

BEFORE THE

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IDAHO PUBLIC UTILITIES COMMISSION

IDAHO PUBLIC  
UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF )  
UNITED WATER IDAHO INC. FOR )  
AUTHORITY TO INCREASE ITS RATES )  
AND CHARGES FOR WATER SERVICE IN )  
THE STATE OF IDAHO )  
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CASE NO. UWI-W-04-4

DIRECT TESTIMONY OF RICK STERLING

IDAHO PUBLIC UTILITIES COMMISSION

APRIL 6, 2005

1 Q. Please state your name and business address for  
2 the record.

3 A. My name is Rick Sterling. My business address  
4 is 472 West Washington Street, Boise, Idaho.

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

6 A. I am employed by the Idaho Public Utilities  
7 Commission as a Staff engineer.

8 Q. What is your educational and professional  
9 background?

10 A. I received a Bachelor of Science degree in Civil  
11 Engineering from the University of Idaho in 1981 and a  
12 Master of Science degree in Civil Engineering from the  
13 University of Idaho in 1983. I worked for the Idaho  
14 Department of Water Resources from 1983 to 1994. In 1988,  
15 I became licensed in Idaho as a registered professional  
16 Civil Engineer. I began working at the Idaho Public  
17 Utilities Commission in 1994. My duties at the Commission  
18 include analysis of utility applications and customer  
19 petitions.

20 Q. What is the purpose of your testimony in this  
21 proceeding?

22 A. There are several purposes to my testimony.  
23 First, I will discuss United Water's decision to build the  
24 Columbia Water Treatment Plant and the process the Company  
25 used to get it constructed. Next, I will make several

1 recommendations concerning adjustments to test year  
2 expenses. Finally, I will make a proposal for new rates  
3 based on Staff's recommended increase in revenue  
4 requirement, and I will discuss rate design alternatives,  
5 including the rate design proposed by United Water.

6 Q. Please summarize your testimony.

7 A. My testimony begins with a discussion of the  
8 Columbia Water Treatment Plant, the primary driver in this  
9 rate case. I conclude that the plant is needed by United  
10 Water, and agree that microfiltration is a reasonable  
11 choice of technology. I review the design-build approach  
12 taken by the Company to construct the plant, discuss the  
13 advantages and disadvantages of the approach, and  
14 recommend that the design-build approach not be used in  
15 the future because of the difficulty it presents in  
16 assuring customers that the best value was obtained for  
17 the investment made.

18 With regard to the Columbia Water Treatment  
19 Plant, I review the request for proposal process employed  
20 by the Company and the criteria used to choose a design-  
21 build firm to construct the plant. I discuss the cost  
22 plus fixed fee contract used by United Water and how a  
23 guaranteed maximum price was established. In addition, I  
24 review the level of competitive bidding used during  
25 construction of the plant and consider whether adequate

1 cost control incentives existed for the construction  
2 contractor. I comment on United Water's own cost  
3 comparisons between its plant and other membrane  
4 filtration plants and conclude that the Company's plant  
5 appears to be one of the most expensive plants compared.  
6 I recommend that the early completion incentive offered by  
7 United Water to CDM, the design-build contractor, not be  
8 recoverable from ratepayers, and that a portion of the  
9 treatment plant construction costs be booked as plant held  
10 for future use because they are not yet used and useful.  
11 Finally, I make recommendations regarding the operation  
12 and maintenance expenses estimated for the Columbia Water  
13 Treatment Plant.

14 Next, I discuss three adjustments regarding  
15 water rights acquisitions by the Company. I recommend  
16 that investment related to the Integrated Municipal  
17 Application Package and a water right specifically for  
18 aquifer recharge and storage be considered plant held for  
19 future use. In addition, I recommend that only a portion  
20 of the investment made to acquire the Initial Butte water  
21 rights be included in rate base because not all of the  
22 water rights can currently be utilized.

23 Next, I make recommendations regarding several  
24 adjustments to test year expenses—purchased water,  
25 purchased power, deferred power, chemicals, and weather

1 normalization related expenses. Next, I discuss rate  
2 design issues. I recommend that the fixed bi-monthly  
3 customer charge not be increased, that the 25%  
4 summer/winter rate differential be maintained at least for  
5 now, but that the Commission give consideration to  
6 implementing an inclining block rate design in the future.  
7 Finally, I present the rates that result using Staff's  
8 recommended revenue requirement.

9 ***Columbia Water Treatment Plant***

10 Need for the Plant

11 Q. One of the primary drivers for this rate case is  
12 costs associated with the new Columbia Water Treatment  
13 Plant (CWTP). Do you believe the plant is necessary?

14 A. Yes, I do. Construction of a new surface water  
15 treatment plant has been a part of United Water's plans  
16 for several years. In its 1988 Master Plan, the Company  
17 recognized that it would be necessary to develop  
18 additional surface water sources to meet future customer  
19 needs due to the limited availability of groundwater.  
20 Since the 1988 Master Plan, the Treasure Valley Hydrologic  
21 Study, a joint effort by the Idaho Department of Water  
22 Resources, the University of Idaho and the Idaho Water  
23 Resources Research Institute, has confirmed the limited  
24 availability of groundwater resources for future  
25 development, particularly in southeast Boise.

1     Choice of Technology

2             Q.    Do you agree with United Water's decision to use  
3     microfiltration technology rather than traditional  
4     granular media filtration technology like is used at the  
5     Marden plant?

6             A.    I believe either technology could meet United  
7     Water's requirements in terms of both water quality and  
8     quantity.  A more important issue, I believe, is whether  
9     one technology could do it less expensively than the  
10    other.  Before building the Columbia Water Treatment  
11    Plant, United Water hired consultants to prepare a Basis  
12    of Design Report.  The report shows that both technologies  
13    were considered, but that microfiltration was ultimately  
14    chosen.  Preliminary cost estimates indicated that the  
15    construction cost of a microfiltration plant were  
16    approximately 10 percent higher, but the report concluded  
17    that both technologies were nearly equal in cost given the  
18    potential inaccuracies of the cost estimates.  The report  
19    also estimated that the lower expected operating costs of  
20    a microfiltration plant outweighed any possible  
21    disadvantage of higher construction cost.

22                    Because the preliminary cost estimates were  
23    judged equal, but admittedly rough, I believe that United  
24    Water should have considered soliciting proposals for  
25    traditional granular media filtration as well as

1 microfiltration. By soliciting proposals for both types  
2 of technology, United Water would have been able to make a  
3 more definitive determination as to which technology would  
4 result in the lowest overall cost.

5 Design Build Contract

6 Q. In constructing the CWTP, United Water employed  
7 a design-build approach. Please briefly explain what the  
8 design-build process is and how it differs from the  
9 traditional design-bid-build approach.

10 A. Design-build is a construction approach in which  
11 the project owner enters into a single contract with a  
12 design-build company that is responsible for both project  
13 design and construction. Design of the project begins and  
14 construction commences once the design has reached beyond  
15 the preliminary stage. Final design work continues as  
16 construction progresses. Design is always a step ahead of  
17 construction. This differs from the traditional approach  
18 in which a complete project design is first prepared, the  
19 project is bid, and then the project is constructed.

20 Q. What are the purported advantages of the design-  
21 build approach?

22 A. Probably the most often cited advantage of  
23 design-build is that it is faster than the traditional  
24 design-bid-build approach because design work and  
25 construction work can overlap. Another advantage is that

1 the design professionals, because of their close  
2 relationship with the construction team, can benefit by  
3 collaboratively coming up with design ideas that are less  
4 costly, more effective and easier to construct. In  
5 addition, there is less likelihood for disputes between  
6 design and construction professionals, and fewer change  
7 orders and claims for errors and omissions. These factors  
8 can potentially lead to lower overall project costs. From  
9 the owner's perspective, design-build requires only a  
10 single point of contact rather than separate contact with  
11 both the designer and the builder as in the traditional  
12 design-bid-build approach. Having a sole source of  
13 responsibility is generally easier for the owner.

14 Q. What are the disadvantages of the design-build  
15 process?

16 A. The biggest disadvantage in my opinion is the  
17 lack of checks and balances compared to more traditional  
18 construction approaches. Unlike a traditional approach  
19 where the design engineer acts as a representative for the  
20 owner, in design-build, the engineer and the contractor  
21 are part of the same company, or at least working as a  
22 team. The owner has a greater responsibility to insure  
23 that his interests are protected and that he receives a  
24 quality product at a fair price. The relationship between  
25 the owner and the design-build firm must be based on a

1 great deal of trust. The design-build firm must satisfy  
2 the owner's desires for a high quality, low cost product,  
3 while also trying to stay within budget and maximize its  
4 own profit. "This conflict between providing what the  
5 owner wants and providing it for a fixed price often  
6 results in the owner questioning whether it is getting the  
7 best quality for the money paid. Likewise, the design-  
8 build firm must trust in the owner not to make  
9 unreasonable demands when the design-build firm is  
10 operating under a fixed budget." (Reference *Best*  
11 *Practices in Design-Build for the Water and Wastewater*  
12 *Industry*, p. 26, Document No. F00103, Design-Build  
13 Education Research Foundation, January, 2003). In an ideal  
14 world, such a relationship may produce a high quality, low  
15 cost result, but in a regulated world, it is extremely  
16 difficult to assure customers of that fact.

17 Another major disadvantage of design-build is  
18 that a final project cost estimate is frequently unknown  
19 at the start of construction. Because design and  
20 construction proceed simultaneously, the final design is  
21 not available for estimating the final cost until  
22 construction is well underway. Without knowing the final  
23 cost before the project is started, there is always a risk  
24 that it could exceed the budget or balloon out of control.  
25 Cost overruns are usually the responsibility of the owner

1 unless there was an agreed upon fixed price from the  
2 start.

