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LAWRENCE V. ROBERTSON, JR.
ATTORNEY AT LAW

308

P.O. Box 1448
Tubac, Arizona 85646

(520) 398-0411
FAX (520) 398-0412
Email: TubacLawyer@aol.com

OF COUNSEL TO
MUNGER CHADWICK, P.L.C

ADMITTED TO PRACTICE IN:
ARIZONA, COLORADO, MONTANA,
NEVADA, TEXAS, WYOMING,
DISTRICT OF COLUMBIA

February 21, 2006

Colleen Ryan, Supervisor
Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Re: Las Quintas Serenas Water Co.
Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and W-
01583A-05-0340 (Consolidated)

Dear Ms. Ryan:

Enclosed for filing in the above-referenced consolidated docketed proceedings are fifteen (15) copies of the prepared rebuttal case testimony of the following witnesses for Las Quintas Serenas Water Company ("LQS"):

Mike Wood
Mark Taylor
Ron Kozoman

Also enclosed for filing are fifteen (15) copies of LQS's Exhibits AR-1 through AR-9, as marked for identification.

Copies of the enclosed prepared rebuttal case testimony and exhibits are also being hand-delivered or mailed today to all known parties of record.

Please let me know if you have any questions. Thank you for your assistance.

Sincerely,

Lawrence V. Robertson, Jr.

Cc: Hon. Jane L. Rodda
Jason Gellman
John Gay

AZ CORP COMMISSION
DOCUMENT CONTROL

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PREPARED REBUTTAL CASE TESTIMONY
OF
MIKE WOOD
ON BEHALF OF
LAS QUINTAS SERENAS WATER CO.
IN
DOCKET NOS. W-01583A-04-0178, W-01583A-05-0326 AND W-01583A-05-0340

Q. 1 Please state your name and business relationship with the Applicant in these consolidated proceedings.

A. 1 My name is Mike Wood, and I am a member of the Board of Directors and Vice President of Las Quintas Serenas Water Co. ("LQS"). I have served in each of those capacities since June 2003.

Q. 2 Are you the same Mike Wood who previously filed direct case testimony in these consolidated proceedings as LQS's policy witness, and are you appearing in that same capacity in connection with this rebuttal testimony?

A. 2 Yes, as to each part of your question.

Q. 3 What are the purposes of your rebuttal testimony?

A. 3 First, I want to acknowledge and address a difference of opinion which appears to have developed among the members of LQS's Board of Directors as to the arsenic treatment program that LQS should implement in order to (i) comply with the United States Environmental Protection Agency's ("EPA") arsenic concentration regulations and (ii) continue to provide adequate and reliable water service to the company's customers. Second, I want to note and discuss why the amount of the financing authorization requested by LQS in its amended application in Docket No. W-01583A-05-0326 will need to be increased if the Commission concludes that the arsenic treatment program proposed by LQS is appropriate for its water system.

Q. 4 Please discuss the difference of opinion which appears to have developed among the members of the Board of Directors of LQS as it relates to these consolidated proceedings.

A. 4 As I stated in my prepared direct testimony at pages 4-5, it was a priority for me to assure

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“...that LQS would select and construct an arsenic removal methodology and facilities that would enable it to fully comply with the EPA regulations, and, simultaneously, discharge its public service corporation obligation to provide adequate and reliable water service to its customers at reasonable rates...”

while I considered various proposals for an arsenic treatment program for the company. I know that that also was (and is) the view of a second member of the company’s Board of Directors, namely, Rohn Householder. I had also understood that to be the view of John Gay, the third and remaining member, at the time the Board of Directors approved the Water System and Arsenic Master Plan (“Plan”) recommended by WestLand Resources, Inc. (“WestLand”) in March 2005, as well as at the time it authorized the filing of the financing authorization application with the Commission which led to the establishment of Docket No. W-01583A-05-0326.

