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IDAHO PUBLIC
UTILITIES COMMISSION

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BEFORE THE 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)
_____)

CASE NO. UWI-W-04-04

DIRECT TESTIMONY OF DON WOJCIK
ON BEHALF OF IDAHO RIVERS UNITED

1 Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION
2 WITH THE WESTERN RESOURCE ADVOCATES.

3 A. My name is Don Wojcik. My business address is Western Resource Advocates
4 (“WRA”), 2260 Baseline Road, Suite 200, Boulder, Colorado 80302. WRA is a non-
5 profit environmental law and policy organization dedicated to restoring and protecting
6 the natural environment of the Interior American West. I am employed as a water policy
7 analyst and technical researcher for WRA’s Water Program.

8 Q. PLEASE DESCRIBE YOUR EDUCATION, BUSINESS EXPERIENCE AND
9 RESPONSIBILITIES.

10 A. In 1995, I attained a Master of Public Affairs degree with a concentration in
11 environmental policy and natural resource management from Indiana University’s School
12 of Public and Environmental Affairs. Prior to that, in 1991, I attained a Bachelor of
13 Science degree in Civil and Environmental Engineering from the University of
14 Wisconsin College of Engineering.

15 I have been employed as a water policy analyst and technical researcher with
16 WRA since August 2002. In this position, my primary responsibility is to collect, assess,
17 and compare data on urban water use efficiency in cities across the interior American
18 West. In this position, I have co-authored various urban water efficiency reports,
19 including: *“Smart Water: A Comparative Study of Urban Water Use Efficiency Across*
20 *the Southwest,”* as well as two comparative analysis reports on water rate structures in
21 Colorado and Utah. The executive summaries of these three (3) reports are provided
22 herewith as Exhibit 401-403; the full copies can be downloaded at the WRA website
23 {<http://www.westernresourceadvocates.org/water/>}.

1 Prior to working with WRA, I have nearly six years experience as a natural
2 resource planner for the Boulder County Parks and Open Space Department in Boulder,
3 Colorado. I also have two years experience working as an environmental research
4 assistant for the Center for Urban Policy and the Environment in Indianapolis, Indiana.
5 Prior to my career in natural resource issues, for two years I worked as a Civil Engineer II
6 for the Village of Bolingbrook, Illinois in suburban Chicago.

7 Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

8 A. I am testifying on behalf of Idaho Rivers United.

9 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

10 A. United Water Idaho's ("UWI") proposed rate changes seek to recover additional
11 revenues through increased bi-monthly fixed charges, as well as through commodity
12 charge increases (*i.e.*, volumetric rate increases). I recommend the Commission direct
13 UWI to modify its rate structure to a design that more effectively encourages efficient
14 water use by sending appropriate price signals to customers. This includes the adoption
15 of an increasing block rate design of at least three blocks during summer months: an
16 initial lower-cost block for the first volume of use (to cover indoor residential use for the
17 average household), and a minimum of two additional blocks to discourage excessive
18 outdoor watering and to assign current and future water development costs more fairly.

19 I also recommend the Commission direct UWI to expand its suite of conservation
20 programs in order to (a) provide customers additional options to avoid the financial
21 impact of UWI's requested rate increases, and (b) enhance UWI's ability to avoid future
22 acquisitions of high-cost supply resources by reducing municipal demands. As a matter
23 of fairness to ratepayers faced with water bill increases of up to 22%, additional utility-

1 guided and utility-incented conservation opportunities should be offered to mitigate the
2 impacts of such an increase. An expanded conservation program would also help UWI
3 avoid expensive supply-side resource acquisitions in the future. UWI's 12-year old
4 Conservation Plan must be updated as part of this effort.

5 **I. Modified Rate Structure**

6 Q. DO YOU BELIEVE UWI'S PROPOSED RATE CHANGES COULD BE
7 ALTERED TO BETTER ENCOURAGE CUSTOMERS TO USE WATER
8 EFFICIENTLY? PLEASE EXPLAIN.