3 Q. Are there ways to overcome some of the  
4 disadvantages of the design-build process?

5 A. Yes. One way to overcome some of the  
6 uncertainty about knowing the final cost of a project is  
7 to hire an engineering firm to develop a preliminary  
8 project design and cost estimate. This approach can also  
9 help the owner to be reassured of a more economical and  
10 successful final product because the engineering  
11 consultant is now working for the owner instead of the  
12 contractor and therefore has the owner's best interests in  
13 mind. In this case, United Water hired a team of two  
14 different engineering consultants to develop preliminary  
15 project designs and alternatives. Sometimes an owner will  
16 hire a consultant to act as its agent and oversee the  
17 entire process, from preliminary design, to development of  
18 an RFP, to evaluation of proposals, to project  
19 construction.

20 Another way to eliminate some uncertainty is to  
21 establish a guaranteed maximum price at some stage in the  
22 process. When construction has progressed beyond the  
23 initial stages, when major materials and equipment have  
24 been procured, and when most of the final design details  
25 are known, a maximum price can be established to force

1 some degree of cost control beyond simply trusting that  
2 the project is being built as economically as possible.

3 Finally, because the design-build process  
4 requires such a high degree of trust between the owner and  
5 the design-build firm, owners can invite to bid only firms  
6 with good reputations and with which it may have had prior  
7 experience. Although difficult to quantify, maintaining a  
8 good reputation by minimizing cost overruns, project  
9 delays and disputes is a real motivating factor for most  
10 design-build firms.

11 Q. If construction costs are often unknown at the  
12 time a design-build firm is hired for a project, and  
13 therefore if the construction cost portion of design-build  
14 projects are not competitively bid up front, are there  
15 ways to insure a competitive construction cost?

16 A. One way to compensate for the lack of  
17 competitive bidding up front is to require competitive  
18 bidding for each element of the construction. In other  
19 words, the project owner can require that jobs awarded by  
20 the design-build firm to subcontractors be competitively  
21 bid, and that any tasks self-performed by the design-build  
22 firm also be competitively bid.

23 Q. Was competitive bidding used in choosing  
24 subcontractors for the CWTP?

25 A. Yes, competitive bidding was used for nearly all

1 of the major construction tasks. In fact, in the early  
2 stages of the project, CDM, the design-build firm, had  
3 intended to self-perform some of the major construction  
4 tasks, but later decided to hire subcontractors for almost  
5 all of the construction.

6 Q. Was the competitive bidding as competitive as it  
7 could have been?

8 A. No, in some cases it was not. For a few of the  
9 major construction tasks, despite attempting to obtain  
10 bids from several contractors, it appears that only one or  
11 two realistic bids were ultimately obtained.  
12 Unfortunately, there is really no way to know whether a  
13 lower price could have been obtained if more bids had been  
14 received.

15 Q. Is the design-build process common for water  
16 project construction?

17 A. Design-build was not common practice for any  
18 type of construction until about the 1990s. Its use was  
19 restricted primarily because of competitive bidding  
20 statutes in many states and in federal government  
21 construction. Since these restrictions have been removed,  
22 design-build has become more common, especially for state  
23 and federal highway construction. Its use for  
24 construction of water and wastewater facilities has been  
25 much more limited however.

1 Q. Has United Water had previous experience with  
2 the design-build approach to construction?

3 A. No, United Water Idaho has not. The CWTP is the  
4 first project on which United Water Idaho has used the  
5 process. However, United Water, the parent company, has  
6 used this approach once in New York and is currently using  
7 it for two projects in Pennsylvania. United Water has  
8 also used the approach for non-regulated operations in  
9 three other states.

10 Q. Do you believe that the design-build approach  
11 chosen by United Water presented any difficulties in the  
12 construction of the CWTP?

13 A. Yes, I do. The biggest difficulty, I believe,  
14 was not in the construction itself. The biggest  
15 difficulty is in United Water's inability to provide  
16 assurance to its customers and the Commission that the  
17 plant represents the best value for the money spent.

18 Q. Do you recommend that United Water use a design-  
19 build process in the future for major project  
20 construction?

21 A. No, I do not. Unfortunately, one of the primary  
22 purported advantages of design-build--faster completion--was  
23 not realized in this case. It appears that much of the  
24 one-year delay in getting the project built was due to the  
25 Company receiving proposals that exceeded initial cost

1 estimates. If a more complete design and a more accurate  
2 estimate had been prepared before proposals were sought,  
3 perhaps this delay could have been avoided. United Water  
4 had been planning since at least 1998 to have a new  
5 treatment plant operational by the summer of 2004.  
6 Anticipating its needs that far in advance, the Company  
7 should not have had to scramble to get the plant built one  
8 year later than planned, to have to employ a non-  
9 traditional contracting process in an attempt to expedite  
10 construction, or to necessitate making multiple 11<sup>th</sup> hour  
11 updates to its filing for the project to be properly  
12 considered in this rate case.

13 Another of the purported advantages of design-  
14 build, that projects can be built at a lower cost, cannot  
15 be proven in this case. Just as there is no evidence that  
16 a design-build approach produced a higher overall project  
17 cost, there is no evidence that it produced a lower cost.  
18 This uncertainty about whether the project could have been  
19 completed at a lower cost makes it virtually impossible  
20 for the Commission to reassure ratepayers that United  
21 Water obtained the best value for the amount spent.

22 In response to a Staff Production Request (Staff  
23 Request No. 131) when asked "What assurance can UWI  
24 provide to its customers and to the Commission that by  
25 using a 'Design-Build, Cost Plus Fixed Fee' contracting

1 process that it obtained the best value for customers?"  
2 the Company stated "Speculation about the outcome or price  
3 from a different contracting process or proposer is  
4 impossible to precisely measure or even accurately predict  
5 without building the project twice."

6 Cost Plus Fixed Fee Contract

7 Q. Do you see any disadvantages to a cost plus  
8 fixed fee approach like that taken by United Water?

9 A. Yes, I see a serious disadvantage. Under a lump  
10 sum contract, the owner knows in advance what the total  
11 project cost will be. However, under a cost plus fixed  
12 fee approach, only the fixed fee is known with certainty.  
13 The fixed fee represents only the design-build firm's  
14 profit, and does not include any of the actual  
15 construction or engineering costs.

16 Q. But in this case, wasn't the overall project  
17 cost known with certainty once a guaranteed maximum price  
18 was developed?

19 A. Yes, but the guaranteed maximum price could not  
20 be developed until the project design had reached 85  
21 percent completion. The guaranteed maximum price was  
22 established on January 29, 2004—more than 17 months after  
23 the contract was originally signed.

24 Q. Why does United Water say it used a cost plus  
25 fixed fee approach?

1           A.    United Water claimed that there were several  
2 unknowns before the project was started such as filtration  
3 type, waste handling, building footprint/configuration and  
4 treated water storage.  These unknowns, the Company  
5 claims, create risks to the construction entity that  
6 ultimately have to be passed on to the utility's  
7 customers.  One way to minimize these risks to the Company  
8 while still attracting bidders is to agree up front on  
9 what fees will be paid independent of construction costs.  
10 Because United Water hired two different consultants to  
11 prepare an extensive Basis of Design Report prior to  
12 issuing an RFP for plant construction, I don't believe  
13 there were nearly as many unknowns as the Company claims.

14   RFP Process

15           Q.    Please briefly describe the process United Water  
16 used in pursuing construction of the CWTP.

17           A.    United Water began the process by assembling a  
18 team consisting of engineers from its own local and  
19 national staff, along with engineers from Montgomery  
20 Watson Harza and Carollo Engineers, both international  
21 firms with extensive experience in water treatment.  This  
22 team collected and analyzed data about Boise River water  
23 quality, performed pilot studies, assessed regulatory  
24 requirements, developed alternatives, and made preliminary  
25 cost estimates.  The result of the team's work was a Basis

1 of Design Report that specified the technology to be used  
2 and the processes to be employed in the new treatment  
3 facility.

4 After the Basis of Design Report was completed,  
5 United Water issued a request for proposals inviting four  
6 firms to submit design-build proposals for construction of  
7 the plant. The four firms were Montgomery Watson Harza,  
8 Carollo Engineers, Black and Veatch, and CDM (Camp,  
9 Dresser & McKee). Two of the firms had previously done  
10 work for United Water Idaho, and the other two firms had  
11 completed work for United Water at other locations. All  
12 of the four firms are well known for their experience with  
13 water facilities.

14 United Water required in its RFP that the  
15 proposals include qualifications, project approach, and  
16 business terms. The RFP did not require preliminary  
17 design preparation although each proposal received  
18 included varying levels of design. The RFP also did not  
19 require fixed design-build prices, yet it did require that  
20 each proposal be accompanied by two separate cost  
21 estimates. First, proposers were required to submit a  
22 fixed fee presented as a lump sum amount. The fixed fee  
23 was intended to represent the design-build firm's required  
24 profit. In addition, proposers were required to submit in  
25 a separate sealed envelope a Target Cost of Work. The

1 Target Cost of Work was intended to be a non-binding  
2 professional opinion of expected costs based on the  
3 design-build firm's proposed approach and understanding of  
4 the project at the time.

5 Q. What criteria did United Water use to evaluate  
6 the bids?

7 A. A group of local and corporate headquarters  
8 level United Water staff evaluated and scored each  
9 proposal using both price and non-price criteria. The  
10 non-price evaluation criteria included the qualifications  
11 and experience of the proposer, the personnel committed to  
12 the project, and the proposed project approach including  
13 ability to control costs, the technical approach and the  
14 project schedule.