Subsequently, Mr. Gay parted ways with Mr. Householder and me as to how the company should proceed. In so doing, he appears to have been primarily motivated by three factors. The first factor is an understandable desire to not overspend in making those facilities additions necessary to enable the company to comply with the EPA’s arsenic concentration regulations. Mr. Householder and I share that view, provided that, in endeavoring to control costs, you do not jeopardize the ability of the company to discharge its ongoing public service obligation to provide adequate and reliable water service to its customers. The second factor appears to be a belief on the part of Mr. Gay that the company has adequate storage capacity at present to enable it to provide adequate and reliable service to its customers. In that regard, that assumption on his part serves as a major premise to the report that he asked Miller Brooks Environmental (“Miller Brooks”) to prepare. The third factor is an apparent assumption by Mr. Gay that LQS can implement an arsenic treatment program in-house, with little use of outside contractors.

In his prepared rebuttal testimony, Mark Taylor of WestLand has discussed at length why the arsenic treatment approach reflected in the Miller Brooks report will not enable the company to attain the two corporate policy goals I have mentioned, whereas the arsenic treatment program that the LQS Board of Directors has adopted will allow those goals to be realized. In addition, Mr. Taylor has demonstrated why Mr. Gay’s premise as to adequate storage is not appropriate for a water system the size of LQS; and, he has included a copy of a letter from the Pima County Department of Environmental Quality which supports the position of the LQS Board of Directors and WestLand on this issue.

Finally, it is the opinion of Mr. Householder and myself that LQS does not have the staff to undertake a major construction project in-house, which both the WestLand and Miller Brooks programs would be; nor does LQS have the staff needed or licensed to allow it to act as its own general contractor, overseeing the work of subcontractors.

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2 Q. 5 In describing the purposes of your rebuttal testimony, you indicated that the amount of
3 financing authorization requested in Docket No. W-01583A-05-0326 will need to be
4 increased in the event that the Commission approves the arsenic treatment program
5 proposed by LQS. Why would that increase be necessary?

6 A. 5 There are two reasons. First, the costs of the equipment and construction necessary to
7 implement our proposed program have increased since the original cost estimate prepared
8 by WestLand in March 2005, or approximately one year ago. In his rebuttal testimony
9 and Exhibit AR-3, Mark Taylor describes in some detail, and on a line item basis, where
10 changes in the estimated costs have occurred. However, I would note, the allowance for
11 Engineering and Contingencies has been reduced from 25% to 15% now that we are
12 working with cost estimates provided by a general contractor who is qualified to
13 implement the program.

14 Second, LQS does not have the financial resources that would allow it to internally
15 finance the difference between the original cost estimate of \$1,648,750 and the current
16 cost estimate of \$1,889,168. As a consequence, those additional funds will have to be
17 borrowed from an outside lender, whether that lender is Commerce Bank of Arizona
18 and/or the Arizona Water Infrastructure Financing Authority ("WIFA"). In that regard,
19 we believe that it is imperative that the Commission decision in Docket No. W-01583A-
20 05-0326 authorize the company to borrow the approved amount from both Commerce
21 Bank of Arizona and WIFA. It is essential that we have a "back up" alternative, which
22 the Commerce Bank of Arizona's loan commitment represents. The ACC Staff's
23 financial witness, Daniel Zivan, appears to assume that a WIFA loan is a "given" if the
24 Commission approves our financing request. We do not think it is appropriate to proceed
25 on the basis of such an assumption, absent a prior commitment from WIFA.

26 As a final comment, I wish to note that a timely decision by the Commission is crucial.
27 WIFA has advised us that if the Commission issues a decision on our financing
28 authorization request by June 1, 2006, WIFA can have our loan application acted upon by
its Board of Directors that same month. Otherwise, no action would occur until the
WIFA Board of Directors next meeting in September 2006. Given that it will take many
months to order and install the necessary equipment, and to complete the related
construction work, every month is important.

Q. 6 Is there anything else you wish to say as a part of your rebuttal testimony?

A. 6 Yes. First, I am pleased that the ACC Staff's engineering witness, Dorothy Hains,
appears to be in general agreement with the basic design concept which WestLand
developed for LQS's arsenic treatment program. While she has recommended certain
equipment disallowances and estimated cost reductions, which Mark Taylor addresses in
his rebuttal testimony, she appears to be in general conceptual agreement with the
approach LQS has adopted.

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3 Second, it is the hope of Mr. Householder and myself that, after reviewing the critique of
4 the Miller Brooks report set forth in Mark Taylor's rebuttal testimony and exhibits, John
5 Gay will come to a full realization of why Mr. Householder and I have continued to
6 support the arsenic treatment program developed by WestLand; and that, with such an
7 understanding upon his part, we can put our differences on this matter behind us.

