)	3.7%	0.2%	(3.5%)
U.S. Treasury Bonds (10-year)	4.3%	3.7%	(0.8%)
U.S. Treasury Bonds (20-year/30-year)	4.6%	4.3%	(0.3%)
State Allowed ROE's for utilities	10.42%[20]	10.34%[21]	(0.08%)
Market-to-book ratios for the Company	203%	188%	(15%)
Market-to-book ratios for the Water Utility Industry	239%[22]	206%[23]	(33%)

*90 Company Late Filed Exhibit No. 59.

The Department focused on the economic and financial changes since the Company's last rate case, recently awarded ROEs in Connecticut, the application of the cost of capital models proposed by the Company witness and the OCC witness, the Department's review of each witness's recommendations, and its own application of the cost of capital models as applied to the financial data in the record. The Department did not rely on any one cost of capital method, but incorporated several methodologies accepted in the financial literature.

The Department reviewed the changes to several finan-

cial and economic indicators in order to take account of the economic trends that have occurred since the Company's last rate case. Approximately 2 1/2 years have passed since the rates approved by the 2007 CT Water Rate Case Decision became effective. There have been several noteworthy changes in this span of time. The first is the economic recession that began in the third quarter of 2008 which resulted in steep declines to the stock market, real estate market, and resulted in increased numbers of unemployed and underemployed workers. In response to the recession, the Federal government intervened in order to support the banking and auto sectors, as well as, to provide injections of money to state governments.

This economic decline is evident in the above tables' figures. Since the 2007 CT Water Rate Case Decision, U.S. economic growth has under paced the increase in inflation. For instance, Gross Domestic Product decreased by approximately 0.87% while inflation as measured by the Consumer Price Index (CPI) increased by 3.47%. CT Water Late Filed Exhibit No. 59. Short-term interest rates (90-and 180-day U.S. Treasury Bills) have decreased almost to zero.*Ibid.* 10-year U.S. Treasury Notes have decreased about 80 basis points while longer term rates have also decreased, on average, by 30 basis points for the 20-year U.S. Treasury bond and the 30-year U.S. Treasury bonds taken together.*Ibid.*

The trend in declining U.S. Treasury rates is reflected in the decline to state commission allowed ROEs. Also, it is evident the recession has taken a toll on market-to-book ratios for the Company's parent and the water utility industry as a whole with a decline of 15% for the parent and a decline of 33% for the Water Utility Industry for the market-to-book ratio. Given this evidence, the Department observes the Company's market to book value did not decline as much as the average water utility during this time period.

The Department incorporated the downward trend in the Long-term U.S. Treasury Bond rates of-0.30% to the Company's last allowed ROE of 10.125%. As a result of the above criteria, the Department finds the updated static allowed ROE to be 9.825% [10.125% +-0.30%].

The Department conducted a survey of recent Connecticut water rate case Decisions. The AG and the OCC in this proceeding have suggested that current market conditions have led to declines in allowed ROEs by the Department in the various regulated utilities. The Avon Water Rate Case Decision and the Hazardville Water Rate Case Decision resulted in ROEs of 10% and 9.6%, respectively. The Department notes that these lower allowed returns are not merely a water company phenomenon but transcends other utilities as well. For example, in the last CL&P rate case, the Department allowed a 9.4% ROE in Docket No. 07-07-01, Decision dated January 28, 2008, *Application of the Connecticut Light and Power Company to Amend Rate Schedules*. In Docket No. 08-07-04, Decision dated February 4, 2009, *Application of the United Illumination Company to Increase its Rates and Charges*, the Department granted UI a 8.75% ROE with decoupling. In Docket No. 08-12-06, Decision dated June 30, 2009, *Application of Connecticut Natural Gas Corporation for a Rate Increase*, a 9.31% ROE was granted. Likewise, in Docket No. 08-12-07, Decision dated July 17, 2009, *Application of Southern Connecticut Gas Company for a Rate Increase*, a 9.26% ROE was granted. Given these actual results for ROEs in Connecticut, the Department believes that, over the last three years, the range of reasonableness is 9.26% to 10%, with emphasis on the lower end of the range.

***91** The Company and the OCC witnesses arrived at highly divergent results. The Department will construct its own analysis and computations to determine which witness produced the more reliable results. The Department relied on the record evidence, including raw data provided by the Company and the OCC witnesses to perform the various methods and computations and develop its own permitted range for each cost of capital method employed. The DCF, Equity Risk Premium, CAPM and Comparable Earnings Model were analyzed based upon their acceptance in the field of cost of capital analysis in the attempt to incorporate different approaches to the estimation of the ROE. The review of each witness position and comments, and the results of the Department's analysis are detailed in the sections below.

b. Introduction and General Issues

(1) Risk

The Company believes its financial condition may become hampered as a result of its perceived declining consumption. It also indicates that land sales and related tax credits are sporadic and do not provide consistent infusions of cash to operate the business. Overall, the Company points out that it did not achieve its last allowed 10.125% ROE since its last rate case.

Examining the table provided by the Company in response to Interrogatory WA-21, the Department observes that, for the most part, the Company's financial metrics improved after the last rate case. In 2009, there is an observed decrease in some but not all of the metrics. Examining some of its turnover ratios, the Company has strong Times Interest Earned and Fixed Coverage ratios, which indicate a strong degree of protection available to its bondholders as these indicators measure how much company earnings cover interest expense. Likewise, the Company offers its Parent Company's shareholders a strong dividend payout ratio ranging between 70% and 80% of earnings. The Company's testimony is that dividend payout ratios are targeted to increase approximately $0.02 annually over the next three years. A review of *AUS Monthly Utility Reports* shows that CWS has one of the highest dividend payout yields of all AUS water companies followed. Company Response to Interrogatory WA-41g.

In contrast to the Company's somewhat dire depiction of its financial condition since the 2007 CT Water Rate Case Decision, the Department finds that the Company's financial condition improved over the interim period between rate cases and that it had consistent repayment of its long-term debt and a high dividend payout ratio. Accordingly, the Company has obtained a strong interest coverage position over the last three years. Likewise, the Company has been able to overlay a steadily increasing dividend obligation to the Parent Company since the last rate case. These financial metrics suggest a company that performs well, not one showing a long-term downward trend to financial flexibility.

(2) Proxy Group

The Department considered the Company and the OCC witnesses' proxy groups. Both experts recommended using two proxy groups, one consisting of publically traded water companies and the other group consisting of publicly traded local distribution gas companies (LDCs).

***92** Ms. Ahern's AUS Water Group includes CWS plus six AUS water companies which are American States Water Company; Aqua America, Inc.; California Water Service Group; Middlesex Water Company; SJW Corporation and York Water Company. Dr. Woolridge's Water Group includes American State's Water Co.; Aqua America; Artesian Resources Corp; California Water Service Group; Connecticut Water Service, Inc.; Middlesex Water Company; Pennichuck Corporation; SJW Corporation and York Water Company. The difference between the two experts' water proxy groups is minimal. Dr. Woolridge includes Artesian Resource Corporation and Pennichuck Corporation, which Ms. Ahern does not.

According to Ms. Ahern, Artesian Resources was excluded because it is not followed by *Value Line* and because Reuters did not have a growth rate estimate for it. Dr. Woolridge included it because it is followed by AUS Utility Reports. Dr. Woolridge used several sources of five-year EPS growth rate estimates besides Reuters. Since it is not followed by *Value Line*, he was not able to get *Value Line* estimates. Tr. 3/29/10, pp. 1350-1352. The stock that is traded for Artesian Resources is a nonvoting stock.*Ibid.*, p. 1413.The Department typically relies upon the utility companies followed by *Value Line* as this data is readily available to investors. Given that Artesian Resource is not followed by *Value Line* and is a nonvoting stock, it was excluded from the Department's Water Group.

Dr. Woolridge also included Pennichuck Corporation while Ms. Ahern did not. Dr. Woolridge indicated it is followed by AUS Utility Reports and *Value Line*. Likewise, he was able to find alternative EPS growth estimates as he did not rely on Reuters as Ms. Ahern did.*Ibid.*

, pp. 1352 and 1353.

Upon further examination of the Pennichuck Corporation, the Department finds that according to the October 23, 2009 *Value Line*, this company has a beta of 0.55, while CWS' beta is 0.85 as of that *Value Line* edition. *Ibid.*, p. 1353.The Department queried Dr. Woolridge why he would include a company with such low beta risk. Dr. Woolridge offered the following explanation:
Again, I included it because it's listed as a water company. Its beta is low because the stock price hasn't moved a whole lot, and it doesn't go up and go down. I mean, the water companies and the gas companies are among the lowest beta companies in the United States, and that one is lower than others. SJW is higher, but Pennichuck is not a widely followed firm, and so it doesn't move quite as much the others.

Ibid., p. 1354.

The Pennichuck Corporation is subject to a protracted eminent domain struggle with the City of Nashville for the last several years. The court recently decided in favor of the City of Nashville.*Ibid.*, p. 1413.Given that the Pennichuck Corporation has a very low beta risk in relation to CWS and that it has been in a long eminent domain struggle with the City of Nashville, the Department excludes Pennichuck Corporation from the Department Water Group.