15 The price evaluation criteria was based on the  
16 proposer's fixed fee balanced with other factors, such as  
17 assumptions and conditions of the proposal, the degree of  
18 risk that the proposer is judged to be assuming under the  
19 terms of the proposal, and direct cost factors.

20 Q. Did United Water choose the highest ranked  
21 proposal?

22 A. No, it did not. It chose the second highest  
23 ranked proposal.

24 Q. Why?

25 A. Based on the information I reviewed, it appeared

1 that the final decision was made, or at least very  
2 strongly influenced, by United Water corporate level  
3 staff. A confidential memo provided in response to a  
4 Staff production request (Request No. 111) revealed that  
5 the local United Water staff believed that before a  
6 contract was awarded the highest ranked design-build  
7 firm/proposal, rather than the one ultimately chosen,  
8 could have delivered the plant faster and at a lower cost.

9 Q. How were the Target Cost of Work estimates  
10 included in each proposal considered in the evaluation and  
11 ranking?

12 A. According to United Water, they were not  
13 considered at all. In fact, the sealed envelopes were not  
14 even opened until after the evaluation and ranking was  
15 complete and a decision made to choose a design-build  
16 contractor. United Water reasoned that selection and  
17 scoring should have nothing to do with the non-binding  
18 estimates provided in the proposals. United Water stated  
19 that it simply wanted to get another budget cost from  
20 these experienced teams to compare to the Basis of Design  
21 Report assumptions. (Response to Staff Request No. 106).

22 Q. Do you believe that the Target Cost of Work  
23 should have been a factor considered in the evaluation?

24 A. Yes, I do. Although the Target Cost of Work is  
25 a preliminary estimate based on limited design work, it

1 nevertheless is an estimate prepared by professionals with  
2 extensive experience in constructing similar plants. It  
3 cannot reasonably be considered a binding estimate but it  
4 still reflects the general design elements, treatment  
5 processes and equipment suggested by the proposer. The  
6 purpose of requiring that a Target Cost of Work estimate  
7 be provided is to be able to make at least some assessment  
8 of the "value" represented by each proposal. By  
9 completely ignoring the Target Cost of Work estimates,  
10 United Water effectively eliminated construction cost as a  
11 criterion in choosing a proposal. I am uncertain as to  
12 why United Water required that the Target Cost of Work  
13 estimates be provided if it did not intend to consider  
14 them.

15 Q. How did the Target Cost of Work estimates  
16 compare to the guaranteed maximum price ultimately  
17 included in the CDM contract?

18 A. The Target Cost of Work estimates from two of  
19 the proposals were \$14,344,000 and \$16,112,998, and the  
20 Guaranteed Maximum Price in the final construction  
21 contract was \$16,844,498. I was unable to review two of  
22 the four Target Cost of Work estimates because United  
23 Water claims to have lost them.

24 Q. Does it concern you that United Water lost two  
25 of the Target Cost of Work estimates?

1           A.    Yes, I find it very troubling.  Again, the  
2 estimates represent the professional opinions of very  
3 experienced and highly qualified firms of the expected  
4 construction costs of the plant.  I would have expected  
5 that United Water would be very interested in knowing the  
6 range of Target Cost of Work estimates and whether  
7 differences in each design-build firm's proposals affected  
8 these estimates.

9           Each proposer was required to submit an original  
10 and six copies of its proposal.  United Water also agreed  
11 to keep each proposal confidential.  Given the number of  
12 copies required and the care that should have been taken  
13 with the proposals, it is surprising that United Water has  
14 been unable to locate two of the Target Cost of Work  
15 estimates.

16           Q.    Why are the Target Cost of Work estimates  
17 important?

18           A.    They are important because they provide  
19 additional benchmarks against which to measure the  
20 reasonableness of the final CWTP cost.  Because every  
21 water treatment plant is unique, direct cost comparisons  
22 are difficult.  Multiple estimates for the same plant may  
23 provide a better indication of a reasonable price than  
24 comparisons to the average cost of many unique plants.  
25 Even though the Target Cost of Work estimates are

1 preliminary, they still reflect costs specific to a  
2 particular plant, site, process and equipment. United  
3 Water has pointed out in response to production requests  
4 (Staff Request No. 202) that the Guaranteed Maximum Price  
5 agreed to by CDM proved to be only 4.34 percent higher  
6 than their Target Cost of Work estimate. This is an  
7 indication, I believe, that the Target Cost of Work  
8 estimates are still quite accurate, despite being  
9 preliminary and based on limited design information.

10 In addition, I believe that the Target Cost of  
11 Work estimates can serve as a reference point as design  
12 and construction work progresses prior to development of a  
13 Guaranteed Maximum Price. When a contract is executed  
14 without an up front fixed price, there should be something  
15 to gauge the final expected cost so that it can't balloon  
16 out of control.

17 Q. If the contract between United Water and CDM did  
18 not initially include a fixed price amount for  
19 construction of the plant, how was a Guaranteed Maximum  
20 Price eventually established?

21 A. Detailed project design commenced upon contract  
22 signing in August 2002. Once the design had reached the  
23 85 percent completion stage, CDM provided United Water  
24 with an initial preliminary guaranteed maximum price.  
25 That price significantly exceeded United Water's project

1 and budget and expectations that were based on the  
2 original Basis of Design Report and budget. The project  
3 was put on hold for approximately a year until United  
4 Water and CDM negotiated a new Guaranteed Maximum Price in  
5 January 2004. The Guaranteed Maximum Price fixed United  
6 Water's construction cost obligation except for minor  
7 contingencies and change orders.

8 Q. Could a Guaranteed Maximum Price have been  
9 established at the time the contract was signed?

10 A. Yes, it could have been. United Water could  
11 have required a lump sum contract so that it knew in  
12 advance with certainty what the final project cost would  
13 be. With that type of an approach, however, CDM rather  
14 than United Water would have been at risk for any cost  
15 overruns. Because of the added risk, it is likely that  
16 CDM would have increased the contract price to cover the  
17 added risk. It is not uncommon, especially when a design-  
18 build approach is used, for a fixed price to not be set  
19 until after the design had advanced far enough so that  
20 accurate cost estimates could be made.

21 Fixed Fee

22 Q. The Fixed Fee portion of the proposals was a  
23 factor in the evaluation of proposals. How did the Fixed  
24 Fees compare?

25 A. The Fixed Fees were quite variable, ranging from

1 \$846,000 to \$1,896,089. The proposal with the lowest  
2 Fixed Fee was also the proposal that was ranked highest  
3 overall, yet as I discussed previously, it was not the  
4 proposal ultimately chosen by United Water. Although the  
5 difference in Fixed Fee between the two highest ranked  
6 proposals was relatively low compared to the total project  
7 cost, it was not immaterial.

8 Q. Do you think any of the design-build firms who  
9 submitted proposals could have successfully completed the  
10 job?

11 A. Yes, I believe all of the firms were highly  
12 qualified and capable and that any one of them could have  
13 delivered a plant that met United Water's needs.

14 Cost Comparisons

15 Q. Company witness Rhead in his Exhibit No. 11  
16 compared the cost of the CWTP to other water treatment  
17 plants, both conventional and membrane filtration. What  
18 is your opinion of these comparisons?

19 A. To the extent the comparisons are useful, my  
20 conclusion in reviewing them is that United Water's CWTP  
21 is considerably more expensive than the average of the  
22 group, and could be one of the most expensive.

23 Despite a Guaranteed Maximum Price of \$16.84  
24 million and an overall project cost of \$18.20 million  
25 (Response to Staff Request No. 108), United Water used a

1 cost of \$12.87 million in comparing its project to the  
2 others. With this project cost and after adjusting for  
3 differences between when each project was built, the CWTP  
4 is still more expensive per gallon of treated water than  
5 all but one of the 19 other projects examined. The  
6 Company claims it used this lower cost because it believed  
7 some project features of the CWTP such as the raw water  
8 pumping station, the transmission pipeline from the Boise  
9 River to the plant, land, electrical service, United Water  
10 labor and overheads, and AFUDC should be removed for  
11 comparison purposes. However, it is not apparent that  
12 United Water removed similar costs from any other project  
13 or that it considered eliminating the costs of features  
14 from other plants that are not part of the CWTP. For  
15 example, the preliminary design for the CWTP called for  
16 the use of dissolved air flotation as a pretreatment  
17 process and the use of ultraviolet disinfection. These  
18 two processes were estimated together to cost \$2.1  
19 million. Ultimately, both processes were not included in  
20 the final project design. Some of the plants United Water  
21 uses for comparison purposes may include one or both of  
22 these processes.

23 Using United Water's adjusted figures for  
24 comparison, the CWTP exceeds the average cost of the other  
25 microfiltration/ultrafiltration plants by 32.7 percent,

1 and the average cost of the conventional granular media  
2 plants by 5.9 percent. If the guaranteed maximum price or  
3 the total project cost was used instead, the CWTP balloons  
4 to 73.5 percent above the average cost of the filtration  
5 plants and to 38.4 percent above the conventional plants.

6 Q. How does United Water explain why its CWTP is  
7 more expensive than other plants?

8 A. United Water attributes the CWTP's higher cost  
9 to differences between the scopes of the projects. The  
10 Company points out that some of the plants listed involve  
11 the addition of membrane filtration to an existing plant  
12 where some treatment facilities already exist. The CWTP,  
13 United Water states, is a completely new plant requiring  
14 all of the facilities that may pre-exist at some plants.  
15 United Water also attributes the cost differences to other  
16 factors such as the type of membrane used, relative raw  
17 water quality differences, local labor and material costs  
18 and treated water pumping requirements.