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12 Q. 7 Does that complete your rebuttal testimony?

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14 A. 7 Yes, it does.
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MUNGER CHADWICK, P.L.C.
ATTORNEYS AT LAW
NATIONAL BANK PLAZA
333 NORTH WILMOT, SUITE 300
TUCSON, ARIZONA 85711
(520) 721-1900

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PREPARED REBUTTAL CASE TESTIMONY
OF
MARK TAYLOR
ON BEHALF OF
LAS QUINTAS SERENAS WATER CO.
IN
DOCKET NOS. W-01583A-04-0178, W-01583A-05-0326 AND W-01583A-05-0340

- Q. 1 Please state your name and business affiliations.
- A. 1 My name is Mark Taylor. I am a registered Professional Engineer in the State of Arizona, and I am a Principal of WestLand Resources, Inc (WestLand).
- Q. 2 Are you the same Mark Taylor who has previously submitted direct case testimony upon the behalf of Las Quintas Serenas Water Co. ("LQS") in the above-referenced consolidated proceedings?
- A. 2 Yes. My previously filed prepared direct testimony includes a description of my professional qualifications and experience.
- Q. 3 What are the purposes of your rebuttal testimony?
- A. 3 There are several purposes to my rebuttal testimony. First, I will discuss the nature of the review and analysis of the documentation filed by Intervenor John Gay that my firm and representatives of LQS have undertaken, and I will discuss the results of that review and analysis. Second, I will provide a summary description of those capital improvements WestLand believes are necessary in order to enable LQS (i) to fully comply with the arsenic concentration regulations promulgated by the United States Environmental Protection Agency ("EPA"), and (ii) to continue to provide adequate and reliable water service to its customers. As LQS's policy witness, Mike Wood, stated in his prepared direct case testimony, these two goals provide the policy framework for the company's applications and requests in these consolidated proceedings. Third, I will discuss certain adjustments that should be made to the October 12, 2005 Opinion of Probable Construction Cost ("OPCC") prepared by WestLand, which appears to be the "starting point" for the analysis and direct case presentation filed by the Arizona Corporation Commission ("ACC") staff. Fourth, I will discuss and critique the capital improvements cost disallowances and adjustments proposed by the ACC Staff.
- Q. 4 Please describe the review and analysis of the direct case documentation submitted by Intervenor John Gay that WestLand and the company conducted.

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A. 4 Both myself and another professional engineer with our firm, Kara Festa, began by thoroughly reviewing the direct case documentation prepared by Intervenor John Gay. We are both thoroughly familiar with the history of this project, having been involved for the entire time (more than one year) that WestLand has been working with LQS on the master plan and arsenic design. Our history with this project is based on a number of meetings with the LQS Board of Directors, management and staff; multiple field visits to review the operation of the water system; knowledge of the LQS system from review of existing water company records and previous engineering studies; and an understanding of how arsenic and other water system regulations relate to the LQS system.

WestLand used this historical knowledge of the water system, personnel, and requirements to evaluate the Miller Brooks Environmental (Miller Brooks) report and other documents submitted by Intervenor John Gay for completeness, technical correctness, accuracy of events, and relevance to the needs of the existing LQS water system. We identified the major and minor issues and inconsistencies in the documents and then developed an approach to address the major items that are relevant to these proceedings in this rebuttal testimony. The main focus of our review was the Miller Brooks report and certain information about the adequacy of the existing water system that appeared to form the basis for John Gay's position. As a part of our approach, we used the additional expertise of an Arizona-licensed contractor with experience in water system construction and arsenic plant projects, as well as familiarity with the bidding conditions in southern Arizona, to analyze the construction cost estimates in both WestLand's and Miller Brooks' reports. That contractor was Smyth Steel Manufacturing, Inc. ("Smyth Steel"), which is based in Tucson, Arizona.

Q. 5 Did your review and analysis disclose any incompleteness or deficiencies in the report prepared by Miller Brooks, which appears to be a major predicate for the position being taken by Mr. Gay as to the amount of financing which should be authorized for capital improvements for arsenic treatment?