***93** The Department Water Group consists of the following companies: CWS; American States Water Company; Aqua America, Inc.; California Water Service Group; Middlesex Water Company; SJW Corporation and York Water Company.

Ms. Ahern's AUS Gas Group includes AGL Resources, Inc.; Atmos Energy Corp.; Delta Natural Gas Company; Laclede Group Inc.; Northwest Natural Gas Company; Piedmont Natural Gas Co. Inc.; Southwest Gas Corporation and WGL Holdings, Inc. The Woolridge Gas Group includes: AGL Resources, Inc.; Atmos Energy Corporation; Laclede Group, Inc.; NICOR Inc.; Northwest Natural Gas Co., Inc.; South Jersey Industries, Inc.; Southwest Gas Corporation and WGL Holdings, Inc.

According to Ms. Ahern, Delta Natural Gas is one of the companies that are not in *Value Line*'s standard edition, but it is followed in *Value Line*'s, Small and Mid-cap editions.*Ibid.*, p. 1265.Dr. Woolridge indicated Delta Natural Gas was excluded because it does not have *Value Line* projections.*Ibid.*, p. 1355.Since Delta Natural Gas is included in *Value Line*'s Small and Mid-cap editions, the Department will include it as it provides some representation of capitalization more like CWS.

Dr. Woolridge included NICORE Inc. and South Jersey Industries, Inc., while Ms. Ahern excluded these on the basis that NICORE does not have positive *Value Line* five year projected DPS growth rate and South Jersey Industries, Inc. did not meet the minimum 60% threshold of obtaining revenue from regulated operations. Response to Interrogatory OCC-97; Tr. 3/29/10, pp. 1355 and 1356. On these points, the Department concurs with Ms. Ahern's analysis and likewise excludes NICORE, Inc. and South Jersey Industries, Inc. from the Department Gas Group.

Accordingly, the Department Gas Group includes AGL Resources, Inc.; Atmos Energy Corp.; Delta Natural Gas Company, Laclede Group, Inc.; Northwest Natural Gas Company; Piedmont Natural Gas Co., Inc.; Southwest Gas Corporation and WGL Holdings, Inc.

(3) Size Premium

A debate ensued regarding the inclusion or exclusion of a size premium. Ms. Ahern's adjustments identified as business risk adjustments are based exclusively upon a size premium given her contention that the Company's size is small relative to that of the average company. Based upon this clarification, her results summary indicates the following size adjustments were included: CT Water Service 0 bps, AUS Water Group a positive 15 bps and AUS Gas Group a positive 20 bps. For instance, to include Ms. Ahern's approximate 17.5 bps size premium, adds approximately $350,984 increase to revenue requirement in the instant docket. Application,

Schedule A-1.0; CT Water Late Filed Exhibit No. 69, Schedule A-1.0 Revised. [FN24]

Dr. Woolridge describes several reasons that even the small size adjustment proposed by Ms. Ahern should be denied. The Department has reviewed the work of Dr. Anne Wong in numerous Decisions. Dr. Wong has tested for a size premium in utilities and concluded that, unlike industrial stocks, utility stocks do not exhibit a significant size premium. Additionally, Dr. Woolridge cited academic work suggesting that the process of portfolio rebalancing used by academicians' analyses techniques may be a factor leading to the observation of a size premium. He highlighted a recent study which indicated that the annual rebalancing of portfolios results in some companies leaving the measurement portfolio, thus a bias is created. He indicates that if one examines the portfolio long-term without rebalancing, within two years the small firm effect is eliminated. Thus, the current thought is that the small company premium is a function of the mathematical methodology used to evaluate it. Tr. 3/29/10, pp. 1409-1411.

*94 The Department has rejected the inclusion of a size premium in a CAPM analysis in a number of rate proceedings. The Department's Decisions for Birmingham Utilities, Valley Water Systems, Inc. and Aquarion Water of Connecticut reject the same type of adjustment recommended by the Company Witness in the current proceeding. [FN25]Based upon the evidence put forth in the instant Docket, the Department finds no compelling evidence to reverse its past practice and disallows Ms. Ahern's size adjustment described in her testimony as 'business risk adjustment.'

c. Discounted Cash Flow Model

[79] In reviewing the DCF approach, the Department finds it necessary to address several differences between the Company and the OCC witnesses' applications of the model. One difference between the two approaches is in the selection of the peer/comparison group. As previously discussed, the Department analyzed the debate and selected a Department Water Group and a Department Gas Group. The Department used these companies in both its DCF and CAPM analyses.

Both Witnesses used the constant growth form of the DCF which simplifies to K=D1/P0 + G. The Department concurs with the suggested form of the DCF and incorporates it into the Department's analysis.

(1) Dividend Yield

In calculating the annual dividend yield Mr. Ahern averaged unadjusted dividends of a spot date (November 20, 2009) with unadjusted divided yields over the three-month average stock price ended November 30, 2009. The dividend yield was increased by one-half of the assumed growth rate to reflect the expected growth in dividends over the coming year. In estimating the forecasted dividend yield D1, Ms. Ahern used one-half the annual dividend growth rate. Dr. Woolridge used the average of the six-month period ending February 2010 and the month of February 2010 dividend yields. He then inflated the February 2010 spot dividend yield by one-half the expected growth rate so as to reflect the expect growth in dividends over the coming year, that is to estimate D1/P0.

The Department finds that both witnesses basically took the same approach. The Department incorporates this computation into its analysis using the two proxy groups to inflate the spot dividend yield by one-half of the growth rate to reflect the expected growth in dividends over the coming year.

(2) Growth Rates

A large debate revolved around the selection of the growth rate in the constant growth form of the DCF model. Ms. Ahern solely relied upon the estimates of five-year EPS growth rates from *Value Line* and Reuters in her DCF. Ms. Ahern disagrees with incorporating *Value Line*'s historical growth rates or DPS growth rates as these are embedded in the security analysts' estim- ates.

On the other hand, Dr. Woolridge recommends incorporating five-year and ten-year historical growth figures

(EPS, DPS, and BVPS), Wall Street analysts' forecasts from Reuters, Yahoo-First Call, and Zacks, and his computation of the retention growth approach into his testimony. Dr. Woolridge believes historical growth rates needs to be accounted for separately as past experience suggests these analyst estimates are overly optimistic.

***95** The Department agrees that analyst forecasts of EPS should be incorporated into the analysis, but its practice has been to temper analyst forecasts with historical growth figures. The rationale for this conclusion is, based on the evidence suggested in this case and those before it, that the Wall Street analysts forecasts are somewhat biased upward. Likewise, the Department is skeptical of the Company's claim that investors do not consider historical growth rates in their investment decision making process. Investors may not prefer or rely on historical growth estimates over analyst forecasts, but the Department does not believe investors ignore past history. For instance, the Department believes that when a potential investor performs his/her analysis to decide between several investment choices, it is unlikely that this investor would ignore the past performance of that investment vehicle, and solely base his investment decision on the forecasts of analysts contributing to Zacks, Reuters, and Yahoo report. Therefore, the Department incorporates only *Value Line*'s five-year historical growth estimates (EPS, DPS, and BVPS) into its DCF analysis.

Inclusion of the *Value Line* five-year past performance provides a good balance to the four-to six-year *Value Line* forecasts. Additionally, the five-year historic growth estimate is only one of several growth rates used in the DCF computation.

Considerable time was spent on the reliability of the analyst forecasts and whether these forecasts can be relied upon with respect to their inclusion in the DCF model. Instead of rehashing this analyst forecast debate, the Department will state that there is much evidence supporting the position that the equity analysts are overly optimistic and tend to overstate future growth in EPS.

The next question then is, 'Should these analyst EPS estimates be thrown out of this analysis?' Since the record indicates that investors rely upon these estimates in part, the Department believes that analyst growth rates have a place in its DCF analysis. The Department incorporated both *Value Line* projections and analyst EPS estimates of growth from Reuters, Yahoo, and Zacks into its DCF computations.

(3) DCF Results

In its analysis, the Department includes *Value Line*'s five-year historical and forecasted growth rate estimates for dividends, earnings, and book value, as well as growth rates computed using the sustainable earnings/ retention growth formula. The various analysts' EPS growth forecasts were also included in the analysis. Negative historical growth rates provided by *Value Line* were excluded as the Department believes sporadic negative growth rates are not reasonable for inclusion in a predictive model.

In applying the DCF model, the Department reviewed the annual constant growth form. In developing its overall DCF range, the Department found it necessary to exclude ROE resultant values below the Company's own cost of debt plus a risk premium based upon the rationale that the cost of equity should be greater than the cost of debt due to equity's greater risk. The Department used the data in the record and developed several scenarios using different measures of growth, including *Value Line* historical and projected growth rates for EPS, DPS and BVPS. The Department also incorporated analyst EPS growth estimates including those of Reuters, Yahoo and Zacks forecasts for EPS growth rates. [FN26]Overall, the Department computed several scenarios using different estimates of growth. No one growth estimate was favored in place of another. As a final point, the Department placed more emphasis on the *Value Line* projected growth rates and the Wall Street analysts' growth rates as the historic growth scenario was only one of several scenarios performed. The other scenarios focus on the *Value Line* and the analysts' five-year EPS growth projections. Overall, the Department's inputs to the model are significantly more reliant

on forecasts than on historical figures.