19 Q. Do you accept United Water's explanation?

20 A. Admittedly, it is difficult to compare costs  
21 between plants due to differences in design features,  
22 treatment requirements and challenges, equipment  
23 differences, regional labor costs, and many other factors.  
24 However, the fact remains that the comparison still shows  
25 that the CWTP is nearly the most expensive plant listed,

1 even after United Water removed a significant portion of  
2 the project costs to make it more comparable.

3 Cost Control Incentives

4 Q. What incentives did CDM have to complete the  
5 project at less than the guaranteed maximum price?

6 A. The contract between United Water and CDM has no  
7 provision for monetary incentive to CDM if the project  
8 should be completed at less than the guaranteed maximum  
9 price. One hundred percent of all savings below the  
10 guaranteed maximum price are to the benefit of United  
11 Water. With such contract provisions, I see no motivation  
12 for CDM to save costs, and little likelihood that any  
13 savings will be passed on to United Water. CDM's only  
14 motivation seems to be that it must protect its own  
15 reputation for performing within or below budget  
16 expectations.

17 Q. Is there evidence that United Water and CDM  
18 tried to keep the costs of the project down?

19 A. Yes, there is. During the design phase of the  
20 project, before a guaranteed maximum price had been  
21 established, United Water and CDM worked together to  
22 develop alternatives to keep the project costs down. In  
23 addition, during project construction, CDM and its  
24 subcontractors have done a variety of things to reduce  
25 construction costs. Finally, as I discussed previously,

1 most of the construction tasks were competitively bid.

2 Early Completion Incentive

3 Q. The construction contract for the CWTP includes  
4 provisions for payment of an early completion incentive.  
5 What is your recommendation with regard to this incentive?

6 A. The contract requires payment by United Water to  
7 CDM of an early completion incentive of \$3,500 per day for  
8 each day that the 30-day facility test is started before  
9 June 1. Because the 30-day facility test began on about  
10 March 7, I estimate that the early completion bonus will  
11 total approximately \$297,500. Originally, the contract  
12 provided for an early completion bonus of \$2,500 per day,  
13 but United Water later increased the bonus to \$3,500 per  
14 day to provide more motivation to CDM to complete the  
15 project sooner. The reason cited by United Water for  
16 increasing the early completion bonus was that beginning  
17 the 30-day facility test on June 1 "left little time for  
18 system performance checks and start-up adjustments that  
19 are common with projects of this magnitude." (Response to  
20 Staff Production Request No. 110).

21 While beginning the facility testing sooner than  
22 June 1 may be wise, I contend that beginning the testing  
23 in early March is much sooner than necessary. I do not  
24 believe that the plant will need to be operated to meet  
25 customer demands until at least June. I see no reason for

1 United Water to be paying extra just to have the plant  
2 sitting idle approximately three months before it is  
3 needed. United Water's customers derive no benefit from  
4 having the project completed early. Furthermore, if  
5 United Water desired to have the plant completed earlier  
6 than June 1, it should have included that requirement in  
7 the original contract or begun the project sooner. As I  
8 pointed out earlier in my testimony, the scheduled  
9 completion date of the project was already delayed by a  
10 year by United Water. The project's scheduled completion  
11 date has always been within United Water's control.

12 United Water is contractually obligated to make  
13 the bonus payment for early completion. However, I  
14 recommend that none of any bonus payment ultimately paid  
15 be passed on to ratepayers.

16 Q. Has United Water provided any other  
17 justification for agreeing to pay an early completion  
18 bonus?

19 A. Yes. In response to Staff Production Request  
20 No. 120, United Water states that it estimates a cost of  
21 \$5,000 to \$6,000 per day for CDM to remain on site. The  
22 net effect of providing an early completion bonus, the  
23 Company states, saves the project and customers \$1,500-  
24 \$2,500 per day for each day of early completion.

25 Q. If early completion saves customers \$1,500-

1 \$2,500 per day for each day of early completion, do you  
2 still recommend that United Water not be allowed to  
3 recover from customers the cost of bonus payments?

4 A. If United Water can conclusively demonstrate  
5 that the project cost has been reduced by \$5,000 to \$6,000  
6 per day for each day an early completion bonus has been  
7 earned, then I would not oppose payment of an early  
8 completion bonus. However, nothing in the contract  
9 between United Water and CDM indicates that CDM will  
10 reduce the project costs if the project is completed  
11 early, nor is there anything in the contract that requires  
12 CDM to reduce its project management fee. In fact, as I  
13 discussed earlier, I see no incentive in the contract for  
14 CDM to complete the project for less than the contract  
15 amount because all of the savings, if any, will go to  
16 United Water. To date, the Company has provided no  
17 evidence that the project cost has been reduced because of  
18 early completion or that the project management fee to CDM  
19 has been reduced. Absent convincing evidence, I must  
20 oppose recovery of the early completion bonus payment.

21 CWTP Over Sizing

22 Q. Do you believe the CWTP is properly sized based  
23 on the Company's current needs?

24 A. Yes, I do. The plant is designed for an initial  
25 capacity of 6 million gallons per day (MGD), which the

1 Company will be able to fully utilize this summer. The  
2 plant capacity can be increased to 10 MGD just by adding  
3 more membrane filters to the existing treatment building.  
4 The ultimate capacity of the plant is expected to be 20  
5 MGD, but full expansion will require some major  
6 construction.

7 There are portions of the current plant however,  
8 that are designed for future use and expansion. For  
9 example, approximately 2.8 of the 11.5 acres (24.5%) on  
10 which the plant sits are currently unused and are intended  
11 for an additional future clear well, an additional future  
12 solids handling basin, and a future Aquifer Storage and  
13 Recovery (ASR) project. I believe it was prudent for  
14 United Water to acquire all of the land it believed would  
15 eventually be necessary to accommodate the plant  
16 facilities at full build out; however, that portion of the  
17 investment in land that is not currently being used should  
18 be booked as plant held for future use. Staff witness  
19 Harms has made this adjustment in her Exhibit No. 111.

20 In addition, I believe that approximately 3,200  
21 of 23,160 square feet of floor space in the treatment  
22 building have no apparent current use. A portion of this  
23 vacant space appears reserved for possible future use for  
24 ultraviolet disinfection if it is eventually necessary.  
25 At an estimated cost of \$110 per square foot for the

1 treatment building, \$352,000 (3,200 x \$110) of this  
2 investment should be booked as plant held for future use.  
3 Staff witness Harms has made this adjustment in her  
4 Exhibit No. 111.

5 CWTP Operation and Maintenance Expenses

6 Q. The CWTP is not operational as of the  
7 preparation date of this testimony; therefore, how can you  
8 know what the operation and maintenance expenses are for  
9 the plant?

10 A. Quite simply, we can't. United Water has made  
11 estimates of what it thinks operation and maintenance  
12 costs will be, but until the plant has been operational  
13 for a significant period of time, operation and  
14 maintenance costs cannot accurately be known. Throughout  
15 the course of this proceeding, United Water has continued  
16 to provide updated information as it becomes available and  
17 it is my understanding that even more updated information  
18 will be provided by the Company in its rebuttal testimony.  
19 However, chasing such a moving target has been extremely  
20 difficult and frustrating for Staff. Even with updated  
21 information until the time of the hearing in this case, we  
22 still will not really know what the actual operation and  
23 maintenance costs of the CWTP will be.

24 Q. Do you agree with United Water's estimated  
25 operation and maintenance expenses for the CWTP?

1           A.    No; therefore, I am proposing some adjustments.  
2    As mentioned, accurately estimating operation and  
3    maintenance expenses for the CWTP is difficult because the  
4    plant is brand new and has no existing record of these  
5    expenses.  In addition, the CWTP uses a much different  
6    technology than the existing Marden plant, so operation  
7    and maintenance costs of the two plants are not directly  
8    comparable.  Power, chemical, and labor costs will likely  
9    be quite different for the two plants.

10           United Water and its consultants have estimated  
11    operation and maintenance costs for the CWTP.  I am  
12    recommending that the power cost estimate for the plant be  
13    reduced because I believe that the electric rate used to  
14    develop the assumption is too high.  Instead of the \$0.045  
15    per kWh assumed by United Water, I have used a rate of  
16    \$0.0368, which is the current Schedule 9 rate without the  
17    PCA and includes demand, energy, customer, and basic load  
18    charges.  Use of this rate reduces United Water's estimate  
19    for operation costs by \$43,891 per year.  This adjustment  
20    is incorporated in my adjustment no. 11.  I am accepting  
21    United Water's estimate for chemical costs for the new  
22    treatment plant.

23    ***Adjustments to Rate Base***

24           Q.    Staff witness Harms made several adjustments to  
25    rate base associated with water rights of United Water,

1 and stated that you would discuss each of these  
2 adjustments. Please discuss each of these adjustments.

3 A. Each of the three separate adjustments is  
4 discussed below.

5 Integrated Municipal Application Package (IMAP)

6 Q. What is the Integrated Municipal Application  
7 Package (IMAP)?

8 A. United Water has filed 99 Applications for  
9 Transfer of Water Rights (Licenses and Statutory Claims)  
10 and 13 Applications for Amendment (Permits) with the Idaho  
11 Department of Water Resources. The 112 applications are  
12 known as the Integrated Municipal Application Package  
13 (IMAP) and are based on existing uses and the Idaho  
14 Municipal Water Rights Act of 1996 (ACT). The Act allows  
15 municipal providers to hold water rights for "reasonably  
16 anticipated future needs" within a planning period to  
17 accommodate growth in municipal service areas. IMAP will  
18 conform United Water's rights to the Act.