9 A. Yes, I believe the rate structure could be improved to encourage efficient use of
10 water. UWI's Application proposes to maintain its seasonal rate structure, with a 36%
11 increase in bi-monthly fixed charges to all customers, as well as a 17% increase in
12 commodity charges (per consumption volume). These fixed and commodity charge
13 increases amount to a 22% increase in the average residential water bill. (Later in this
14 testimony I address the proposal made by UWI and the Community Action Partnership
15 Association of Idaho to adopt an initial lower-cost 3 CCF consumption block.)

16 The existing rate structure fails to proportionately assign the increasing utility
17 costs and future water development costs to the high-volume users who place the highest
18 strain on the water supply system.

19 First, UWI is seeking to gather most of its revenue increases via the bi-monthly
20 fixed service charge (36% increase) instead of the commodity charges. This type of
21 "across the board" rate increase approach can be seen as a penalty to average or low-
22 volume users, and particularly to customers who have voluntarily made efforts to
23 conserve. High fixed charges may further weaken a customer's incentive to conserve,

1 since a larger percentage of their bill cannot be changed regardless of whether they waste
2 water or conserve water.

3 More importantly, UWI's seasonal rate structure only provides a limited, and
4 rather blunt, conservation price signal when moving from winter to summer. However,
5 within each summer season, UWI's rate structure does not provide a price incentive for
6 conservation because the unit price is constant regardless of the amount of water
7 consumption in each billing period. To put it another way, on a day-to-day basis during
8 the summer months, UWI's current rate structure essentially functions as a *uniform rate*
9 *structure*. As a result, this rate structure does not effectively promote efficient water use
10 during the period of peak use. An increasing block rate structure would send stronger
11 pricing signals to customers to promote more efficient use.

12 Q. WHY DO YOU PROPOSE MODIFYING THE UWI SUMMER RATE
13 STRUCTURE INTO AN INCREASING BLOCK RATE STRUCTURE WITH
14 MULTIPLE TIERS/BLOCKS?

15 A. In general, of the various types of water rate structures, the increasing block rate
16 structure sends the strongest message of conservation. Not only can it be designed to
17 curb high volume use and penalize wasteful water users, but it can also reward customers
18 for being efficient.

19 The most significant effects and biggest benefits of increasing block rate
20 structures occur in summer months, when discretionary outdoor water use dominates the
21 demand on urban water supplies. The Direct Testimony of Frank Gradilone (Exhibit 6,
22 Schedule 3, page 6) shows that about 76% of UWI's total normalized annual

1 consumption is used in the summer months. Outdoor water use is and will be the
2 primary driving force behind UWI's need to expand its supply.

3 These system expansions, supply procurements, and infrastructure upgrades will
4 translate to higher utility costs, which inevitably will be passed on to UWI customers.
5 To minimize, delay, or possibly avoid some of these future costs, a stronger conservation
6 message should be sent to customers now.

7 To promote efficiency, water rate structures must communicate the true value of
8 water. Only if the price of water reflects the economic value of water will customers
9 know whether it is "worth it" to conserve water. The true economic value of water not
10 only includes the utility's operation and maintenance costs (including billing and
11 metering), but also includes the costs to procure and develop additional water supplies to
12 meet growing demands, as well as the social and environmental "opportunity costs" of
13 losing other benefits of the water in order to develop and consume the water (e.g.,
14 ecological and recreation values of rivers, local/community economies, values of river
15 flows for diluting pollutants, etc.). Failing to integrate all of these direct and indirect
16 costs into a water rate structure is equivalent to subsidizing the cost of water.

17 An increasing block rate structure charges higher unit prices to customers who use
18 more water, and lower unit prices to customers who use less. In other words, the unit
19 prices reflect the strain or demand a customer (and customers like him or her) place on
20 the water supply system. This design is fundamentally fair, as customers are charged on
21 the basis of the costs they impose on the utility. Because high-volume users expedite the
22 need for infrastructure upgrades and new supply procurement, these relatively few high-
23 volume customers are more expensive for the utility to serve. It would be unfair to pass

1 on the costs generated by these relatively few customers to those who use more modest
2 amounts.