***96** The DCF result of the Department Water Group which computes an overall composite growth rate by averaging the *Value Line* five-year historic and *Value Line*'s projected growth rates for EPS, DPS and BVPS with the security analysts five-year EPS forecasts is lower than the 6.5% recommended by Dr. Woolridge. As a result, the Department examined various scenarios and inputs to the DCF separately rather than as a composite approach. These scenarios separately examine the *Value Line* historic growth rates, *Value Line* projected growth rate and security analysts' five-year EPS estimates. Overall, the Department's observation is that the security analysts' five-year EPS forecasts for CWS are driving up the results. For instance, the average of analysts' EPS growth for CWS is 12%. However, the Department does not believe that this is representative of the water industry given that the average five-year EPS growth rate for the other companies in the Department Water Group is approximately 7.4%. Accordingly, a reasonable range of results for the Department Water Group's DCF is 8.78% to 10.94%.

The Department also examined the DCF results of the Department Gas Group and did not have issue with its composite growth. As such, the Department's application of the DCF approach to the Department Gas Group yields a ROE range of 8.35% to 10.34%

Based upon review of the data and the application of the constant growth DCF as described above, the Department believes an overall range of 8.60% to 10.64% to be reasonable.

d. Capital Asset Pricing Model

[80] The Department reviewed Ms. Ahern's proposed Empirical CAPM methodology and finds that the only difference between the simple CAPM and the Empirical CAPM is the use of the X factor. This X factor appears to be an arbitrary figure. The Department believes that the X factor incorporates another level of conjecture that is unnecessary given that the simple CAPM formula is widely accepted in cost of equity literature. The Department finds the simple CAPM appropriate as it avoids the need to incorporate the arbitrary X factor. As a result, the Department will rely on the simple CAPM formula. The Department also implemented a simple CAPM ($K = R_f + b \times (R_m - R_f)$). The Department finds that there are several debates surrounding the application of CAPM methodology such as the choice of risk free rate of interest, beta and risk premium.

(1) Risk Free Rate and Beta Estimate

The evidence regarding the selection of the risk free rate of interest (R_f), does not show much controversy. Ms. Ahern recommends using 4.62% from *Blue Chip Financial Forecast's* estimates for yields of 30-year U.S. Treasury Bond rates. Dr. Woolridge also recommends the recent 30-year U.S. Treasury Bond yield of 4.65%. The Department finds the OCC's proposed 4.65% as an acceptable proxy for the return on long-term risk free asset (R_f).

The measure of beta represents the volatility of a proxy group of companies to the aggregate market. Ms. Ahern suggests the use of *Value Line* adjusted betas. Dr. Woolridge also recommends the use of *Value Line* betas. Accordingly, the Department incorporates *Value Line* betas into its analysis.

(2) Equity Risk Premium

***97** The Department did not perform a separate Equity Risk Premium analysis like Ms. Ahern did, but its review of the Equity Risk Premium is contained in its CAPM review. The Department notes that Ms. Ahern's separate Equity Risk Premium approach indicates an Equity Risk Premium of 4.98% for CWS, 4.74% for her AUS Water Group, and 4.43% for her AUS Gas Group. Examining her holding period approach resulted in an Equity Risk Premium of 4.15%. According to Ms. Ahern, these Equity Risk Premium estimates are applicable to A rated public utility debt costs. Response to Interrogatory WA-72; Tr. 3/29/10, pp. 1288-1289

The most hotly debated issue in the CAPM is the choice of Equity Risk Premium. In this case, Ms. Ahern recom-

mended 7.69% based upon her *Value Line* approach and Ibbotson historic approach. On the other hand, Dr. Woolridge recommended 4.40% based on his review of the academic literature related to Equity Risk Premium. These figures are widely divergent. Moreover, the Department finds several contentious issues in the development of their respective recommendations.

Ms. Ahern primarily relies on Ibbotson historical ex-post returns. Alternatively, Dr. Woolridge examined the Equity Risk Premium by compiling the results of several academic studies and also performing his own update to the Ibbotson historical approach incorporating the arithmetic and geometric approaches. The results of the surveys are contained in Exhibit JRW-11 of Dr. Woolridge's pre-filed testimony.

The OCC indicated that there are a number of other flaws to using the historic approach in estimating the Equity Risk Premium. One such example is survivorship bias. The Department questioned Ms. Ahern about survivorship bias. Her response was that she made no explicit adjustment for it as she felt the U.S. economy did not suffer from survivorship bias. The Ibbotson 2009 Stocks, Bonds, Bills and Inflation (SBBI), includes the following statement, '[T]hey conclude that once survivorship is taken into consideration, the U.S. Equity Risk Premium is overstated by approximately 60 basis points. The non-U.S. risk premium was found to be significantly more.' Company Responses to Interrogatories WA-41i and WA-71; Tr. 3/29/10, pp. 1286-1289. The Department reviewed the entire selection, and finds Ms. Ahern's statement indicating no survivorship bias to be somewhat misleading in light of reviewing the entire discussion instead of the small portion of the selection she provided.

Another area of debate revolved around the use of the arithmetic mean as opposed to the geometric mean in the estimation of the Equity Risk Premium using the Ibbotson method. The contention that the best measure of investment performance covering more than one time period is the geometric return is supported by the Securities and Exchange Commission's rulemaking which requires that firms show investment performance with geometric mean. Therefore, the argument is that since Ms. Ahern's study covers more than one period, she should be using the geometric return, not the arithmetic return.

***98** There is a debate in finance literature regarding the nature of stock returns. The argument revolves around whether the stock market could be described as a random walk or if the stock market has some element of mean reversion thus incorporating some degree of negative auto serial correlation.

According to an article by John Y. Campbell, Peter A. Diamond and John B. Shoven, the following citation is made, 'When returns are negatively serially correlated, the conclusion is that the geometric average is a better indicator of future prospects.' Company Response to Interrogatory OCC-1, Attachment 1; Tr. 3/29/10, pp. 1399 and 1400. Ms Ahern did not agree that the stock market is mean reverting, but does concur that the mean reverting argument is a topic in the literature. Tr. 3/29/10, p. 1278. Dr. Woolridge points out that there are periods of high returns followed by periods of low returns, and so mean reversion is likely, but it depends on how one examines the time periods covered.*Ibid.*, p. 1302.Because of the ambiguity in the literature about mean reversion, Dr. Woolridge indicates that he uses both the arithmetic and geometric approaches in his survey of Equity Risk Premium estimates. [FN27]*Ibid.*, p. 1401.

This evidence strongly suggests that if one believes the stock market is a random walk then the arithmetic mean is proper. But, if one believes the stock market has negative auto-serial correlation or mean reversion, then it is the geometric mean that is proper.*Ibid.*, pp. 1399-1403.The Department believes there is strong evidence supporting mean reversion theory but this theory has not yet been definitively undisputed. Dr. Woolridge's approach incorporates both the arithmetic mean approach and the geometric mean approach, and includes many academic studies examining the Equity Risk Premium over the years. Dr. Woolridge's approach is the most inclusive. His proposed 4.40% is the best proxy of the Equity Risk Premium for the CAPM.

The simple CAPM yields an ROE range of 7.79% to 8.83%. The Department selects the highest result,

8.83%, to be a conservative representation of the CAPM return in its overall analysis.

(3) Long-term Debt Plus

For the holding period approach, Ms. Ahern finds the Equity Risk Premium to be 4.15%. The 4.15% is the risk premium relative to Moody's A rated public utility bonds. It approximates the average Moody's bond rating for the AUS Water Group and AUS Gas Group. The Company's most recently issued Long-term Debt Series, the 2009 A Series, was issued at a fixed rate of 5.10%. Application, Schedule D-3.0; Tr. 3/12/10, pp. 421 and 422. Given that issuance of this bond was recent, theoretically, the issuer of that debt had incorporated the Company's business and financial risk in pricing the issue. Combining the risk premium relative to A rated public utility debt with the Company's own cost of debt yields 9.25% [4.15% + 5.10%]. This represents a simple, static approach to estimating the Company's cost of equity.

e. Comparable Earnings Approach

*99 **[81]** The Department reviewed the Comparable Earnings approach recommended by Ms. Ahern. It appears that this approach is highly dependent on the number of companies included in the comparison group and the time period covered. The Department also believes that it is not appropriate to compare regulated companies with those that face market-based competition with respect to allowed return. Additionally, the Department believes that the comparable earnings approach's is not a widely accepted cost of capital method used today in utility ratemaking, such as DCF, risk premium, or CAPM. Indeed the comparable earnings approach has been replaced with market-based approaches by regulators.

In reviewing Ms. Ahern's overall results, it is clear that the Comparable Earnings results substantially increase the overall ROE recommendation. Thus, the Department finds that the inclusion of Comparable Earnings merely helps to inflate the Company's overall ROE recommended range. Lastly, this is an approach that the Department does not normally include in any of its analysis and hereby rejects it for this Decision. In the Birmingham Utilities Rate Case Decision, at pages 68 and 69, the Department explicitly rejected the Comparable Earnings approach and stands by this precedent.

f. Summary of Department's ROE

Analysis Capital

[82] An ROE of 9.75% is indicated by the analysis and the cost of capital measures employed the Department. In establishing its allowed ROE, the Department relied primarily upon the results of the cost of capital models. The Department relied primarily on the results of the DCF, yet tempered the results of the water companies with the natural gas companies' results. The Department used its analysis that updated the last Company rate case and the survey of recent Decisions merely to establish benchmark parameters and to indicate in which direction the current allowed rate should trend.