19 United Water documented a 50-year planning  
20 period for IMAP, including estimates of population growth  
21 and increased water needs. The Company anticipates a  
22 water demand of about 420 cfs within 50 years. Existing  
23 United Water rights describe about 310 cfs, although  
24 current peak demand is about 150 cfs. The difference  
25 between the rate currently described by the rights (about

1 310 cfs) and the current peak flow (about 150 cfs) is  
2 about 160 cfs. United Water requests approval to hold  
3 about 160 cfs for future growth.

4 Q. What adjustment are you proposing associated  
5 with IMAP?

6 A. I am proposing that \$644,700 in investment  
7 related to the Company's IMAP activities be excluded from  
8 rate base. I am not challenging the prudence of IMAP  
9 activities in any way; in fact, IMAP is something United  
10 Water should be doing. Clearly, however, IMAP is intended  
11 to preserve and protect water rights for future use. As a  
12 result, I am recommending that all investment associated  
13 with IMAP be booked as plant held for future use.

14 Aquifer Storage and Recharge (ASR) Water Permit

15 Q. Please discuss your recommended adjustment  
16 related to one of the Company's water rights for Aquifer  
17 Storage and Recovery.

18 A. United Water holds permit no. 63-31409, which  
19 is a right to divert up to 20 cfs of flood flow  
20 specifically for the purpose of ground water recharge.  
21 United Water intends to use this right for aquifer storage  
22 and recovery (ASR) at the Marden and Columbia water  
23 treatment plants. However, United Water currently has no  
24 capability for ASR at either plant. Consequently, this  
25 right is not currently used and useful and should be

1 booked as plant held for future use. The amount to be  
2 removed from plant in service is \$29,697.

3 Initial Butte Water Right Purchase

4 Q. Please describe the Initial Butte water right.

5 A. The Initial Butte water right actually consists  
6 of three separate licenses (02-2341, 02-2358, 02-2420).  
7 Previously under the water rights, water was diverted from  
8 the Snake River to irrigate 2055 acres of land located  
9 south of Nampa and north of the Snake River. The water  
10 rights allowed a total volume of 9247.5 acre-feet to be  
11 diverted at a maximum diversion rate of 35.21 cfs. United  
12 Water purchased these water rights for the purpose of  
13 supplying water to its Marden and Columbia water treatment  
14 plants. In order to be able to use this water at the  
15 plants, however, the Company had to execute an "exchange."  
16 The exchange of water authorizes United Water to divert,  
17 for irrigation purposes within its authorized service  
18 territory, up to 35.21 cfs from the Boise River in  
19 exchange for the same amount under water rights 02-2341,  
20 02-2358, and 02-2420 from the Snake River and subject to  
21 the conditions of approval of the exchange. The amount of  
22 flow made available through non-diversion under the Snake  
23 River water rights will remain in the Snake River to and  
24 below the mouth of the Boise River to fully replace the  
25 exchanged amount diverted from the Boise River.

1 Q. What restrictions are associated with the use of  
2 these water rights?

3 A. United Water's diversions from the Boise River  
4 under the exchange can only be made during times when the  
5 Bureau of Reclamation is providing flow augmentation water  
6 from Boise River reservoirs pursuant to the NOAA Fisheries  
7 flow augmentation program. United Water cannot divert  
8 under these rights from June through February each year so  
9 as to reduce flows in the Boise River to less than 240  
10 cfs, and cannot reduce flows to less than 1100 cfs from  
11 March through May. These restrictions effectively limit  
12 United Water from being able to fully utilize all of the  
13 water purchased under the Initial Butte purchase. In  
14 fact, the practical limit is approximately half of the  
15 amount of the Initial Butte water rights. Depending on  
16 the amount of water available in the Boise River storage  
17 system in a given year, United Water expects to be able to  
18 secure approximately 3,500 to 4,900 acre-feet of water  
19 under these rights.

20 Q. Will United Water ever be able to fully use the  
21 Initial Butte water rights?

22 A. In order to be able to use the full amount of  
23 the Initial Butte water rights, United Water will have to  
24 find a way to either get water from the Snake River to its  
25 water treatment plants, or more realistically, to get

1 Snake River water into the Boise project irrigation system  
2 and execute another exchange with a water user diverting  
3 Boise River water.

4 Q. How much did United Water pay to acquire the  
5 Initial Butte water rights?

6 A. The total cost to United Water, including  
7 purchase costs, closing costs and legal fees, was  
8 \$1,838,560.

9 Q. What is your recommendation regarding the  
10 Initial Butte water rights purchase?

11 A. Based on the average rate base calculation  
12 recommended by Staff, I am recommending that \$677,452 of  
13 the investment be excluded from rate base. This amount  
14 represents the proportionate cost for the 5748 acre-feet  
15 (9248-3500=5748) of water that currently cannot physically  
16 be used. I based this adjustment on the lower amount that  
17 the Company indicates it may be able to use because in a  
18 very low water year as this one is expected to be, it is  
19 likely that no water will be available from the Initial  
20 Butte water rights. At such time in the future when  
21 United Water develops the physical capability to fully  
22 utilize all of the water authorized under the Initial  
23 Butte water rights, United Water can seek to add the  
24 excluded amount to rate base.

25

1           ***Adjustments to Test Year Revenue and Expenses***

2           Q.     Staff witness English states in his testimony  
3           that Staff disagrees with many of the test year expense  
4           adjustments proposed by United Water in this case. In  
5           Exhibit No. 108, he shows Staff's proposed adjustments,  
6           but stated that you would discuss adjustment nos. 9, 11,  
7           12, 13, and 31. Please proceed to discuss each of these  
8           adjustments.

9           A.     I discuss each of the adjustments in order  
10          below. Exhibit Nos. 121-125 show my computations for each  
11          adjustment.

12          Adjustment No. 9 - Adjustment of Purchased Water Cost

13          Q.     Before discussing the details of this  
14          adjustment, please discuss how United Water acquires raw  
15          water (untreated surface water) for use at its treatment  
16          plants.

17          A.     United Water acquires raw water using a variety  
18          of mechanisms. First, to the extent they are available,  
19          United Water acquires ownership of water rights, like  
20          Initial Butte which I previously discussed, that authorize  
21          water to be diverted from the Boise River. Owned water  
22          rights are considered capital assets, and investments made  
23          to acquire them are capitalized for ratemaking purposes.

24                  Second, United Water makes contractual purchases  
25          of water through a variety of mechanisms including lease

1 and rental agreements, and ownership and lease of shares  
2 in canal companies. Some of the purchases made using  
3 these mechanisms are annual agreements, while others may  
4 extend for several years. In every case, however, United  
5 Water is required to make one or more annual payments,  
6 usually in the spring of the year once water availability  
7 is known and prices are established. Water acquired  
8 through these mechanisms is considered "purchased water"  
9 and booked as an expense for ratemaking purposes.

10 The combination of owned water rights and  
11 contractual purchases make up a portfolio intended to  
12 fully meet the raw water requirements of the Marden and  
13 Columbia treatment plants. The availability of Idaho's  
14 water supplies from year to year dictates how much of each  
15 water right can be satisfied, as well as the amounts and  
16 prices of water available for purchase, lease or rent.  
17 United Water must decide each spring how much water to  
18 purchase based on its forecast of water needs and  
19 availability.

20 Q. United Water proposed an adjustment to test year  
21 purchased water costs of \$87,528. Please describe how the  
22 Company arrived at its proposed adjustment amount.

23 A. The proposed adjustment consists primarily of  
24 new contractual water purchases that the Company assumes  
25 it will make prior to the CWTP becoming fully operational.

1 To arrive at its proposed adjustment amount, United Water  
2 took the actual purchased water expense in the test year,  
3 added the estimated costs for three purchases it expects  
4 to make in the coming year, and adjusted upwards the cost  
5 of one exiting contract that is paid based on the quantity  
6 of water taken from Lucky Peak storage.

7 Q. Do you agree with the Company's proposed  
8 adjustment?

9 A. I agree that some adjustment is appropriate, but  
10 I disagree with the amount proposed by the Company.  
11 Contracts have yet to be signed for some of the raw water  
12 purchases the Company estimated it would make;  
13 consequently, they are not known and measurable. Only one  
14 new contract for \$20,400 with the South Boise Water  
15 Company had been signed as of the preparation date of this  
16 testimony. I recommend that the pro forma purchased water  
17 expense consist of the budgeted test year expense of  
18 \$97,437 as documented in the Company's supporting  
19 workpapers, plus the \$20,400 for the one new signed  
20 contract. Thus, Staff's proposed adjustment is \$20,400 as  
21 shown in Exhibit No. 121.

22 Q. Why are you proposing to begin with the budgeted  
23 test year expense in making your adjustment rather than  
24 the actual test year expense?

25 A. I recognize that the actual purchased water

1 expense for the test year of \$107,788 was greater than the  
2 budgeted test year expense of \$97,437. However, the  
3 objective in adjusting purchased water costs is to  
4 determine an amount representative of normal water  
5 conditions, not water conditions that may be expected to  
6 occur this year or as they may have occurred during the  
7 test year. As a result, I used the budgeted test year  
8 amount because I believe it better represents the level of  
9 expenses United Water expects would occur in a normal  
10 year. I believe the actual expense for the test year was  
11 higher than normal because United Water had to purchase  
12 water to make up for other water that was unavailable due  
13 to poor water conditions in 2004. In fact, I believe  
14 United Water is estimating even higher purchased water  
15 expenses for 2005 because of even worse water conditions  
16 that will preclude it from receiving its full allotment  
17 under its water rights, contracts, leases, and shares in  
18 canal companies.