3 In summary, along with other conservation and efficiency programs, increasing
4 block rate structures can help stretch existing water supplies further and avoid much of
5 the cost, delay, and controversy that result from large new water development projects. If
6 designed appropriately, increasing block rates:

- 7 • Provide water at low prices for basic and essential needs, so all customers can
8 afford it;
 - 9 • Reward efficient customers with lower unit rates for water;
 - 10 • Send a strong price signal to high-volume and inefficient customers to encourage
11 more efficient use;
 - 12 • Fairly assign water supply and development costs proportionately to the
13 customers who place the highest burden on the supply system and the natural
14 supply sources;
 - 15 • Do all of the above while still maintaining a stable flow of revenue for the utility
16 to cover its increasing costs.
- 17

18 For an increasing block rate structure to send an effective conservation message to
19 all customers (low-volume and high-volume), enough blocks need to be established to
20 cover the full volume range. I recommend a minimum of three blocks, with additional
21 blocks being added depending on UWI customer use patterns and volumes. The
22 commodity charges for these blocks need to increase at a percentage that instills a notable
23 “price signal” to the customers.

24 Q. HOW MUCH USAGE SHOULD BE PRICED AT THE FIRST, LOW-PRICED
25 BLOCK?

26 A. The first, lower-priced block should be equivalent to the average indoor
27 residential usage per customer. While I support the Stipulation between UWI and the
28 Community Action Partnership Association of Idaho in concept, I recommend that the

1 initial block be increased to a volume that equals the average total indoor use per billing
2 period for a residential UWI account (i.e., not just toilets and showers). The proposed 3
3 CCF indoor volume block over a two-month billing period (2,244 gallons) is very low
4 relative to the average indoor water needs for a residential customer over the same
5 period. According to Attachment A to the Stipulation, this 3 CCF amount is slightly in
6 excess of average toilet and shower use during a bill period.

7 However, most families (low-income or not) use much more than 3 CCF indoors
8 over a two-month period, even when they're being efficient with their use. Many cities
9 with increasing block rates set their first block to accommodate all indoor use
10 (determined by the city's average winter consumption per residential account per month).
11 In most cities, this volume typically falls somewhere between 3,000 and 7,000 per month
12 (6,000-14,000 gallons bi-monthly). Widely-used studies on water usage (i.e. from the
13 American Water Works Association Research Foundation studies and other water use
14 documentation) reveal that the average American uses roughly 69 gallons per capita per
15 day indoors. This amounts to roughly 4,140 gallons bi-monthly, per person. With an
16 average U.S. indoor occupancy of 2.6 people per household, roughly 10,750 gallons are
17 used bi-monthly per household account, substantially more than the 2,244 gallons set by
18 the proposed 3 CCF block. This figure corroborates with the general range of 6,000-
19 14,000 gallons bi-monthly that were reported in cities that I have assessed. The bill
20 frequency data provided by UWI (Exhibit 404) also confirm this range is appropriate, as
21 43% of UWI winter-time bills are for less than 10 CCF (7,480 gallons bi-monthly).

22 Lastly, as it relates to choosing a volume for this "subsistence" use level, I
23 disagree with an assumption in Attachment A of the Stipulation with respect to the

1 proposed 3 CCF consumption block, that “[i]t is reasonable to assume that low-income
2 users would be in this low water consumption group” Based on average indoor
3 water needs for the average residential household, I find no reason to believe that the
4 10% of UWI customers using the least amount of water correlates to UWI’s low-income
5 customers. It is more likely that this very low use customer group is more correlated to
6 single-occupant households than low-income households. Low-income households with
7 family sizes greater than one or two will have a very difficult time staying within this
8 “subsistence” level. Furthermore, and equally important, it is likely that low-income
9 customers are residing in older, less-updated housing stock that do not have ULF toilets,
10 low-flow showerheads, or high-efficiency clothes washers. Protection of low-income
11 customers therefore is another strong policy basis for increasing the “subsistence” indoor
12 volume above 3 CCF.