A. 5 Yes. In that regard, I would like to provide some context. The Miller Brooks report does present a feasible concept for an arsenic treatment approach that addresses only the issue of arsenic concentration in the wells. Although there are a few equipment items that we feel would be required to complete the arsenic system proposed in that report, such as flow control for the proposed bypass, chlorination, sand separation, and backup power supply, there are no major engineering deficiencies in the concept, given its limited scope.

However, there are two fundamental issues with the approach that was requested by Mr. Gay, as reflected in the Miller Brooks report. Information in the report indicates that its development was based upon an instruction from Mr. Gay to look solely at the design of individual arsenic treatment for the three wells, without consideration of the water system as a whole, and also to assume that all of the work would be either self-performed by LQS or subcontracted to local contractors.

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3 With respect to the first point, Miller Brooks was not asked to (i) perform site visits to
4 confirm the information provided or identify site-specific construction factors that may
5 not be evident in the photographs provided, (ii) determine if other solutions would better
6 fit the overall LQS system, (iii) analyze the existing water system for deficiencies, (iv)
7 identify water system issues that would be intensified by the implementation of the plan,
8 or (v) determine the effect of the proposed improvements on the existing system
9 operation. The Miller Brooks report, by the limited nature of what was requested of that
company, did not address system factors such as (a) storage requirements, (b) additional
pressure on the wellheads due to losses through the arsenic treatment, (c) subsequent
reduction of well capacity due to the additional pressure, or (d) undersized pipelines and
excessive pressures in the water system.

10 Second, as set forth in the respective direct case filings of LQS and John Gay, the cost
11 estimates do not allow a direct "apples-to-apples" comparison of the cost estimates for
12 the two arsenic systems, due to different assumptions. The assumptions made in
13 WestLand's cost estimate, and discussed with the LQS Board of Directors, were that
14 LQS will publicly bid the plans for the Well Nos. 6 and 7 combined arsenic treatment
15 system and will award the construction to the lowest qualified bidder to construct the
16 project in its entirety. This was due to the complexity of the Severn Trent arsenic
17 treatment system, which will require a significant construction effort to assemble.
18 WestLand assumed that the small packaged system for the Well No. 5 site would be
installed by LQS. The construction at this site will be less difficult due to the pre-
packaged skid-mounted treatment plant that is planned. Per the direction of John Gay,
Miller Brooks provided cost estimates assuming that LQS would act as a general
contractor and perform most of the installation at all three sites, although the treatment
systems at Well Nos. 6 and 7 would be the same type of site-assembled Severn Trent
treatment systems as planned for the combined site in WestLand's report.

19 WestLand's review of the cost estimates indicates that the Miller Brooks cost estimates
20 do not reflect current costs for the construction of the arsenic treatment systems by a
21 general contractor with the appropriate State of Arizona Class A-General Engineering
22 contractor license, as well as several other cost items. The issues identified with respect
23 to the cost estimates in the Miller Brooks report are as follows: (i) appropriate markup
24 and labor costs for a general contractor to install the facilities; (ii) costs for equipment
25 and operation of equipment required for installation of the facilities, such as cranes; (iii)
shipping costs for delivery of the arsenic treatment plant equipment from Pittsburgh,
Pennsylvania; (iv) appropriate unit costs for short lengths of piping and installation in a
retrofit situation where hand-digging may be required; (v) chlorination equipment; and
(vi) sand separation equipment.

26 Q. 6 Did you develop the full cost for the design concept presented in the Miller Brook report,
27 if adjusted to take the deficiencies and omissions you have described into account?
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A. 6 Yes.

Q. 7 Please describe how that was accomplished.

A. 7 The approach we used to arrive at a basis for comparison of the cost estimates was to adjust the costs provided by Miller Brooks, as necessary, to obtain a cost estimate that would reflect construction of the Severn Trent arsenic treatment systems for Well Nos. 6 and 7 by a licensed general contractor and to address the other items not currently provided for in the Miller Brooks report. The primary goal of the cost analysis was to utilize (i) the expertise of a local contractor with knowledge of current, local bidding conditions; (ii) experience with construction of water plant sites; and (iii) the same set of construction criteria, in order to develop an "apples-to-apples" construction cost comparison between the two design concepts.