19 Q. Why have you excluded many of the water  
20 purchases United Water expects to make to supply water for  
21 the CWTP?

22 A. In the workpapers provided by United Water in  
23 support of its proposed adjustment amount, the Company has  
24 in many instances included estimates of amounts it expects  
25 to spend for specific purchases (Fairview Lateral Ditch,

1 Black Canyon Irrigation, Basin 63 rental pool, etc.).

2 However, without signed contracts establishing specific  
3 prices, the Company's estimates are simply not known and  
4 measurable. Unlike the CWTP construction contract where  
5 there is a contract with a guaranteed maximum price, there  
6 are no signed contracts for water purchases in many cases.  
7 Staff is aware that United Water intends to sign contracts  
8 for additional water purchases prior to the summer, but  
9 without contracts in hand, or when contracts are provided  
10 to Staff at the 11th hour, Staff is unable to review them  
11 in the time frame established for this rate case.

12 Consequently, Staff recommends they be considered in a  
13 future case.

14 Q. Has United Water made any attempt to normalize  
15 its purchased water costs to consider the effect of  
16 varying raw surface water cost and availability from year  
17 to year?

18 A. No, United Water seems to have made no attempt  
19 to normalize its raw water purchase costs.

20 Q. You discussed earlier that United Water builds a  
21 portfolio consisting of a combination of owned water  
22 rights and purchased water to supply water for its water  
23 treatment plants. Is your proposed adjustment to  
24 purchased water costs related to United Water's investment  
25 to acquire the Initial Butte water rights?

1           A.    Yes, the adjustment to purchased water expenses  
2 is interrelated with the Company's Initial Butte water  
3 rights purchase. As I stated earlier, United Water is  
4 only able to currently utilize approximately half of the  
5 Initial Butte water rights due to seasonal minimum stream  
6 flows that must be maintained in the Boise River and  
7 inability to utilize water from the Snake River. Because  
8 only half or less of the Initial Butte water can be  
9 utilized, additional contractual water purchases are  
10 necessary. United Water should not be allowed to recover  
11 both the full investment for the Initial Butte water  
12 rights and the costs of contractual purchases of  
13 additional raw water because once Initial Butte is fully  
14 utilized at some time in the future, additional  
15 contractual water purchases likely will not be necessary.  
16 Thus, I propose that if the Commission decides to allow  
17 only half of the investment in Initial Butte water rights  
18 to be included in rate base, it consider allowing known  
19 and measurable adjustments to purchased water expenses.  
20 However, if the Commission decides to allow all of the  
21 Initial Butte water rights investment in rate base, it not  
22 allow full recovery of all of the raw water purchase  
23 expenses intended to supply the CWTP.

24 Adjustment No. 11 - Adjustment of Purchased Power Expense

25           Q.    United Water proposed an adjustment to test year

1 purchased power expense of \$514,265. Do you agree with  
2 the Company's proposed adjustment?

3 A. The purpose of this adjustment is to adjust for  
4 the effect of Idaho Power's PCA on purchased power  
5 expense, and to adjust for expected power costs at the  
6 Columbia Water Treatment Plant and the associated raw  
7 water pumping station. I agree that an adjustment is  
8 appropriate, but disagree with the amount proposed by the  
9 Company. I instead recommend an adjustment amount of  
10 \$283,459. My proposed adjustment removes the effects of  
11 Idaho Power's PCA from both the test year and from the  
12 current rates being applied to the estimated usage. In  
13 addition, my adjustment also utilized more accurate  
14 estimates of energy consumption amounts for the raw water  
15 pumping station as provided by the Company in response to  
16 Staff Production Request No. 94. In addition, I adjusted  
17 the cost assumed by the Company for CWTP redundant power  
18 and stand by charges to correspond to more accurate cost  
19 estimates included in the Company's response to Staff  
20 Production Request No. 95. Computations in support of my  
21 proposed adjustment are included as Exhibit No. 122.

22 Adjustment No. 12 - Adjustment of Deferred Power Expense

23 Q. Please explain the purpose of this proposed  
24 adjustment.

25 A. The purpose of this adjustment is to reflect the

1 amortization of deferred power expenses as established in  
2 Order No. 28505 in Case No. UWI-W-00-1. In that order,  
3 the Commission stated,

4 United Water has requested authorization to  
5 defer on its books beginning May 1, 2001,  
6 certain electric power costs. The Commission  
7 finds it reasonable to authorize such a  
8 deferral. The Company also proposes to apply a  
9 carrying charge on unamortized deferral balances  
at a rate equal to the customer deposit rate.  
The Commission finds it reasonable to reserve  
judgment on the recovery of the amount deferred  
as well as the appropriateness of any carrying  
charge until actual recovery is requested.

10 United Water in this case is proposing to  
11 recover an amount of \$1,550,000. This amount represents  
12 the Company's estimate of the deferral balance as it has  
13 accumulated from May 1, 2001 through May 31, 2005. United  
14 Water is also proposing to amortize this amount over three  
15 years.

16 Q. Do you agree with the adjustment proposed by  
17 United Water?

18 A. I agree that United Water should be permitted to  
19 recover some amount of the deferral. However, I do not  
20 believe that the Commission should authorize recovery of  
21 the full amount requested by United Water. The purpose of  
22 the deferral was to allow United Water to seek some relief  
23 from the extraordinarily high power prices that resulted  
24 from the 2000-2001 Western energy crisis. As depicted in  
25 Exhibit No. 123, page 2 of 3, Mid-C prices had subsided by

1 mid-summer 2001, and Idaho Power's monthly PCA deferrals  
2 had returned to more normal levels by the beginning of  
3 2002. Idaho Power began recovering the massive PCA  
4 deferrals from customers through PCA rate adjustments in  
5 May of 2001. As shown on Exhibit No. 123, page 3 of 3,  
6 the average PCA charged to customers remained  
7 exceptionally high from May 2001 through May 2003.  
8 Although the PCA has remained fairly high since May 2003,  
9 it has been far below what it was the previous three  
10 years. I believe that the PCA surcharges since May 2003  
11 have been almost exclusively the result of below normal  
12 water conditions, and have not in any way been influenced  
13 by the extreme market price crisis of 2000-2001.

14 Q. If you agree that Idaho Power's current PCA  
15 surcharge is considerably higher than it was historically  
16 prior to 2001, why don't you believe United Water should  
17 be permitted to continue to defer its unusually high power  
18 expenses?

19 A. I do not believe the Commission's authorization  
20 in Order No. 28505 for a deferral of power costs was  
21 intended to permit United Water to recover above normal  
22 power costs that were strictly due to poor water  
23 conditions. I believe the deferral was intended only to  
24 provide temporary relief from the extremely high power  
25 costs resulting from the short-term Western energy crisis.

1 Absent highly unusual circumstances like occurred in 2000-  
2 2001, electric prices will deviate both above and below  
3 normal, and Idaho Power will have both PCA surcharges and  
4 credits. Consequently, I propose that United Water only  
5 be allowed to recover a deferral amount accumulated  
6 between May 1, 2001 and May 31, 2003. This amount, based  
7 on the Company's accounting records, is \$1,033,220.

8 Q. United Water has proposed to amortize deferred  
9 power expenses over a period of three years. Do you agree  
10 with the proposed amortization period?

11 A. No, I believe that United Water's proposed  
12 amortization period of three years is too short. In my  
13 opinion there are several things that should be considered  
14 when determining a reasonable amortization period for  
15 deferred expenses. First, I believe that the length of  
16 time between rates cases is a factor. United Water's last  
17 rate case was four years ago in 2000. Second, I believe  
18 the amortization period should stretch over a period at  
19 least as long as the time over which the deferral was  
20 accumulated. As discussed previously, I am recommending  
21 that deferred amounts accumulated over a two-year period  
22 from May 2001-May 2003 be approved for recovery. Finally,  
23 I believe that the length of the amortization period  
24 should be long enough to soften the impact on ratepayers,  
25 compared to the impact that would have been felt if the

1 expenses had been simply passed through during the time  
2 while they were being incurred. For these reasons, I  
3 recommend an amortization period of four years. By  
4 approving deferral of extraordinary power costs, the  
5 Commission gave relief to the Company and its  
6 shareholders. By approving a four-year amortization  
7 period, I believe the Commission would be balancing the  
8 relief provided to the Company with commensurate relief  
9 provided to customers. Using a four-year amortization  
10 period and my recommended deferral amount, the pro forma  
11 annual amortization expense is \$259,524.

12 Q. United Water has applied a carrying charge rate  
13 of one percent to the deferral balance. Do you agree that  
14 this is appropriate?

15 A. The carrying charge rate proposed by United  
16 Water is based on the annual customer deposit interest  
17 rate approved by the Commission for Idaho Power in Case  
18 No. IPC-E-01-07, Order No. 28722. Staff believes a  
19 carrying charge is not warranted because, absent the  
20 deferred authority, these costs would not be recovered at  
21 all. Recovery of the actual expenditures from the  
22 deferral period, Staff believes, is sufficient relief  
23 without also applying a carrying charge. However, since  
24 these expenditures are associated with the Western power  
25 crisis, and are totally outside the control of United

1 Water, Staff is willing to accept this carrying charge  
2 rate as appropriate for this issue in this case.

3 Computations in support of Staff's proposed adjustment are  
4 included as Exhibit No. 123, page 1 of 3.

5 Adjustment No. 13 - Adjustment of Chemical Expense

6 Q. What is your recommendation with regard to  
7 adjustments to chemical expenses?

8 A. The purpose of this adjustment is to normalize  
9 chemical expense using test year usage at current prices,  
10 to adjust for expected chemical usage at the CWTP, and to  
11 normalize phosphate usage. I recommend accepting the  
12 portion of the adjustment intended to normalize test year  
13 chemical expenses at current prices. I also recommend  
14 accepting the estimated chemical expense associated with  
15 the CWTP. However, I recommend rejecting that portion of  
16 the adjustment intended to normalize phosphate usage.