13 Q. WHAT USAGE LEVELS WOULD BE PRICED AT HIGHER RATE BLOCKS?

14 A. There is no one single way to set the second, third, or fourth block volumes.
15 Many design options and strategies exist for setting up an effective increasing block rate
16 structure. However, to provide a suggested answer to this question, my explanation will
17 use a hypothetical three-block rate structure as an example. Other options exist (e.g.,
18 different volume threshold strategies, additional blocks).

19 I would suggest that the second block include a volume of water that would be
20 sufficient to allow average, efficient outdoor use in Boise. This can be done by carefully
21 assessing average customer use patterns in summer months. Alternatively, the second
22 block volume can be set by calculating an allocation of water that would sustain an
23 efficiently-watered average landscaped yard in UWI’s service area (using

1 evapotranspiration data for common vegetation choice(s) and average lot size or irrigable
2 area per customer).

3 Any water use that exceeds this second block volume threshold would fall into the
4 third block, which could be set at the point where the customer starts using indoor and
5 outdoor water that exceeds the average needs of UWI customers. Therefore, this is the
6 point where the strongest conservation price signal should be sent (assuming a three-
7 block structure).

8 However, once again, there is no “magic number” for setting block volumes and
9 prices. Additional blocks can be used to encourage efficient use within the range of
10 average outdoor water use. Or, as in some cities, an additional “penalty block” is used to
11 reach customers who use very excessive volumes of water (well above the average indoor
12 and outdoor volume thresholds).

13 Q. ARE YOU CONCERNED THAT CUSTOMERS WILL NOT KNOW AT
14 WHICH POINT IN THE MONTH THEIR USAGE HAS MOVED INTO A HIGHER
15 RATE BLOCK?

16 A. This is frequently raised as a concern with respect to tiered rates. However, many
17 water providers throughout the interior West have recently instituted increasing block
18 rate structures. In the Front Range of Colorado, nine of 12 large urban water providers in
19 a recent sampling are using increasing block rates. In a similar recent effort in Utah,
20 eight of 12 apply increasing block rate structures. See Exhibits 402 & 403; full reports
21 available at {<http://www.westernresourceadvocates.org/water/>}.

22 Customers in these cities have “learned” the charging mechanisms, monitored
23 water use via bills, and adjusted their use accordingly. Also, as with any rate structure

1 change, the corresponding utility holds the responsibility of preparing customers for the
2 change via appropriate public relations work in the months that precede the change.

3 Customers typically become much more attentive to their water use when a new
4 rate structure is enacted. In most cases, customers monitor and learn their use patterns by
5 viewing their billing statements on a monthly basis. Thus, with any rate structure
6 change, a clear and explanatory billing statement is vital. Most cities with increasing
7 block rates send bills that clearly define the blocks and indicate where an individual's use
8 is with respect to the block volumes.

9 If a customer's use extends slightly into the next block, only the volume of use in
10 that higher block is billed at the higher block rate. Therefore, this customer's resulting
11 water bill will only be increased by a small amount (by the gallon or CCF amount billed
12 at the higher block price). Unless the commodity charge increases from block to block
13 are excessive, the true "price signal" of an increasing block rate structure only becomes
14 strong or noticeable when a customer's water use extends well into the higher block(s).

15 Q. DO YOU RECOMMEND UWI ADOPT A MORE FREQUENT BILLING
16 CYCLE ?

17 A. Yes. Bi-monthly billing cycles can be counter-productive to water conservation
18 efforts. As mentioned above, customers interested in conservation or saving money adjust
19 their home water use on an incremental basis, in response to the consumption reported in
20 each billing statement. This practice is particularly common during the summer irrigation
21 months, when urban water use peaks. With a bi-monthly billing cycle, the summer could
22 be half over by the time customers are notified of their recent consumption quantities.
23 This may preclude many customers from making more efficient water use decisions

1 earlier in the summer during the high water-use months. Therefore, I recommend that
2 UWI switch to a monthly billing process. While I recognize this will increase billing
3 costs, monthly billing is a reasonable and common practice across various utilities.