The table below represents a summary of the Department's analyses and findings with respect to the ROE.

Method	Department Result
Update Last Rate Case	9.825%
Survey Recent Decisions	9.26% to 10%

DCF-Water & Gas	8.60% to 10.64%
CAPM/Risk Premium	8.83%
Debt Plus	9.25%
Comparable Earnings	Not Accepted
Size Premium	0%
Overall ROE Range	8.83% to 10.64%

Based upon its review, the Department finds an ROE of 9.75% to be borne out by its analysis and incorporates this into its weighted cost of capital analysis below.

g. Department's Allowed Weighted Cost

of Capital

[83] The Company's requested an ROR of 8.52% (11.3% ROE with a hypothetical capital structure of 50% Common Equity to 50% Long-term Debt) is rejected as excessive given today's market environment. The OCC's ROR recommendations of 7.03% (9.25% ROE with 8.58% Short-term Debt Equivalent, 45.20% Common Equity to 46.23% Long-term Debt) is accepted, in part, as it relates to the proposed capital structure but is rejected as to OCC's proposed ROE.

***100** Consistent with the legal guidelines defined in Conn. Gen. Stat. §16-19e(a)(4), the Department identified a rate of return on the rate base that is deemed appropriate for the Company's overall capital structure. The Department has identified the key components of the Company's capital structure, estimated the cost of each component of capital, and then calculated its overall cost of capital by weighting each component cost by its proportionate share of the overall capital structure.

The table below summarizes the capital structure components and calculates the weighted cost of capital, including the assigned rate of return on common equity, determined by the Department based upon the changes accepted from the Company's Written Exceptions:

Class of Capital	Amount ($)	% of Total	Cost	Weighted Cost
Short-Term Debt Equivalent	$16,728,001	7.51%	2.38%	0.18%
Long-Term Debt	104,188,823	46.77%	5.74%	2.68%

Common Equity	101,862,783	45.72%	9.75%	4.46%
--				
--				
Total	$222,779,607	100.00%		7.32%

Based upon the above, the Department has determined that a 7.32% return on the Company's $230,252,308 rate base is reasonable. This results in an adjusted utility operating income of $16,856,771. This amount is sufficient to service the Company's interest payments on its debt, fund its proposed capital construction projects and allow it to earn a fair rate of return.

Table III, below, shows the revenue and expenses found reasonable by the Department:

TABLE III

Operating Revenue: Present Rates	$63,115,683 M&J/Other Income
	Total Operating Revenues
5p	
Operating Expenses: Operation & Maintenance	$33,886,369 Depreciation
	Total Operating Expenses
Utility Operating Income	$16,856,771

[Note: The following TABLE/FORM is too wide to be displayed on one screen. You must print it for a meaningful review of its contents. The table has been divided into multiple pieces with each piece containing information to help you assemble a printout of the table. The information for each piece includes: (1) a three line message preceding the tabular data showing hy line # and character # the position of the upper left-hand corner of the piece and the position of the piece within the entire table; and (2) a numeric scale following the tabular data displaying the character positions.]**********
****
** This is piece 1. -- It begins at character 1 of table line 1.
****

****
TABLE IIIOperating Revenue: Present Rates $63,115,683 M&J/Other In- come
Total Operating Reven- ues
5pOperating Ex- penses: Operation & Maintenance $33,886,369 Depreciation
Total Operating Ex- penses
Utility Operating Income $16,856,771

1... ...10.... ...20.... ...30.... ...40.... ...50.... ...60.... ...70.... ..**********
****
This is piece 2. -- It begins at character 78 of table line 1.
****
****
757,324 Allowed Increase 8,035,000 $71,908,007 7,231,363 Property Taxes 5,351,502 982,440 CT 1,024,888 Payroll Corpor- ate Federal Taxes Busi- ness Income Taxes Taxes $55,051,23678..... ...90.... ....0.... ...10.... ...20.... ...30.... ...40.... ..**********
****
This is piece 3. -- It begins at character 148 of table line 1.
****
****
6,574,673148.... .. WIDETABLE NOTE--Some parts of this form are wider than one screen. To view material that exceeds the width of this screen, use the right arrow key. To return to the original screen, use the left arrow key. TABLE IIIOperating Rev- enue: Present Rates $63,115,683 M&J/Other Income 757,324 Allowed In- crease 8,035,000 $71,908,007
Total Operating Reven- ues
5pOperating Ex- penses: Operation & Maintenance $33,886,369 Depreciation 7,231,363 Property Taxes 5,351,502 982,440 CT 1,024,888 6,574,673
Payroll Corporate Feder- al Taxes Busi- ness Income Taxes Taxes
$55,051,236
Total Operating Ex- penses
Utility Operating Income $16,856,771

K. CONSUMER SERVICES

1. Bill Form, Notices and Bill Estimation

Policies

[84] The Application includes copies of CT Water's standard bill form, termination notice and customer rights notice. Application, Schedule H-2.0(b). The Application also provided the Company's policies and procedures for estimating customer bills. Application, Schedule H-2.0(c).

Upon review, the Department finds the standard bill form, termination notice customer rights notice, and bill estimation policies and procedures submitted by the Company to be in compliance with applicable regulations.

2. Customer Service Employees

CT Water employs one part-time and 22 full-time customer service representatives (CSR) to handle customer complaints and inquiries. Eight CSRs work out of the Company's Central Call Center in Clinton, three CSRs work in collections, and the remainder work in regional offices. In addition to handling customer complaints and inquiries, the CSRs process work orders, review and approve meter reading and billing reports, and provide information to field technicians who conduct service calls. The CSRs are cross-trained and are able to support other functions as necessary. Company Response to Interrogatory CSU-1; Tr. 3/8/10, pp. 111 and 112.

3. Service Quality Measures

***101** The Company tracks typical call center metrics

through its call accounting system: number of calls received/abandoned, average calls/day, and average speed of answer (ASA). Company Response to Interrogatory CSU-9. Statistics for 2009 indicate strong performance; the Company maintained an abandoned call rate of less than 5% with an ASA of 49 seconds. Westbrook PFT, p. 6; Company Response to Interrogatory CSU-9.

4. Customer Complaints

The Department's Utility 'Scorecard' shows a total of 16 complaints logged against CT Water in calendar year 2009, which is a relatively low complaint total. In its Application, the Company included its own customer contact log for the quarterly period ending December 2009. Application, Schedule H-4.0. The Company stated that customer inquiries regarding billing are the most common inquiry, and that it has a 'High Bill' procedure in place for those complaints. That procedure includes verifying the meter reading, analyzing historical usage, factoring in any estimated reads, educating the customer on simple leak checks, and discussing other relevant factors. If the CSR is unable to resolve the complaint, a work order is generated for qualified field staff to visit the customer's home or business. According to CT Water, almost all such inquiries are resolved after such field visits. Company Response to Interrogatory, CSU-16.

5. Pilot Program for Hardship Customers

[85-88] In the 2008 CT Water Rate Case Decision, CT Water was directed to consider, explore, and report upon a financial assistance program for its hardship customers. The Company subsequently submitted a preliminary proposal, which the Department approved.

In August 2008, CT Water introduced its H-2.0 pilot program for 51 of its customers with financial hardship. The Company established customer participation eligibility by partnering with local social service agencies in five communities within its service territory: Enfield, Deep River, Naugatuck, Unionville, and Killingly. Eligible customers (under state or federal income guidelines) were entered into a payment arrangement whereby the Company applied a 20% match for each timely payment the customer subsequently made under the payment arrangement. Westbrook PFT, p. 4.

CT Water now proposes to extend the program throughout its service territories. Westbrook PFT, p. 4. While the Company was unable to determine the number of customers that might qualify and participate in such an expanded program, it hopes to budget funds to each town, based on demonstrated need. CT Water claimed that, of the 51 participants, only a few did not complete their payment arrangements and were thus unsuccessful in the program. Tr. 3/8/10, pp. 116-119.

Based upon the Company's success with the pilot program, the Department encourages the Company to develop and submit for approval in its next rate case, an expanded analysis of the costs and benefits of the H-2.0 program, along with recommendations as to whether the program should be curtailed, modified, or expanded. In the interim, the Department approves recovery of up to $75,000 annually for the program, as proposed.

6. Rules and Regulations

a. General

***102** The Application included a copy of CT Water's latest revision to its Rules and Regulations. Application, Schedule H-2.0(f). The Company proposed four modifications to its Rules and Regulations. One of those modifications relates to the proposed Late Payment Penalty Fee previously discussed in Section II.H.3.b. Since implementation of this fee has been denied, the Company should remove the provision added to Section VIII of its Rules and Regulations relative to the Late Payment Penalty Fee. The Department will order the Company to file a final version of its revised Rules and Regulations. The three other modifications are discussed below.

b. Applications and Transfers

[89] CT Water seeks to add a provision in Section IV of its Rules and Regulations intended to facilitate the

transfer of an account from tenant to landlord:
When a request for service is made by a tenant, the application shall also include the name and address of the landlord or property owner. Such property owner would become the customer of record and billed accordingly for any service or commodity or turn off/on fees incurred after the tenant vacates the property and closes their account.