17 Q. Why do you recommend rejecting the portion of  
18 the adjustment associated with phosphate usage?

19 A. The Company states that the phosphate expense  
20 has been normalized upward by \$15,000 from the test year  
21 level because "Company operating personnel have learned  
22 through experience that certain areas of the system become  
23 'unstable' in the winter season, leading to an increased  
24 level of customer complaints, unless phosphate use is  
25 continued through the winter season." (Reference Healy,

1 Di., p. 16, lines 14-18). Without judging the Company's  
2 rationale, the fact remains that United Water did not  
3 increase its phosphate usage in the test year by \$15,000;  
4 it only speculates that increased usage will be necessary  
5 in the future. The speculation about increased phosphate  
6 usage in the future simply fails the test of being known  
7 and measurable. Computations in support of Staff's  
8 proposed adjustment are included as Exhibit No. 124.

9 Adjustment No. 31 - Adjustment of Expenses Related to  
10 Weather Normalization

11 Q. Do you agree with the Company's proposed  
12 adjustment of expenses related to weather normalization?

13 A. Yes; however, I have made a very minor change to  
14 the Company's proposed adjustment to maintain consistency  
15 with my earlier recommendation to remove the PCA from the  
16 power cost computations. The purpose of this adjustment  
17 is to normalize variable power costs and chemicals due to  
18 the negative weather normalization adjustment made by  
19 United Water. Removing the PCA effect from the power cost  
20 reduces the Company's total variable costs, thus slightly  
21 reducing United Water's proposed adjustment. Computations  
22 in support of Staff's proposed adjustment are included as  
23 Exhibit No. 125.

24 Pro Forma Revenue Adjustments

25 Q. United Water witness Gradilone has made several

1 adjustments to test year revenues as shown on his Exhibit  
2 6, Schedule 1, page 2 of 2. Do you agree with his  
3 proposed adjustments to test year revenues?

4 A. I have reviewed his proposed adjustments and  
5 agree with the adjustments for a) full pricing of South  
6 County water sales, b) weather normalizing adjustments, c)  
7 annualization of growth during the test year, and d)  
8 annualization of growth through May 31, 2005. These  
9 adjustments are shown in columns (2), (3), (4), and (5)  
10 respectively of Exhibit 6, Schedule 1, page 2 of 2.

11 Q. Are you proposing any other adjustments to  
12 revenue?

13 A. Yes, I am proposing two minor adjustments to  
14 revenue at proposed rates. First, United Water witness  
15 Gradilone in Exhibit No. 6, Schedule 1 page 2 of 2 on line  
16 7 shows revenue associated with bulk hydrant sales.  
17 United Water's practice is to bill for bulk hydrant sales  
18 at the normal commodity rate charged to all other  
19 customers. If the commodity rate for all other customers  
20 is increased, a corresponding increase should be reflected  
21 in the revenue at the new proposed rates. I have  
22 reflected this increase in Staff's Exhibit No. 126.

23 I am also proposing an increase in the rate  
24 United Water charges for rent on construction meters  
25 commensurate with the overall increase Staff recommends in

1 this case. I recommend that the rental rate on  
2 construction meters be increased from \$20 per month to \$25  
3 per month. Even though United Water has not proposed an  
4 increase in the meter rental rate, I believe it would be  
5 inappropriate to not increase this charge associated  
6 exclusively with new construction, while increasing the  
7 commodity rates for all other customers. The increased  
8 rate will have a very minor effect on the Company's  
9 revenues; nevertheless, the effect has been incorporated  
10 in Exhibit No. 126.

11 ***Rate Design***

12 Q. What do you believe should be the objectives of  
13 a good rate design?

14 A. There are many objectives, but I believe some of  
15 the most important are fairness, simplicity, effectiveness  
16 in sending a conservation signal, and sensitivity to the  
17 needs of low-income customers.

18 Customer Charges

19 Q. United Water is proposing to increase the  
20 customer charge by 36.4 percent. Do you agree with this  
21 proposal?

22 A. No, I do not. The Company's proposal is to  
23 increase the customer charge by a percentage equal to half  
24 the difference between the overall requested revenue  
25 increase of 22.46 percent and the 51.1 percentage increase

1 it believes can be supported by its cost of service study.  
2 For a typical residential customer with a ¾-inch meter,  
3 the customer charge would increase from \$14.57 bi-monthly  
4 to \$19.86.

5 In his testimony, Company witness Peseau states  
6 the definition of customer costs as defined by the  
7 American Water Works Association as follows:

8 Costs directly associated with serving  
9 customers, irrespective of the amount of water  
10 use. Such costs generally include meter  
11 reading, billing, accounting, and collecting  
12 expense, and capital costs related to meters and  
13 associated services.

14 On the other hand, he also acknowledges that the  
15 Commission Staff recently, in Case No. IPC-E-03-13,  
16 proposed that customer costs for electric utilities be  
17 defined more narrowly. In that case, the Commission  
18 accepted Staff's position that customer costs should be  
19 based on the direct costs of meter reading and billing and  
20 should not include any fixed plant cost. In Order No.  
21 29505 issued on May 25, 2004, the Commission stated,

22 The Commission finds that a monthly service  
23 charge should recover costs that are directly  
24 attributed to the customer paying the charge.  
25 Typically, these charges are related to meter  
reading and customer billing. ... The Commission  
finds that the appropriate service charge for  
residential customers is \$3.30 per month. This  
is an increase of 31.47%. We find a service  
charge of that amount provides a reasonable  
balance between recovering specific customer

1 service costs in a fixed fee while preserving  
2 the ability to provide price signals for  
conservation purposes. Order at p. 53.

3 In an even more recent rate case for Avista,  
4 Avista proposed to increase its basic customer or minimum  
5 monthly charge from \$4.00 to \$5.00 for residential  
6 customers. In rejecting the proposed increase, the  
7 Commission stated on October 8, 2004,

8 The Commission is unwilling to dampen the  
9 incentive for customers to conserve energy. For  
10 the residential customer that incentive is  
11 generally a price signal and the ability to  
12 control the total bill amount. We find that the  
13 present customer charge for residential  
14 customers is sufficient to provide the Company  
15 with recovery of those costs that are directly  
16 attributed to the customer taking service. We  
17 find that those charges are related to meter  
18 reading and customer billing costs, in this case  
19 approximately \$2.62/residential customer. While  
20 we are not inclined to increase the charge;  
21 neither do we find a compelling reason to  
22 decrease it. Order No. 29602 at p. 33.

23 I recommend an approach in this case that is  
24 consistent with that accepted in the Idaho Power and  
25 Avista cases. Based on United Water's cost of service  
study, customer related metering and billing costs  
represent \$3,752,687 of the Company's total normalized pro  
forma annual expenses of \$38,141,514 (Peseau, Exhibit No.  
14, Schedule 1, p. 1 of 2). If metering and billing costs  
were converted to a bi-monthly customer charge, the rate  
would be \$7.04 for a typical residential customer with a  
¾-inch meter. The current bi-monthly customer charge for

1 this customer is \$14.57. Because the current charge  
2 already exceeds the charge that could be supported by the  
3 cost of service study for just customer billing and  
4 metering costs, I do not recommend an increase in the  
5 monthly customer charge. Even at the current rate (\$14.57  
6 bi-monthly = \$7.29 monthly), United Water's customer  
7 charge is more than double Idaho Power's and nearly double  
8 Avista's.

9 Q. Are there any other reasons why you oppose any  
10 increase in the bi-monthly customer charges?

11 A. Yes, another reason I oppose an increase in the  
12 customer charge is because it would have a  
13 disproportionate effect on customers who use small amounts  
14 of water. For these customers, the customer charge  
15 represents a greater proportion of their bill. For  
16 example, if United Water's proposed 36.4 percent increase  
17 in customer charge and 21.5 percent increase in commodity  
18 charge were accepted, a customer with minimal consumption  
19 would face an overall increase closer to 36 percent, while  
20 a customer with a very large volume of consumption would  
21 face an overall increase closer to 21.5 percent. This  
22 tends to place more of the overall increase on those  
23 customers who are likely to already be more conservative  
24 in their water use. I do not believe these customers  
25 deserve to be "penalized" for their conservative

1 consumption habits.

2 In addition, many low-income customers are more  
3 likely to also be small water users. Staff has an  
4 interest in minimizing the impact of a rate increase on  
5 low-income customers, and maintaining customer charges at  
6 their current level will help to accomplish that  
7 objective.

8 Q. Given that United Water's current customer  
9 charges are more than double an amount you estimate is  
10 necessary to cover meter reading and billing costs, do you  
11 recommend a decrease in bi-monthly customer charges?

12 A. No, I do not. Because the likely outcome of  
13 this case is an overall increase in rates, I think that a  
14 reduction in any single component of rates is a step in  
15 the wrong direction unless there is a very compelling  
16 reason to do so. In addition, a substantial decrease in  
17 the customer charge could create cash flow problems for  
18 United Water because so much more revenue would then have  
19 to be collected through commodity charges in the summer  
20 months when the majority of the consumption occurs.  
21 Finally, water utilities generally have much higher fixed  
22 costs per customer than electric utilities; therefore, I  
23 do not believe it is unreasonable to collect a little more  
24 than just meter reading and billing costs in the customer  
25 charge.