4 The bottom line, however, is that customers need to be able to better track their
5 usage over shorter periods of time than bi-monthly billing allows. Advanced meters that
6 allow for automated meter reading (AMR) can also provide customers with up-to-the-
7 minute water usage information via remote electronic monitoring devices placed inside
8 their homes. The City of Aurora, Colorado (suburban Denver) recently implemented a
9 rebate program for these in-home usage monitors, which sell for about \$55. Other cities
10 have also considered this measure. An investigation into AMR in UWI's service territory
11 may be warranted as an alternative, or in addition to, more frequent billing.

12 **II. Conservation Programs**

13 Q. PLEASE OUTLINE THE COMPONENTS OF A SUCCESSFUL UTILITY
14 CONSERVATION PROGRAM.

15 A. For a conservation program to be effective, four types of policies, incentives, or
16 practices need to be in place:

- 17 • Water pricing incentives (via an increasing block rate);
- 18 • Rebate and retrofit incentives for indoor water saving appliances/fixtures,
19 landscaping, and irrigation system controllers and sensors;
- 20 • Regulations (e.g., plumbing, landscaping, and water-waste code); and
- 21 • Education

22
23 Two principles should guide these types of programs. First, it is very important
24 for a utility to send a consistent message of efficiency. To achieve this consistency, all
25 attributes that affect customer end use should send a similar message that promotes
26 conservation, including the rate structure, conservation incentive programs, development

1 and water use regulations, and education programs. Second, and more importantly, water
2 customers are human. Therefore, every customer possesses his/her own unique
3 behavior/action "trigger". Some respond solely to pricing, or perhaps other monetary
4 incentives. Others may not be reachable except through regulatory controls. Yet, for
5 others, all it may take is an education effort to affect their water use behavior.

6 Q. DO YOU BELIEVE UWI'S CONSERVATION PROGRAM OFFERS A
7 REASONABLE RANGE OF OPPORTUNITIES FOR CUSTOMERS TO LOWER
8 THEIR USAGE, AND THEREFORE MAINTAIN OR LOWER THEIR BILLS?
9 PLEASE EXPLAIN.

10 A. No. In practice, UWI's current program only employs one of the four program
11 components I listed above: education. Based on UWI's 1993 conservation plan and
12 information provided in this case, UWI's conservation program is insubstantial compared
13 to most other large interior West cities (e.g., Denver, Albuquerque, Santa Fe, El Paso,
14 Salt Lake City, Tucson, Las Vegas, Colorado Springs, and Boulder). UWI's response to
15 Staff's Production Request Number 43, including a summary of UWI's 1993
16 conservation plan, is attached hereto as Exhibit 405. UWI's response to IRU's Production
17 Request Number 5, which outlines the UWI's recent resource planning efforts, is attached
18 hereto as Exhibit 406.

19 The education component of UWI's water conservation program can be
20 considered commendable and acceptable in terms of comprehensiveness (via website,
21 classes, etc.). However, since customers must be rather self-motivated to seek education
22 on water conservation, these programs only tend to tap a small percentage of customers.
23 Bill flyers, media campaigns, and other widespread education efforts certainly "reach"

1 more customers, but the resulting water savings from such efforts is not easily
2 documented or proven. Indeed, it is inherently difficult to measure the effectiveness of
3 education program in actually achieving water savings.