CT Water proposes to require a tenant applying for water service to provide the landlord's name. This is intended to avoid the possibility of a tenant vacating a property, closing out the account, but leaving the Company without a new tenant or customer using the service without properly establishing service with the Company beforehand. Under such circumstances, the Company maintains that it should be allowed to place the bill in the property owner's name, especially if it cannot gain access to its meter. In support of its proposal, CT Water referenced recent legislation, Public Act 09-31, *An Act Concerning Utility Service Termination*, which enables utilities to place an account in a landlord's name if the utility is denied access to a meter serving a tenant, upon ten days notice. In further support of its proposal, the Company cited the definition of 'customer' in Conn. Agencies Regs. §16-11-50(5). [FN28] Company Response to Interrogatory CSU-27; Tr. 3/8/10, pp. 129 and 130.

While this proposal offers potential benefit to CT Water and property owners, Conn. Agencies Regs. §16-11-50 does not allow a water company to unilaterally swap customers of record when a rental property turns over, especially without prior written authorization from the customer to whom the account may be transferred. The Department cannot approve the change as proposed, but suggests that the Company revisit this proposal and consider drafting for Department review and approval, a document or contract (between CT Water and property owners) that would fully disclose in advance the landlord's wishes with regard to utility service transfers.

c. Meters

[90] Another proposed provision stipulates the required height and location for its automatic meter reading (AMR) pad. CT Water states that this proposal is intended to provide for improved AMR access, and to insure timely meter readings. Application, Schedule H-2.0(f); CT Water Late Filed Exhibit No. 4; Tr. 3/8/10, pp. 131-133. Upon review of this proposed provision, the Department hereby approves this proposed modification to Section VI of the Company's Rules and Regulations.

d. Provision for Mandatory Water Use

***103** Restrictions

The Company also proposes to add a provision in Section VII of its Rules and Regulations that would allow it, upon customer notice, to terminate service or impose a charge upon customers who fail to comply with mandatory water use restrictions. The Company states that it requires such a tool to ensure that customers adhere to restrictions that may be imposed by the DEP pursuant to proposed Streamflow Regulations Service Quality Measures. Application, Schedule H-2.0(f).

The Department finds that CT Water has not sufficiently developed or defined this proposal (*e.g.*, notice to customers, method of enforcement) and cannot approve it as proposed.*III. FINDINGS OF FACT*

1. CT Water currently serves approximately 88,500 residential, commercial, industrial and municipal customers throughout 54 towns across Connecticut.

2. Since 2006, the Company has acquired 36 water systems.

3. The Company has expanded the size of its utility operations, including the size of its service territories, through various acquisitions of other water utilities.

5. The water quality of the Company's water systems meets the standards set by the Connecticut Public Health Code.

6. The Thompson water system contains high sodium and experiences water discoloration.

7. The Company treats its water for radon and uranium

in certain water systems.

8. For water treatment, the Company has spent $1,562,032 on chemicals in 2009.

9. The Company has tested at least 90% of its scheduled periodic meters, and has determined that 90% of the tested meters fell within 96% and 102% of accuracy.

10. The Company tests all of the meters in its CWC Main Division. Meters 5/8-inch, 3/4-inch and 1-inch in size are tested every 16 years.

11. The Company tests its production meters annually.

12. Of the 175 vehicles it uses, the Company owns 124 vehicles and leases 51 vehicles.

13. The Company has spent $23,190,798 on 57 capital projects between 2006 and 2009.

14. For the 2009 *pro forma* year, although the Company had originally proposed 12 major projects at an estimated cost of $5,175,000; actual spending was $4,617,495 for just one of those proposed projects plus 10 new projects.

15. The Company's 5-year construction budget forecast amounts to approximately $162,141,454.

16. The Company's calculated average NRW was 11.9% in 2008 for 66 water systems.

17. Twenty-six out of 62 water systems had NRW higher than 15%.

18. The Company currently has 226 employees.

19. The Company has included expenses associated with 12 vacant positions.

20. The five-year period, 2005-2009, shows increases in employee levels with the exception of 2009 which experienced a decrease of one position.

21. The Company has experienced incremental customer growth on a yearly basis and has added employees with larger customer additions such as in the Eastern acquisition.

22. CT Water proposes to increase salary levels by 4% for the rate year.

23. CT Water proposes to include $160,196 in *pro forma* expenses associated with merit and employee awards.

24. D&O insurance provides a benefit to ratepayers and shareholders as it protects BOD members in their decision making.

25. The Company's chemical expense has increased approximately 24% from 2007 to 2008 and 19% from 2008 to 2009.

26. The Company's purchased water expense has increased approximately 13% from 2008 to 2009.

27. The Company has entered into a fixed price contract for 50% of its purchased power.

28. CT Water has expanded its unregulated activities on a yearly basis.

29. The purpose of any shared expense allocation mechanism is to equitably charge non-direct shared costs to all entities that benefit.

30. For its weather normalization adjustment, the Company uses a base load approach.

31. The Company's base load approach is primarily premised on the Company's contention that billings for the first quarter (January, February and March) exhibit the least impact from weather-related use.

32. The Company's weather normalization adjustment under its base load approach is limited to the residential class.

33. 2009 is the most recent year for which annual consumption and year-end customer count data is available.

34. The Company's weather normalization adjustment was calculated using 1st quarter data for the 2005-2009 period.

35. The WCAM calculation incorporates the base load approach for determining the base use variation in residential consumption between the projected year and the actual year.

36. The WCAM calculation would only result in a deferred expense if: (a) the base use variation indicates a daily conservation in consumption per customer; and (b) the difference between projected revenues and actual revenues is a decrease of more than 1%.

37. The WCAM calculation would only result in a deferred credit if: (a) the base use variation indicates a daily growth in consumption per customer; and (b) the difference between projected revenues and actual revenues is an increase of more than 1%.

38. The Company has not finalized its conservation program but has identified certain key components (*e.g.*, retrofit programs, rebates for appliances and fixtures, customer incentives) that it anticipates would be incorporated into the program.

39. If the WCAM calculation results in an accumulated deferred expense or a deferred credit of $2 million or more, then the Company would apply for Department approval to adjust metered residential rates to collect or credit the deferred amount.

40. A cost of service rate design analysis was not performed specifically for the Application.

41. The Company has an existing late payment fee of 1.5% per month that is applied to past due amounts.

42. The Company has proposed both a Standard Rate Plan and an Alternate Rate Plan Proposal based on a three-year rate plan.

43. The Company has proposed no increases to any of its existing miscellaneous service charges.

44. The Company has proposed an across-the-board percentage increase to all meter service charges, commodity charges, flat rates, seasonal rates and private fire protection charges.

45. The Company seeks to limit the increase to its public fire protection rates to 2%.

46. The Company proposed a simple hypothetical capital structure consisting of 50% Long-term Debt to 50% Common Equity valued as of the Test Year, Decemher 31, 2008.

47. The Company's capital structures proposed for Rate Years 2 and 3 are exactly the same as the one for Rate Year 1, consisting of 50% Long-term Debt to 50% Common Equity.

48. The Company's use of Short-term Debt increases over the time period December 31, 2009 through March 31, 2010, from 7.33% to 9.34%.

49. The Company's estimates for June 30, 2010, show that the actual capital structure will consist of 45.50% Common Equity, 45.94% Long-term Debt and 8.56% Short-term Debt.

50. In December 2009, CWS provided a $5.1 million capital infusion.

51. The Company did not provide projected capital structures for the years 2013 through 2016 because it did not prepare a financial forecast for those years.

52. CWS has no strict dividend payout target, but over the long-run, it is believed that a payout of 70% to 80% of earnings should be paid out to shareholders.

53. CWS has supplied its shareholders with increased common dividends of $0.02 annually, translating to a 2% annual growth rate in shareholder dividends.

54. The Company indicates that it almost exclusively used the Connecticut Development Authority to issue its debt.

55. The Company conducts its intercompany short-term borrowing with CWS.

56. CWS maintains lines of credit with three banks with total access to approximately $40 million.

57. The Company indicates its composite cost of Short-

term Debt is 2.384%.

58. The Company's proposed cost of Long-term Debt is 5.74%

59. In 1986, the Department created Account 272 (in the Uniform System of Accounts Prescribed for Water Utilities Class A) to provide a procedure for CIAC to be amortized over the life of the plant rather than remaining on a company's books indefinitely.

60. The Company's proposed ratemaking capital structure has no short-term debt and includes more common equity than the capitalization of CWS.

61. CT Water's proposed ratemaking capitalization mix is that it is less than the Company's proposed rate base.

62. The OCC proposed a ratemaking capital structure of 8.58% Short-term Debt Equivalent, 46.23% Long-term Debt and 45.20% Common Equity.