To this end, WestLand contacted Smyth Steel to provide a full cost estimate for the Miller Brooks concept using the detailed cost estimates provided in that report as a starting point. At the same time, Smyth Steel also provided a cost estimate based on the WestLand design concept, plans, and specifications for the arsenic treatment system. Smyth Steel holds a Class A-General Engineering license issued by the State of Arizona Registrar of Contractors. They are involved in the construction of numerous water plant sites each year, including wells, reservoirs, booster stations, and pipelines, and Smyth is currently involved in the construction of several arsenic treatment systems. Smyth Steel is familiar with local bidding conditions, equipment availability and lead-times, and the issues associated with the type of construction contemplated on this project. As such, WestLand and LQS felt that Smyth Steel's input would be valuable in providing accurate, complete, and comparable cost estimates.

Q. 8 Please describe the completed cost picture you developed for the arsenic treatment approach reflected in the Miller Brooks report.

A. 8 In order to obtain comparative cost figures for the two arsenic treatment options, Smyth Steel was asked to provide a construction cost estimate for the Miller Brooks concept design based upon the assumption that the Severn Trent arsenic treatment systems for Well Nos. 6 and 7 would be constructed by a general contractor, while the packaged plant for the Well No. 5 site would be installed by LQS. Smyth Steel was asked to provide a construction cost estimate for Well Nos. 6 and 7 representative of a typical contractor's bid under current conditions to complete the facilities as intended by the conceptual design. The cost for Well No. 5 was based on Miller Brooks' cost estimate, updated to reflect the omitted items.

We asked Smyth Steel to provide the cost estimates in the same format as was previously provided in the Miller Brooks report. Even though the format for the cost estimates in the Miller Brooks report included different line items than the WestLand cost estimates, we believed it was important for the integrity of the comparison to the original report to

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3 maintain a similar format. The cost estimate provided by Miller Brooks was divided
4 separately for each well and had four separate item descriptions for each well. Smyth
5 Steel used these four categories and added two additional categories not originally
6 proposed by Miller Books. These two categories were a sand separator and a
chlorination unit, which were equally added to both Miller Brooks and WestLand's
design concepts. In addition, freight, contractor's mark-up, and installation costs were
also added to the Miller Brooks costs for Well Nos. 6 and 7.

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8 The resulting total construction cost, excluding engineering and contingencies, for the
9 Miller Brooks proposal was \$1,055,913. We added a 15 percent engineering and
contingencies cost of \$158,387, for a total cost of \$1,214,300. Exhibit AR-1 provides a
breakdown of the Smyth Steel cost construction estimate for the Miller Brooks proposal.

10 **Miller Brooks Design**

11	Smyth Steel Cost Estimate	\$1,055,913
12	15% Engineering and Contingencies	<u>158,387</u>
		\$1,214,300

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14 Q. 9 Would the arsenic treatment system reflected in the Miller Brooks report, if fully and
15 properly implemented, enable the company to achieve its two policy goals of (i)
16 complying with the EPA's arsenic concentration regulations and (ii) continuing to
17 provide adequate and reliable water service to its customers?

18 A. 9 No.

19 Q. 10 Why not?

20 A. 10 The treatment system reflected in the Miller Brooks report does not achieve both goals.
21 While the Miller Brooks approach would result in water that complies with EPA arsenic
22 requirements, it does not address other water system factors that are critical to the
23 incorporation of arsenic treatment on the LQS water system. When WestLand was
24 originally retained by the LQS Board of Directors to provide a plan to address arsenic,
25 the Board's direction was that we review this issue within the broader context of the
26 overall needs of the water system.

27
28 Using this approach, WestLand developed the LQS Water System and Arsenic Master
Plan ("Plan") in March 2005. This Plan addresses not only arsenic, but a number of other
issues that must be addressed in the implementation of an arsenic treatment program.
Addressing these other issues will avoid weakening the water system due to the addition
of the arsenic treatment system and will assist LQS in to achieving the two policy goals
previously mentioned.

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3 Q. 11 Please explain the approach to the Plan, the issues that WestLand identified through the
4 development of the Plan, and how those issues relate to the addition of the arsenic
5 treatment system to the LQS water system.