4 UWI does have a water conservation kit program as well as a water audit
5 program, which technically falls under the category of customer education. However,
6 based on the very low participation rates of these programs, it appears that program
7 promotion is not nearly adequate and/or the customers are not sufficiently aware of any
8 incentives to participate. UWI's response to Idaho Rivers United's Production Request
9 Number 2 is attached hereto as Exhibit 407. According to that response, only 23 Indoor
10 Conservation Kits, 29 Outdoor Conservation Kits, and 55 Precipitation Kits were
11 distributed in 2003, with similar results in 2004 (prior years were not tracked). It is
12 likely that in most cases the same customer requested the indoor and outdoor kits
13 simultaneously. Thus, in 2003 and 2004, only 0.06% of UWI's 75,400 customers
14 benefited from the indoor/outdoor conservation kit program (or, this translates to 0.07%
15 of UWI's 65,210 residential accounts if these kits were only distributed to residential
16 customers). Relative to water use by all customers, the resulting water savings from
17 these programs is statistically negligible.

18 UWI's voluntary water audit program is also realizing low participation numbers.
19 As provided in response to production requests, only 311 water audits were performed
20 from 2000 through 2004. Exhibit 408 (UWI's response to Idaho Rivers United's
21 Production Request Number 3). This amounts to a participation rate of 0.4% of UWI's
22 75,400 customers over this five-year period (or, 0.5% of UWI's 65,210 residential
23 customers). All in all, these extremely low participation numbers clearly indicate that

1 UWI customers are not being adequately reached by the audit and conservation kit
2 programs.

3 Q. ARE THERE ADDITIONAL CONSERVATION PROGRAMS UWI COULD
4 IMPLEMENT?

5 A. Yes. Some examples of other programs and policies not utilized by UWI are:

- 6 • Ultra low-flush toilet rebate program
- 7 • High-efficiency clothes washer rebate program
- 8 • Landscape rebate program (i.e., for replacing turf with Xeriscaping, or installing
9 low-water use trees/shrubs)
- 10 • Irrigation controller rebate program
- 11 • Soil moisture sensor rebate (for irrigation system)
- 12 • Evapotranspiration controller rebate (for irrigation system)
- 13 • Water use monitoring meter rebate program
- 14 • Large water user audit program (voluntary or mandatory for high-volume CII
15 customers)
- 16 • Large water user savings incentives (e.g., water bill credits in return for efficiency
17 upgrades on high-volume CII accounts)
- 18 • Water-wise landscaping ordinance for new development (would necessitate City
19 of Boise involvement)
- 20 • Water-wise building codes and plumbing codes that exceed the requirements of
21 the 1992 Energy Policy Act.

22
23 The starting point for consideration of such programs would be an update and
24 renewal of UWI's 1993 conservation plan. I recommend the Commission direct UWI to
25 draft a new conservation plan (including a cost comparison between supply versus
26 demand-side resources) and submit the plan for the Commission's review as soon as
27 possible.

1 Q. ARE THERE ANY BARRIERS TO UWI INSTITUTING THESE PROGRAMS?

2 A. Yes. The most obvious barrier is that UWI (as an investor-owned utility) can
3 only lobby for regulatory changes, such as landscaping codes. Relative to other city-
4 owned utilities, UWI is at somewhat of a disadvantage in forming a conservation
5 program that includes municipal regulatory controls on land use and development.

6 In addition, UWI does not have a dedicated source of funds for conservation
7 programs, such as a tariff rider collecting a small percentage of revenues each month.
8 UWI's renewed conservation plan should include an analysis of how best to cover
9 conservation program costs.

10 Q. ARE THE CONSERVATION PROGRAMS YOU OUTLINED ABOVE COST
11 EFFECTIVE?

12 A. In general, yes. There is always a risk that programs can be mismanaged, or
13 under-advertised and simply not reach consumers. But the very nature of water supply
14 and water use in the West informs us that conservation is an economically appropriate
15 investment. Unlike electricity supplies, which can be expanded, water supplies are finite.
16 Given the finite nature of water in the semi-arid and arid interior West, the cost of
17 developing and supplying this finite resource will continue to increase as demands
18 increase. Burgeoning urban populations in our interior West cities combined with
19 predictable drought cycles will continue to pressure water utilities to seek new supply
20 sources as long as our current per capita demands persist.