63. The OCC proposed an ROE of 9.25%.

64. Approximately $7 million of the rate base to capitalization differential is a result of CT Water's acquisition of Birmingham Utilities' Eastern division assets at less than book value.

65. The average capitalization mix for the Woolridge Water Group is 5.99% Short-term Debt, 48.83% Long-term Debt, 0.17% Preferred Stock and 45.01% Common Equity.

66. The Company's Short-term Debt-use ranges from 7.33% to 9.34% through March 31, 2010.

67. The Company requested an 11.3% rate of return on common equity solely based upon the testimony prepared by the Company's witness and made a downward adjustment to its initial recommendation to be conservative.

68. The Company's witness used the Discounted Cash Flow Model, the Risk Premium Model, the Capital Asset Pricing Model, and the Comparable Earnings Model.

69. The Company's witness analysis indicated a ROE recommendation of 11.60% if the WCAM is adopted and 11.80% if WCAM is not adopted.

70. Long-term capital cost rates for U.S. corporations are a function of the required returns on risk-free securities plus a risk premium.

71. The risk-free rate of interest, as proxied by long-term U.S Treasury yields, has been below 5.0% since 2002.

72. The OCC's expert cost of capital witness was Dr. Randall J. Woolridge.

73. The OCC used the DCF and CAPM methods only.

74. The Company and the OCC's witnesses both recommended the use of proxy groups of water companies and natural gas companies.

75. There is a debate in the finance literature suggesting smaller companies tend to be more risky causing investors to expect greater returns as compensation for that risk.

76. Financial risk is the additional risk a company bears by the introduction of debt and preferred stock into the capital structure.

77. The Efficient Market Hypothesis asserts that all publically available information is fully reflected in securities prices and that fundamental analysis cannot enable an investor to outperform the market.

78. The premise of the DCF model is that the intrinsic value of common stock can be estimated as the present value of future cash that flows to the investor plus the expected growth in selling the stock discounted to the present.

79. The Company and the OCC's witnesses both used the single-stage, constant growth form of the DCF model.

80. The Company's witness only considered security analyst's five-year projected growth rates in earnings per share in her DCF model.

81. The OCC's witness used five-year and ten-year historical growth rates in EPS, dividend per share and book value per share in his DCF model.

82. The OCC's witness used *Value Line*'s historical and projected growth rate estimates for EPS, DPS, and BVPS, as well as five-year EPS forecasts by Wall Street analysts including First Call, Zacks, and Reuters.

83. The Company and the OCC's witnesses both inflated the dividend yield by one-half of the expected growth rate to estimate the forecasted dividend yield, D1/P0, component.

84. The Risk Premium model indicates that the cost of equity equals the expected cost of long-term debt plus a risk premium to compensate shareholders for the added risk of being unsecured and last-in-line for a claim on the corporation's assets.

85. The Capital Asset Pricing model is based upon the assumption that all non-market risk can be eliminated through diversification.

86. The Comparable Earnings Model is designed to measure the returns expected to be earned on book common equity of similar risk enterprises.

87. The Comparable Earnings Model uses the non-regulated proxy group companies, to reflect the systematic and unsystematic risks of cost of equity for the target company.

88. An economic recession began in the third quarter of 2008.

89. Since the 2007 CT Water Rate Case Decision, short-term interest rates (90-and 180-day U.S. Treasury Bills) have on average decreased by 345 basis points, bringing short-term rates effectively to zero.

90. Since the 2007 CT Water Rate Case Decision, ten-year U.S. Treasury Notes have decreased by approximately 80 basis points.

91. Since the 2007 CT Water Rate Case Decision, longer term U.S. Treasury rates have decreased, on average, by 30 basis points for the 20-year U.S. Treasury bond and the 30-year U.S. Treasury bonds taken together.

92. CWS has one of the highest dividend payout yields of all AUS water companies followed.

93. The Department received 110 letters and e-mails regarding the Application.

94. The Company employs 22 full-time and 1 part-time CSRs to handle customer complaints and inquiries.

95. The Company's standard bill form, termination notice, and customer rights notice comply with applicable regulations.

96. In August 2008, the Company introduced a pilot program called H-2.0 that provided financial assistance for a number of eligible customers.

97. The Company proposed four additional provisions to its Rules and Regulations that would: (a) facilitate the transfer of an account from tenant to landlord; (b) stipulate the required height and location for an AMR pad; (c) allow the Company to apply a Late Payment Penalty Fee; and (d) allow, upon customer notice, the termination of service or imposition of a charge upon customers who fail to comply with mandatory water use restrictions.

98. CT Water maintained a less than 5% abandon call rate and an average ASA of 49 seconds in 2009.*IV. CONCLUSION AND ORDERSA. CONCLUSION*

***104** Based on the foregoing, the requested increase in annual revenues, the proposed rate schedules under a three-year plan, and the proposed WCAM as filed in the Application are hereby denied.

Instead, total annual revenues of $71,150,683 are hereby approved subject to the Company complying with the Orders set forth below. The total annual revenues approved herein result in an overall revenue increase of $8,035,000 over adjusted pro forma test year revenues of $63,115,683. Excluding revenues from

sales for resale and special charges, retail revenues amount to $70,479,124 for the purposes of WICA proceedings. The approved schedules of rates and special charges for service rendered on or after the date of this Decision are set forth in Appendix A, attached hereto.

For a residential customer on a 5/8-inch meter with quarterly usage of 18,000 gallons, the quarterly bill would increase from $139.51 to $160.95 in the CWC Main Division, from $108.37 to $125.02 in the Crystal Division, from $127.77 to $147.41 in the Gallup Division, from $86.24 to $99.50 in the Unionville Division, and from $143.28 to $165.31 in the Mansfield Division.

B. ORDERS

For the following Orders, submit one original and five (5) copies of the required documentation to the Executive Secretary. Submissions filed in compliance with Department Orders must be identified by all three of the following: Title, Docket Number, and Order Number.

1. On or before July 26, 2010, CT Water shall file a final version of its revised Rules and Regulations for the Department's review and approval.

2. On or before July 26, 2010, the Company shall submit to the Department under its own letterhead or official tariff designation the approved rates and special charges to be rendered on or after July 14, 2010, as prescribed in Appendix A, attached hereto.

3. On or before August 31, 2010, the Company shall provide detailed explanations of the five-year capital spending plan for budget item number 201, Acquisition Improvements and Pumping Improvements, as well as budget item number 505, Corporate Facilities.

4. The Company shall explore whether there are any reasonable and viable remedies to eliminate or alleviate the high sodium issue affecting its Thompson system. On or before December 31, 2010, the Company shall submit to the Department a report on its efforts and recommendations for a resolution of this issue.

5. On or before December 31, 2010, the Company shall update all hydraulic profile diagrams and provide proof to the Department that the update is complete.

6. In its next rate case application, the Company shall provide a detailed listing of vehicles from the current 175 vehicles to the level of vehicles being requested. At a minimum, the Company shall include purchase date, actual mileage per year and function that the vehicle serves. This report shall include all vehicles from this rate case, the year of retirement, if applicable, as well as all additions to the fleet and the associated per vehicle cost included in rate base.

7. In its next rate case application, the Company shall propose a rate structure that considers a cost of service study which moves toward single tariff pricing and rate equalization amongst all of its divisions.

***105** *APPENDIX A - SCHEDULE OF APPROVED RATES AND CHARGES*

THE CONNECTICUT WATER COMPANY

SCHEDULE OF APPROVED RATES AND CHARGES (Effective July 14, 2010)

CONNECTICUT WATER DIVISION
Year-Round Meter Service Charges

Meter Size	Monthly Charge	Quarterly Charge
5/8‘	$9.61	$28.83

3/4‘	$14.41	$43.24
1‘	$24.02	$72.06
1 1/2‘	$48.05	$144.15
2‘	$76.88	$240.24
3‘	$144.15	$432.44
4‘	$240.24	$720.73
6‘	$480.49	$1,441.46
8‘	$768.78	$2,306.34
10‘	$1,153.35	$3,460.05

Year-Round Commodity Charges

5p

Customer Class	Per 1,000 Gallons
Residential	$7.340
Commercial	$6.424
Industrial	$5.464
Public Authority	$6.025

5p

Year-Round Commodity Charges

5p

Customer Class	Per 100 Cubic Feet
Residential	$5.491
Commercial	$4.806
Industrial	$4.087
Public Authority	$4.507

MIDDLEBURY - HERITAGE SYSTEM

Meter Service Charges

Meter Size	Quarterly Charge
5/8‘	$14.59
3/4‘	$21.89
1‘	$51.06
1 1/2‘	$167.79
2‘	$218.87

3‘	$437.74
4‘	$729.55
6‘	$1,459.10
8‘	$2,334.62
10‘	$3,356.01
12‘	$4231.49

5p

Year Round Commodity Charges
5p

Customer Class	Per 1,000 Gallons
All Classes	$5.545
All Classes	$7.296

5p

CRYSTAL DIVISION
Meter Service Charges
5p

Meter Size	Quarterly Charge
5/8‘	$28.83
3/4‘	$43.24
1‘	$72.06
I 1/2‘	$144.15
2‘	$240.24
3‘	$432.44
4‘	$720.73
6‘	$1,441.46
8‘	$2,306.34
10‘	$3,460.05