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7 A. 11 When WestLand developed the Plan, in addition to developing alternatives for arsenic
8 reduction in each of the three wells, we also identified additional factors that are integral
9 to system reliability and operation and could be affected by the methodology selected for
10 arsenic treatment. These factors are (a) adequate storage volume, (b) excessive operating
11 pressures in the water system due to small pipeline sizes, and (c) the effect of increased
12 pressure losses through the arsenic treatment system on wellhead pressure and well
13 capacity.

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15 It is important to discuss in detail the subject of providing reliable and adequate storage
16 for system operation during both peaking demands and emergency situations. The typical
17 engineering requirement for providing storage to a water system is to provide above-
18 ground storage in the amount of average daily demand for the peak month, plus fire flow
19 requirements, accounting for any additional operational band or unusable storage. This is
20 a standard requirement used by both large and small water systems throughout southern
21 Arizona. Many water systems increase their goal for storage capacity to as much as two
22 times average daily demand, and some use approximately one time average daily demand
23 plus fire flow volume. The recommended volume of above-ground storage has multiple
24 uses. The primary use is to provide an adequate volume of water that is available during
25 periods of peak demand, especially during summer months. This water needs to be
26 available during the instantaneous and peak hour demands throughout the year or when
27 operational issues or maintenance occurs on existing wells.

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29 In the existing Arizona Administrative Code (R-18-5-503), as referenced in Mr. Gay's
30 presentation, there is a calculation that can be used to reduce calculated storage capacity
31 requirements by accounting for available well capacity. This "exception" allows the
32 typical storage requirement of a water system to be reduced by treating well production
33 capacity as "storage," minus the capacity of the largest well. In the case of LQS, this
34 results in a calculated storage requirement of negative (-) 512,000 gallons. Because of
35 the exception, technically LQS can state that it is in compliance with State law, although
36 the reality is that the available storage is considerably less than what would be considered
37 operationally adequate or consistent with industry standards. The LQS system includes a
38 total of only 90,000 gallons of storage, and the water system has a calculated average
39 daily demand of approximately 450,000 gallons, and average day of peak month demand
40 of approximately 712,000 gallons. Thus, in reality, its current storage is clearly deficient.

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42 WestLand has discussed the issue of this reservoir capacity calculation with staff at our
43 local regulatory agency, Pima County Department of Environmental Quality (PDEQ),
44 numerous times in the past when preparing master plans for various water companies.
45 Staff at PDEQ has always maintained that a minimum of average daily demand of the
46 water system, plus fire flow, should be maintained to provide safe and reliable storage,
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3 and they do not recommend use of the aforementioned exception calculation. Based
4 upon these conversations with PDEQ, WestLand continues to recommend storage equal
5 to a minimum of average daily demand for all water systems. This is a position that
6 consistently has been both supported and encouraged by PDEQ and reiterated in recent
7 telephone conversations and meetings with PDEQ. It is also detailed in the February 16,
8 2006 letter from Mr. Mike Redmond, Senior Civil Engineering Assistant at PDEQ, to Mr.
9 Steve Gay, General Manager of LQS. A copy of this letter is attached as Exhibit AR-2.

10
11 The other issues identified in the development of the Plan, while less conspicuous than
12 the lack of storage capacity, are no less significant to the proper operation of the water
13 system. The existing system consists of a number of small water mains that are not
14 adequate to convey large volumes of water. When water in excess of immediate demand
15 is pumped into the water system, as would likely occur with any arsenic treatment
16 system, this can result in high operating pressures and therefore increased operating and
17 maintenance costs. Depending upon the demand within the water system, the LQS
18 system experiences pressure fluctuations around 25 psi, and sometimes greater than 30
19 psi when the wells are operating, due to the pipeline sizes and the output volume of the
20 wells delivering directly into the system. System pressures reach as high as 110 psi in the
21 lowest elevations in the water system. This is not an ideal operating situation for the
22 water system pipelines or the wells that are currently delivering directly into the water
23 system.

24
25 Other issues identified during the development of the Plan were the increased pressure
26 that would be developed on the wellhead, especially at Well Nos. 6 and 7, due to the head
27 losses anticipated through the operation of the arsenic treatment units and appurtenances,
28 and the subsequent reduced capacity of wells. In addition, the higher the pressure on the
wellheads, the more wear and less operating life that can be expected for the pumps and
other equipment.