21 However, water conservation, and subsequent demand reduction, can play a
22 significant role in offering a solution to this finite resource problem. With urban
23 population growth and drought cycles being virtually inevitable in most interior West

1 urban centers, aggressive conservation efforts can serve as an alternative and more cost-
2 effective source for meeting the demands brought by new growth. In fact, just as
3 traditional procurement and development of new water supplies will undoubtedly
4 increase over time as more of the finite resource is tapped, the cost of water conservation
5 will likely decrease due to improved technology, more water-wise policies, and an
6 improved public awareness.

7 Various municipal water utilities around the region have reported that
8 conservation efforts are becoming notably more cost-effective than traditional supply
9 development options, when compared in dollars per acre-foot. The time and costs of
10 environmental permitting, infrastructure expansion, and other displaced economies (e.g.,
11 recreation, tourism, etc.) are only a few of the attributes to the increasing costs of water
12 supply development. Unfortunately, a lack of conservation program monitoring and a
13 relatively short history of water conservation implementation, has yielded a significant
14 “data gap” in the water supply industry. Unlike with traditional supply options, accurate
15 and reliable cost-effectiveness data for water conservation options is rather limited.
16 However, more and more water utilities that see the potential water savings and
17 subsequent cost savings brought by active conservation are beginning to implement and
18 closely-monitor a wide variety of conservation measures.

19 The City of Albuquerque is a good example of cities that are actively utilizing a
20 comprehensive conservation program as a primary and cost-effective future supply
21 source. Although Albuquerque is experiencing steady population growth, it has managed
22 to address the water needs of most of this growth via demand reduction per capita. From
23 1995 to 2004, the City reduced its system-wide per capita demand by 28% and has set a

1 target to reach 40% reduction by 2014. In 1995, Albuquerque consumed over 125,000
2 acre-feet of water. Ten years later in 2004, the city consumed roughly 110,000 acre-feet
3 of water. Over this same period of time, Albuquerque's growth yielded roughly 25,000
4 new water accounts (from approximately 135,000 accounts to nearly 160,000 accounts).

5 Albuquerque's wide-reaching conservation program and water-wise development
6 standards played a vital role in this effort, which included indoor and outdoor rebate
7 programs and incentives, education efforts, and aggressive media campaigns. During
8 this 10-year time period when Albuquerque's conservation program took hold, the
9 program accounts for the installation of more than 48,500 ultra-low-flow toilets, 6,146
10 high-efficiency washing machines, 9,964 low-flow showerheads, 643 high-efficiency
11 dishwashers; and 271 hot water recirculation systems. Albuquerque utility staff
12 conducted 9,733 residential water use audits up to mid-2004.

13 Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?

14 A. I recommend the Commission find that UWI should implement a variety of
15 modifications to its water rate structure, conservation program, billing, and long-range
16 planning. Instead of raising rates across the board as proposed (increases in bi-monthly
17 fixed charge and winter and summer commodity charges), I recommend the Commission
18 order UWI to do the following:

- 19 (1) Modify water rate *structure* to an effective increasing block rate structure, with a
20 minimum of three blocks/tiers and block prices that reward for conservation and
21 charge notably higher commodity rates for high-volume use.
- 22 (2) Set an initial low-volume indoor block at the average indoor use volume for
23 residential customers. Ideally, this block price should be set at or below cost to
24 provide a reward incentive for low-volume or conserving customers.

- 1 (3) Institute monthly billing to give customers more frequent opportunities to monitor
2 water use and make appropriate adjustments from month to month.
- 3 (4) Develop and submit for Commission approval an updated and comprehensive
4 conservation plan as soon as possible following this case. This plan should
5 include a cost comparison between supply versus demand resources, and also
6 analyze means of funding additional further conservation program costs.
- 7 (5) Implement the new conservation plan to effectively encourage efficient water use
8 by all customers and provide incentives and opportunities for customers to
9 mitigate the financial impacts of increased water rates. Work with the City of
10 Boise Planning and Development Services Department and the Boise City
11 Council to consider a water-wise landscaping ordinance for new development and
12 establish a higher level of water-efficiency in the Boise plumbing code.
13

14 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

15 A. Yes