Commodity Charges

Customer Class	Per 1,000 Gallons
Residential	$5.344
Commercial	$4.310

Industrial	$2.947
Public Authority	$4.098

GALLUP DIVISION

Meter Service Charges

Meter Size	Quarterly Charge
5/8‘	28.83
3/4‘	43.24
1‘	72.06
1 1/2‘	144.15
2‘	240.24
3‘	432.44
4‘	720.73
6‘	$1.441.46
8‘	$2.306.34
10‘	$3,460.05

Commodity Charges

Customer Class	Per 1 000 Gallons
Residential	$6.588
Commercial	$5.523
Industrial	$5.604
Public Authority	$5.604
Residential (per CCF)	$4.9276

UNIONVILLE DIVISION

Meter Service Charges

Meter Size	Quarterly Charge
5/8‘	$28.83
3/4‘	$43.24
1‘	$72.06

1 1/2‘	$144.15
2‘	$240.24
3‘	$432.44
4‘	$720.73
6‘	$1,441.46
8‘	$2,306.34
10‘	$3,460.05

Commodity Charges

Customer Class	Per 1 000 Gallons
Residential	$3.926
Commercial	$3.180
Industrial	$2.724
Public Authority	$2.724
Residential (per CCF)	$2.937
Commercial (per CCF)	$2.379
Industrial (per CCF)	$2.038
Public Authority (per CCF)	$2.038

***106** *MANSFIELD DIVISION*

Meter Service Charges

Meter Size	Monthly Charge
5/8‘	$20.77
3/4‘	$31.15
1‘	$51.92
1 1/2‘	$103.83
2‘	$166.13
3‘	$311.50
4‘	$519.17
6‘	$1,038.33
8‘	$1,661.33
10‘	$2,388.16

Commodity Charges per 1,000 gallons

Residential (all systems except Pilgrim Hills, Pinewood and Redwood Farms)	$5.722
Residential (Pilgrim Hills, Pinewood and Redwood Farms systems only)	$6.899
Commercial	$4.941
Public Authority	$4.712
Residential (all systems exc. above) per CCF	$4.280
Flat Rate Charges (monthly)	
Senior Housing	$30.69
Residential (all except Westchester East & Westchester Village customers)	$55.38
Residential (Westchester East & Westchester Village customers)	$41.53
Seasonal	$44.00

SOUTH COVENTRY SYSTEM

Meter Service Charges

Meter Size	Monthly Charge	Quarterly Charge
All Meters	$10.21	$30.64

Commodity Charges

Customer Class	Monthly Charge	Quarterly Charge
Residential (per TG)	$8.424	$8.424
Residential (per CCF)	$6.318	$6.318
Commercial & Industrial		
Block 1 (per TG)	$8.424	$8.424
Block 2 (per TG)	$5.103	$5.103
0-3,333(mo)/0-10 000 (qtr) (per CCF)	$6.318	$6.318
>3,333 (mo)/over 10,000 (qtr) (per CCF)	$3.827	$3.827

ELLINGTON ACRES SYSTEM

Meter Service Charges

Meter Size	Quarterly Charge
5/8‘	$24.09
1‘	$60.22
1 1/2‘	$120.45
2‘	$192.71

Commodity Charges

Per 1,000 Gallons

Residential $4.121

METERED SEASONAL ACCOUNTS

Basic Service Charges

CT Water Division		
	5/8‘ (per season)	$115.38
	3/4‘ (per season)	$172.94
	1‘ (per season)	$288.32
	1 1/2‘ (per season)	$576.65
	2‘ (per season)	$922.27
	3‘ (per season)	$1,730.80
	4‘ (per season)	$2,884.67
Masons Island:		
	5/8‘ (per season)	$229.57
	1‘ (per season)	$535.40

Commodity Charges:
CT Water Division: All usage (per TG) $7.340 All usage (per CCF)
Masons Island: All usage (per TG) $6.588 All usage (per TG)

UNMETERED SEASONAL ACCOUNTS
Flat Rate
Soundview, Point O'Woods, White Sands:
Single (per season) $375.00

SALES FOR RESALE CUSTOMERS
Meter Service Charges 2‘ meter (per $230.64 6‘ meter (per month) $480.49

quarter)

(CWC Main Division's commercial consumption rate)
All Usage (per TG) $6.424

CT Water Division 5/8' (per sea- son) $115.38 3/4' (per season) $172.94 1' (per season) $288.32 1 1/2' (per season) $576.65 2' (per season) $922.27 3' (per season) $1,730.80 4' (per season) $2,884.67Masons Island: 5/8' (per sea- son) $229.57 1' (per season) $535.40Commodity Charges:CT Water Division: All usage (per TG) $7.340 All usage (per CCF) $5.491Masons Island: All usage (per TG) $6.588 All usage (per TG) $4.927UNMETERED SEASONAL ACCOUNTSFlat RateSoundview, Point O'Woods, White Sands:Single (per season) $375.00SALES FOR RESALE CUSTOMERSMeter Service Charges 2' meter (per $230.64 6' meter (per $480.49 quarter) month)(CWC Main Division's commercial consumption rate)All Usage (per TG) $6.424

PUBLIC FIRE PROTECTION CHARGES
Linear-Foot Charges (monthly): CT Water $0.08840 Bradley Field

Private Rights of Way (monthly) $0.07072
Inch-Foot Charges (monthly): Mansfield $0.01006 Ellington Acres
Hydrant Charges (per hydrant quarterly): All systems (except below) $52.36 Bradley Held
PRIVATE FIRE PROTECTION CHARGES
CONNECTION CHARGES (quarterly)
CT Water, Gallup & Unionville Divisions: 2‘ service connection $41.89 3‘ service connection

Crystal Division: 4‘ service connection $209.18 6‘ service connection
10P

Ellington Acres System: 4‘ service connection $45.14 6‘ service connection

[Note: The following TABLE/FORM is too wide to be displayed on one screen. You must print it for a meaningful review of its contents. The table has been divided into multiple pieces with each piece containing information to help you assemble a printout of the table. The information for each piece includes: (1) a three line message preceding the tabular data showing by line # and character # the position of the upper left-hand corner of the piece and the position of the piece within the entire table; and (2) a numeric scale following the tabular data displaying the character positions.]**********
****
** This is piece 1. -- It begins at character 1 of table

line 1. ********** **********PUBLIC FIRE PROTECTION CHARGESLinear-Foot Charges (monthly): CT $0.08840 $0.05304 $0.08840 Water Brad- ley Unionville Middlebury Field & GallupPrivate Rights of Way (monthly) $0.07072Inch-Foot Charges (monthly): $0.01006 $0.00076 Mansfield El- lington AcresHydrant Charges (per hydrant $52.36 Bradley $31.41 South $0.00 quarterly): All systems (except Held Coventry Middlebury below)PRIVATE FIRE PROTECTION CHARGESCONNECTION CHARGES (quarterly)CT Water, Gallup & Unionville $41.89 3' $94.45 4' $131.36 6' Divisions: 2' service connec- tion service service service connection connection connectionCrystal Division: 4' service $209.18 6' $475.42 8' $846.22 10' connection service service service connection connection connection10PEllington Acres System: 4' service $45.14 6' $101.57 8' $180.54 10' connection service service service connection connection connection1... ...10.... ...20.... ...30.... ...40.... ...50.... ...60.... ...70.... ....********** **********

This is piece 2. -- It begins at character 80 of table line 1. ********** ********** $0 .08840 Crystal $0.03582 $0.08840 $0.04436 $0.18041 Division: Brooklyn Killingly Borough Thompson Plainfield (except of Danielson) Danielson $52.3 6 Mansfield $61.20 $40.53 Ellington Acres $308.33 8' $544.96 10' $841.23 12' $1,197.16 service service service connecti on connecti- connection on $1,321.62 12' $1,901.61 service connection $282.1180.. ...90.... ....0.... ...10.... ...20.... ...30.... ...40.... ...50..********** **********

* This is piece 3. -- It begins at character 152 of table line 1. ********** **********

$0.08840152....60 WIDETABLE NOTE--Some parts of this form are wider than one screen. To view material that exceeds the width of this screen, use the right arrow key. To return to the original screen, use the left arrow key.PUBLIC FIRE PROTECTION CHARGESLinear-Foot Charges (monthly): CT $0.08840 $0.05304 $0.08840 $0.08840 Crystal $0.03582 $0.08840 $0.04436 $0.18041 $0.08840 Water Bradley Unionville Middlebury Division: Brookl yn Killingly Bor- ough Thompson Field & Gallup Plainfield (except of Danielson) DanielsonPrivate Rights of Way (monthly) $0.07072Inch-Foot Charges (monthly): $0.01006 $0.00076 Mansfield Ellington AcresHydrant Charges (per hydrant $52.36 Bradley $31.41 South $0.00 $52.36 Mansfield $61.20 $40.53 quarterly): All systems (except Held Coventry Middlebury Ellington below) AcresPRIVATE FIRE PROTECTION CHARGESCONNECTION CHARGES (quarterly)CT Water, Gallup & Unionville $41.89 3' $94.45