19 Q. 12 Does the arsenic treatment system designed by WestLand Resources, and approved by
20 the company's Board of Directors attain both of the company's policy goals, namely, (i)
21 compliance with the EPA's arsenic concentration regulations and (ii) continuous
22 provision of adequate and reliable water service to customers?

22 A. 12 Yes.

23 Q. 13 Please briefly explain how the plan proposed will achieve each of those goals.

24 Q. 13 As previously mentioned, WestLand's direction from the LQS Board of Directors was to
25 provide the best solution for arsenic treatment in coordination with the needs of the
26 overall water system. Within this framework, WestLand developed a concept for a
27 combined arsenic treatment system for Well Nos. 6 and 7 that includes storage, a booster
28 station, and a backup generator. Well No. 5 was proposed to be kept separate and to

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2 deliver directly into the water system, as this well site does not have pressures as high as
3 the other two sites.

4 As designed, the Plan calls for a 400,000-gallon reservoir and 1,000 gpm booster station
5 with a backup generator at the Well No. 6 site. We believe that this is the best
6 engineering solution for LQS because it addresses many of the issues identified during
7 the master planning within the context of providing arsenic treatment. The reservoir
8 serves the dual purpose of providing reliable and adequate storage for system operation,
9 as well as serving as a finished water holding tank for the combined arsenic treatment
10 product from Well Nos. 6 and 7.

11 The proposed system will allow the pump station to deliver potable water into the system
12 at a rate commensurate with what is being used by the system. This will allow water
13 deliveries to correspond better with water system demands and will reduce system
14 operating pressures, thereby resulting in less electricity required to provide water to the
15 system.

16 Because the Plan includes re-equipping the wells and delivering at low pressure through
17 the arsenic treatment plant and into the finished water storage, it also addresses the issue
18 of excessive pressures on the existing Well Nos. 6 and 7. This methodology will reduce
19 the pressures on the existing well system from current pressures that range from 80 to
20 110 psi down to a range of 20 to 30 psi, resulting in improved operation and maintenance
21 of the wells due to lower pressure on the wellheads. As a result, the wells would
22 maintain current production capacity and could even be increased in capacity without
23 increasing motor horsepower or electrical service and controls for the sites.

24 The backup generator will provide a method of accessing the treated water during a
25 power outage. This backup supply is important to the provision of adequate service by
26 LQS, since the usable capacity in the 90,000 gallons of existing storage would provide
27 less than two hours of water supply to the system if there were an outage during peak
28 hour demand and the tanks were full. A more likely scenario, with the tanks only
partially full, would likely result in one hour or less before the system was out of water.

In summary, for all of the reasons discussed above, WestLand and LQS believe that the
Plan developed by WestLand will enable the company to attain the previously stated two
policy goals, whereas the design approach reflected in the Miller Brooks report would
not.

Q. 14 The company's applications were based upon the OPCC that was prepared by WestLand
in the Spring of 2005. Was that OPCC subsequently revised by WestLand in order to
reflect more recent costs, and was a copy of that OPCC provided to the ACC Staff?

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3 A. 14 Yes. The OPCC was updated in October 2005 for the reasons you suggest; and a copy of
4 the same was provided to ACC staff as a part of LQS's response to ACC staff's Fourth
5 Set of Data Requests.

6 Q. 15 Does it appear that the ACC Staff used the October 2005 OPCC as the "starting point"
7 for its critique of the company's proposed capital improvements program, and its
8 testimony on the proposed financing authorizations?

9 A. 15 Yes.

10 Q. 16 Assuming that to be what has occurred, are there certain adjustments that should be made
11 to the October 2005 OPCC in order to conform it to what the company is actually
12 proposing through its applications and testimony and exhibits as of this point in time?

13 A. 16 Yes.

14 Q. 17 Please describe the nature of those adjustments, and quantify the cost effect of the same
15 on the October 2005 OPCC.

16 A. 17 As previously mentioned, we requested that Smyth Steel provide a contractor's cost
17 estimate for the WestLand arsenic treatment program. Our primary goal in having a
18 licensed general contractor review our plans and provide a construction cost estimate
19 based upon local conditions, current equipment and labor prices, and experience with the
20 local construction industry, was to provide the most accurate construction cost estimate
21 for the proposed project for use in connection with the financing authorization request.
22 We believe that the resulting construction cost estimate is the most accurate we are able
23 to obtain without proceeding with an actual bidding process with multiple contractors.