1 United Water's Proposed Rate Design

2 Q. In its Application, United Water has not  
3 proposed a new rate design but has instead proposed to  
4 retain the current rate design consisting of a fixed bi-  
5 monthly customer charge and a commodity rate with a  
6 summer/winter rate differential of 25 percent. Do you  
7 believe that the current rate design should be maintained?

8 A. Although my preference is a two-block inverted  
9 rate design which I will discuss shortly, the current rate  
10 design has some positive features. First, the current  
11 rate design has been in place since 1993. Customers have  
12 now generally become accustomed to the summer/winter rate  
13 differential. Most understand its rationale and  
14 objectives, and many are motivated to conserve by the  
15 higher summer rates. Based on the number of comments and  
16 complaints received by the Commission Staff, many  
17 customers dislike the summer/winter rate differential  
18 believing that they are paying an unjustified "premium"  
19 for summer water use rather than viewing it as getting a  
20 "discount" for water used the remainder of the year.  
21 While Staff does not necessarily regard the number of  
22 complaints as an indication of a good rate design, the  
23 number of complaints regarding the seasonal rate  
24 differential is at least some indication that higher  
25 summer rates get customers' attention and motivate some

1 people to conserve.

2 Any time a new rate design is implemented,  
3 however, there is a period—sometimes a very lengthy one—  
4 during which customers must learn and become aware of the  
5 new rate design. Moreover, even more time is required for  
6 customers to adjust their usage patterns before the  
7 objectives of a new rate design can be achieved. I  
8 believe the decision of whether to implement a new rate  
9 design should be based on an evaluation of whether the  
10 advantages of a new rate design outweigh the tradeoffs.

11 25% Summer/Winter Rate Differential

12 Q. Do you believe the 25 percent summer/winter rate  
13 differential should be maintained?

14 A. Yes, I do. By having a commodity rate that is  
15 25 percent higher in the summer than in the winter,  
16 customers are sent a strong conservation signal that helps  
17 to lessen United Water's peak summertime demands.  
18 Furthermore, I agree with United Water witness Peseau's  
19 conclusion from his cost of service study that there is a  
20 substantial difference in commodity costs of service  
21 between the winter and the summer.

22 Q. Do you believe that the summer/winter commodity  
23 rate differential should be increased to more than 25  
24 percent?

25 A. No, I do not. I have reviewed United Water

1 witness Peseau's cost of service analyses that show that  
2 the seasonal rate spread based on cost of service falls in  
3 the range of 25-70 percent. Although this is a very broad  
4 range and far from a precise conclusion, I do believe it  
5 demonstrates that a seasonal differential of at least 25  
6 percent is warranted. I am not inclined to propose a  
7 seasonal rate differential greater than 25 percent,  
8 however. The 25 percent rate differential has been in  
9 place for more than 10 years now. Most customers, I  
10 believe, are now very aware of the rate differential. For  
11 many customers, if not most, the 25 percent rate  
12 differential, especially when combined with much higher  
13 summertime usage and bi-monthly bills, is enough to send a  
14 very strong conservation signal. Although a greater  
15 seasonal rate differential might be supported by cost of  
16 service, if the seasonal rate differential were increased  
17 even further, I expect it would be met with extreme  
18 resistance from many customers. Thus, I believe the  
19 current 25 percent seasonal rate differential should be  
20 maintained.

21 Rate Design Alternatives

22 Q. If the Commission wishes to consider alternative  
23 rate designs, what is your recommendation?

24 A. Before any consideration is given to changing  
25 the current rate design, I believe that the Commission

1 first needs to decide whether the practice of bi-monthly  
2 billing should be continued. Because there is a lengthy  
3 lag under bi-monthly billing between when water is used  
4 and when the customer is billed for it, customers have  
5 limited ability to respond to price signals. Since one of  
6 the objectives of good rate design is to send appropriate  
7 price signals, no rate design can be very effective if the  
8 price signal it sends is always two-months too late.

9 Q. Are there other issues to consider with regard  
10 to bi-monthly billing?

11 A. Yes. Bi-monthly billing, combined with the  
12 current 25 percent higher summer commodity rate tends to  
13 greatly inflate nearly all customers' summertime bills.  
14 For some customers, the higher summertime bills are so  
15 much higher that they have difficulty budgeting and paying  
16 them. Monthly billing could relieve at least some of the  
17 burden of extremely high summertime bills for many  
18 customers.

19 Q. Would moving to monthly billing dilute the price  
20 signal in the summertime?

21 A. Because each bill, including those in the  
22 summer, would be half as large under monthly billing,  
23 there is some possibility that the price signal would be  
24 diminished. However, because there would only be a one-  
25 month lag between consumption and billing, and because

1 there would be a monthly price signal sent, I believe  
2 customers would receive just as strong of a conservation  
3 message as with bi-monthly billing.

4 Q. Has United Water estimated the cost of  
5 converting to monthly billing?

6 A. Yes, the Company estimates the incremental cost  
7 of monthly billing as \$1,086,000 per year. That cost  
8 alone would require an increase in the Company's annual  
9 revenue requirement of approximately 3.4 percent. The  
10 Commission would have to weigh this incremental cost  
11 against the benefits of monthly billing. Most likely,  
12 some customers would prefer to retain bi-monthly billing  
13 if it meant no increase in rates, while others would agree  
14 to pay more just to reduce the impact of their summertime  
15 bills.

16 Q. Is Staff proposing a new rate design in this  
17 case?

18 A. No, Staff is not proposing to change the current  
19 rate design.

20 Q. Why not?

21 A. In Case No. UWI-W-98-3, I proposed a change from  
22 the current seasonal rates, but the Commission rejected my  
23 proposal. In that case, I proposed a three-tiered  
24 inverted block rate design. I believed that a three-tier  
25 inverted block rate design would be more equitable, but I

1 acknowledge that it would also be more complicated.

2 Q. Neither United Water nor Staff is proposing any  
3 change to the current rate design in this case; however,  
4 if the Commission wishes to consider a different rate  
5 design, what type of rate design would you prefer?

6 A. My preference would be an inverted block rate  
7 design consisting of two blocks that would be in place  
8 year round. I believe an inverted block rate design would  
9 accomplish all of the same objectives as the current  
10 seasonal differential rate design, but would overcome some  
11 of the problems.

12 Q. Please generally describe your preferred  
13 inverted block rate design.

14 A. Under an inverted block rate design, all  
15 customers—residential, commercial, industrial and public  
16 authority—would have a lower priced block and a higher  
17 priced block that would remain in place throughout the  
18 year. The consumption limits for each block would be set  
19 for each meter size in proportion to the quantity of water  
20 typically used by other customers with the same meter  
21 size. The block limits would be designed so that most  
22 customers' usage would not fall within the higher priced  
23 block except in the summertime. Customers whose usage  
24 remained fairly constant throughout the year may never  
25 have their usage fall within the higher priced block.

1           Q.    Why do you prefer such an inclining block rate  
2 design?

3           A.    There are several reasons why I prefer it.  
4 First, because rates remain fixed throughout the year, it  
5 sends a conservation signal year round. This would  
6 provide a more consistent price signal to customers and,  
7 unlike the current summer/winter rates, would send a price  
8 signal before the summer season begins. Second, an  
9 inverted block rate design does not give the impression of  
10 "penalizing" those customers whose usage does not increase  
11 significantly in the summertime. Third, by establishing  
12 block limits based on meter size, an inverted rate design  
13 can differentiate between the seasonal consumption  
14 patterns of large customers. Many large customers,  
15 particularly commercial and industrial ones, have a  
16 relatively flat consumption pattern throughout the year,  
17 but under the current rate design, pay much more in the  
18 summer for the same amount of water used in other seasons  
19 of the year. In summary, I simply believe that an  
20 inverted block rate design provides greater fairness for  
21 more customers and still accomplishes a conservation  
22 objective.

23           Q.    Has the Commission adopted inclining block rate  
24 designs for other utilities?

25           A.    Yes, both Idaho Power and Avista now have

1 inclining block rate designs.

2 Q. Are you recommending that an inclining block  
3 rate design be implemented in this case?

4 A. My recommendation is that if the Commission  
5 wishes to consider an inclining block rate design or other  
6 alternative designs, that further proceedings be ordered  
7 in this case to enable alternative rate designs to be  
8 created, analyzed, and evaluated.

9 ***Rates***

10 Q. Given the revenue requirement increase of  
11 \$581,069 recommended by Staff witness Harms that includes  
12 your adjustments to pro forma revenue as discussed earlier  
13 in your testimony, how do you propose to adjust rates to  
14 collect the 1.84 percent increase in revenue?

15 A. I recommend that the commodity rates be  
16 increased uniformly by 2.38 percent to collect the  
17 additional revenues.

18 My recommended rates are shown in Exhibit No.  
19 127. Fixed service charges that are based on meter size  
20 remain unchanged from their present levels. However, the  
21 fixed rates for street sprinkling and flat rate service  
22 have been increased by 1.84 percent, consistent with the  
23 overall percentage increase in revenue requirement  
24 recommended by Staff. Fire protection tariffs have also  
25 been increased by the same percentage. My proposed

1 commodity rates are \$1.0058 per ccf in the winter and  
2 \$1.2574 per ccf in the summer.

3 Q. Have you prepared a rate proof to demonstrate  
4 that your proposed rates will generate Staff's proposed  
5 revenue requirement?

6 A. Yes. My rate proof is included as Exhibit No.  
7 126.

8 Q. Does this conclude your direct testimony in this  
9 proceeding?

10 A. Yes, it does.

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