4' $131.36 6' $308.33 8' $544.96 10' $841.23 12' $1,197.16 Divisions: 2' service connection service service service ser- vice service service connection connection connection connection connecti- connection

onCrystal Division: 4' service $209.18 6' $475.42 8' $846.22 10' $1,321.62 12' $1,901.61 connection service , service service service connection connection connection connection10PEllington Acres System: 4' service $45.14 6' $101.57 8' $180.54 10'

Service Turn On/Off and Meter Charges Service turn off (normal hours)

Miscellaneous Fees and Charges Bulk water account activation

Collection Fees Returned check fee

[Note: The following TABLE/FORM is too wide to be displayed on one screen. You must print it for a meaningful review of its contents. The table has been divided into multiple pieces with each piece containing information to help you assemble a printout of the table. The information for each piece includes: (1) a three line message preceding the tabular data showing by line # and character # the position of the upper left-hand corner of the piece and the position of the piece within the entire table; and (2) a numeric scale following the tabular data displaying the character positions.]**********
****

** This is piece 1. -- It begins at character 1 of table line 1.
****
**********Ser

vice Turn On/Off and Meter $40 Service turn $60 Service turn on Charges Service turn off (normal off (after hours) (normal hours) hours)Miscellaneous Fees and Charges Bulk $50 Bulk water Commercial metered water $282.11 connection service servic e service connection connection connection

***107** *SCHEDULE OF SPECIAL CHARGES (All Divisions)*

\(>= 2' (normal hours)$40 Service turn of - large meter

\(>= 2' (after hours)$60 Service turn on at curb (normal hours)$40 Service turn on (after hours)$60 Frozen meter charge$50 Frozen meter charge (after hours)$75

$40 Service turn off (after hours)

$50 Bulk water commodity charge

$ 30 Late payment fee

.**********
********** This is piece 3. -- It begins at character 156 of table line 1.
****
********** $ 40156.. WIDETABLE NOTE--Some parts of this form are wider than one screen. To view material that exceeds the width of this screen, use the right arrow key. To return to the original screen, use the left arrow key.Service Turn On/Off and Meter $40 Service turn $60 Service turn on $40 Service turn on $60 Service turn on -- Charges Service turn off (normal off (after hours) (normal hours) (after hours) large meter hours)Miscellaneous Fees and Charges Bulk $50 Bulk water Commercial metered $200 Unauthorized $300 Curb box repairs -- $300 Curb $100 Cross $ 40 water account activation commodity charge rate Unauthorized water use equipment required box connection hydrant use repairs noti ce fee -- hand dugCollection Fees Returned check fee $ 30 Late payment 1.5% per month fee

*Calculation of Late Payment Fee and Interest Charges:

The interest charges are applied at the time of billing and are applied to past due amounts only.*Monthly* customers would have a one-month interest charge applied at the time of billing and *quarterly* customers would have a three-month interest charge applied at the time of billing (3 times the monthly interest rate).

TABLETABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE

.SK 3

FOOTNOTES

FN1 Decision dated December 23, 2009, in Docket No. 08-10-15WI03,*Application of The Connecticut Water Company for a Water Infrastructure and Conservation Adjustment - Semi-Annual Filing Report Dated October 28, 2009* (CT Water 2nd SAFR Decision), pp. 11 and 15.

FN2 1.94% = $8,158,964 / $466,299,287. Application, Schedule C-3.3wp.

FN3 Schedule G-2.6wp, p. 14.

FN4 2009 Chemical expense $1,562,032 X 10% = $156,203. Requested increase $350,944-$156,203 = $194,741.

FN5 No adjustment was prepared for the Bradley Field system because there are no residential customers in that system. Due to the lack of a 5-year period of historical billing information for the Ellington Acres and South Coventry systems, no adjustments were prepared for those systems. No adjustment was prepared for the Middlebury system because billing information for that system was not identified separately in the data reports used by the Company. Response to Interrogatory WA-162.

FN6 Consumption for the 1st quarter was captured by a report created by the Company's IT Department which provides the billing amount in dollars and gallons, number of days billed, number of bills and average number of days per bill for the 3 months ending March 31. Response to Interrogatory WA-167.

FN7 CT Water acquired the Jensen Communities' systems on February 16, 2010. Tr. 4/9/10, p. 1581.

FN8 CT Water thought that the 1% threshold establishes a minimum level of revenue variation that would sensibly minimize the administrative costs of both the Department and the Company. Response to Interrogatory WA-169.

FN9 Decision dated November 16, 2007, in

Docket No. 07-07-33,*DPUC and DPH Review of Joint Application of South Central CT Regional Water Authority, The CT Water Company and BIW Limited for Approval of the Merger of BIW Limited with and into South Central CT Regional Water Authority and The CT Water Company's Acquisition of Assets Owned by Eastern CT Regional Water Company, Inc.* (Eastern Acquisition Decision).

FN10 2007 CT Water Rate Case Decision, and Decision dated February 16, 2007, in Docket No. 06-09-03,*Application of The Jewett City Water Company to Amend Rate Schedules*, (Jewett City Rate Case Decision).

FN11 Decision dated March 31, 2010, in Docket No. 09-10-08,*Application of the Avon Water Company to Increase Rates* (Avon Rate Case Decision).

FN12 Hypothetically, if CT Water's statement is correct, the Department will then need to carve out the annual use of short-term debt dollars from the Company's next proposed long-term financing application, and likewise re-examine AFUDC and its interest.

FN13 The Department calculated its short-term debt equivalent using its revised rate base.

FN14 The Short-term Debt Equivalent is estimated as the difference between the Company's proposed revised rate base of $230,103,427 less $115,803,941 revised Common Equity (including the proposed equity infusion) less $104,613,358 Long-term Debt plus $7,064,809 to exclude the Eastern acquisition's unfunded rate base.

FN15 Annie Wong, 'Utility Stocks and the Size Effect: An Empirical Analysis, ' Journal of the Midwest Finance Association, (1993), pp. 95-101.

FN16 Ching-Chih Lu, 'The Size Premium in the Long Run,' 2009 Working Paper, SSRN abstract no. 1368705.

FN17 Reg-FD was introduced by the US Securities and Exchange Commission (SEC) in 2000 and prohibits private communication between analysts and management as to level the information playing field in securities markets. GARS was agreed to in 2003, and includes a number of regulations that were introduced to prevent investment bankers from pressuring securities analyst to provide favorable projections. Woolridge PFT, pp. 66-68; OCC Brief, p. 35.

FN18 December 2007.

FN19 December 2009.

FN20 *Regulatory Research Associates (An SNL Company).*

FN21 *See* prior footnote.

FN22 AUS Monthly Utility Reports.

FN23 *See* prior footnote.

FN24 Per Late Filed Exhibit No. 69, Schedule A-1.0 Revised indicates a change in ROE 1% is equivalent to $2,005,623 change to revenue requirement. Thus 17.5 bps (0.0175%) increases to the proposed ROE is a $350,984 increase to revenue requirement.

FN25 *See:* Decision dated November 28, 2006 in Docket No. 06-05-10,*Application of Birmingham Utilities, Inc. to Increase Rates* , p. 74; Decision dated October 26, 2004 in Docket No. 04-02-14,*Application for an Increase in Rates for the Aquarion Water Company of Connecticut* , p. 97; Decision dated March 30, 2007, in Docket No. 06-10-07,*Application of Valley Water Systems, Inc. for Amendment of Rate Schedule*, p. 50.

FN26 The supporting data used in the Department's analysis is found in CT Water Late Filed

Exhibit No. 63, Attachments A and C; Company Response to Interrogatory CWC-29; Ahern PFT, Schedule PMA-10; Ahern PFT, Workpaper No. 32.

FN27 Mean reversion refers to the observation that periods of high stock returns are followed by periods of low stock returns. Response to Interrogatory OCC-I, Attachment 11; Tr. 3/29/10, p. 1403.

FN28 Conn. Agencies Regs. §16-11-50(5) states: 'Customer' means any person, firm, corporation, company, association, governmental unit, lessee who by the terms of a written lease is responsible for the water bill, or owner of property furnished water service by a water company.

***108** EDITOR'S APPENDIX

PUR Citations in Text

[CONN.] Re Aquarion Water Co. of Connecticut, 262 PUR4th 81, Docket No. 07-05-19, Dec. 12, 2007.

[CONN.] Re Birmingham Utilities, Inc., 226 PUR4th 468, Docket No. 03-02-07, Aug. 7, 2003.

[CONN.] Re Southern Connecticut Gas Co., 276 PUR4th 1, Docket No. 08-12-07, July 17, 2009.

[CONN.] Re The United Illuminating Co., 271 PUR4th 185, Docket No. 08-07-04, Feb. 4, 2009.

[U.S.Sup.Ct.] Bluefield Water Works & Improv. Co. v. West Virginia Pub. Service Commission, 262 U.S. 679, PUR1923D 11, 67 L.Ed. 1176, 43 S.Ct. 675 (1923).

[U.S.Sup.Ct.] Federal Power Commission v. Hope Nat. Gas Co., 320 U.S. 591, 51 PUR NS 193, 88 L.Ed. 333, 64 S.Ct. 281 (1944).

END OF DOCUMENT