24 WestLand's October 12, 2005 OPCC included 16 separate item descriptions. Smyth
25 Steel evaluated our design concept, prepared a detailed cost estimate, and broke out three
26 additional line items which were previously incorporated into other line items. These
27 items are electrical equipment, a new air compressor, and disinfection and testing. Smyth
28 Steel's construction cost estimate for the Plan shown in WestLand's September 2005
Arsenic Treatment Design Report is \$1,722,755, and this information is detailed in
Exhibit AR-3. A copy of the September 2005 design report was attached to my
previously filed direct testimony as Exhibit A-13.

The \$1,722,755 cost estimate includes the 400,000-gallon reservoir recommended in the
master plan. However, only 250,000 gallons of storage is included as a part of the
company's proposed arsenic capital improvements program and the financing
authorization request. Therefore, we must adjust the cost estimate to include only
250,000 gallons of storage. Smyth Steel provided information that a cost reduction of
\$80,000 could be anticipated to reduce the reservoir cost from 400,000-gallons to
250,000-gallons, as shown in Exhibit AR-4. This will result in a subtotal of \$1,642,755.

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3 Following the adjustment for reservoir size, we then added 15 percent engineering and
4 contingencies of \$246,413 for a total cost of \$1,889,168. The engineering and
5 contingency percentage was reduced from the original 25 percent estimate to 15 percent
6 based upon what we believe is the more accurate construction cost estimate by a licensed
7 contractor.

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WestLand Design

Smyth Steel Cost Estimate	\$1,722,755
Subtract (150,00 gallon oversize)	<u>-80,000</u>
	\$1,642,755
15% Engineering and Contingencies	<u>246,413</u>
	\$1,889,168

The final cost estimate is approximately \$59,000 less than the October 12, 2005 cost estimate, after adjusting for the 250,000-gallon reservoir and reducing the Engineering and Contingencies allowance from 25% to 15%. The differential cost between the Miller Brooks arsenic project cost estimate and the WestLand arsenic project cost estimate is approximately \$675,000; however, as I have previously discussed, the Miller Brooks approach does not achieve LQS's policy goals.

Q. 18 Have you reviewed and analyzed the prepared testimony and exhibits filed by Dorothy Hains as a part of the ACC Staff's direct case?

A. 18 Yes.

Q. 19 Do you agree with the cost disallowances and estimated cost reductions with regard to the company's capital improvements program that she has proposed?

A. 19 No.

Q. 20 Please describe each of the cost disallowances and estimated cost reductions she has recommended, and discuss why the company and WestLand disagree as to each.

A. 20 The January 25, 2006 direct testimony of Ms. Dorothy Hains included adjustments via exclusion or cost adjustment of several items in WestLand's October 12, 2005 OPCC. First, three items were excluded from the arsenic treatment project, namely, Item No. 5) 400,000-gallon reservoir; Item No. 11) emergency backup generator; and Item No. 14) hypochlorite chlorination units.

As I explained in detail previously, the 400,000-gallon reservoir is crucial to maintaining a water system that has adequate storage for operational uses and providing a forebay to balance the differential flows between the wells and the booster station. We have previously agreed with ACC Staff that not all of the 400,000 gallons of storage

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2 recommended in the Plan is solely for arsenic treatment. The minimum storage capacity
3 that we feel is required for the proper operation of this arsenic treatment system, without
4 excessive cycling and stress on the wells, is 250,000 gallons. This minimum 250,000
5 gallons of storage is integral to the project as designed and is necessary for the operation
6 of this arsenic treatment system. Also, this reservoir cannot be eliminated and still
maintain the overall benefits to this system previously described in terms of providing
adequate and reliable water service.

7 The second item eliminated in Ms. Hain's direct testimony is the emergency backup
8 generator. As mentioned previously, the emergency backup generator is an important
9 part of the overall system and is essential to the LQS goal of providing adequate and
10 reliable water service in order to maintain the health, safety, and reliability of the public
11 water system. It is imperative that water service be maintained to the public when
commercial power service from Trico Electric Cooperative is interrupted. The system as
a whole, in order to operate as intended even during relatively brief periods of
commercial power interruptions, requires an emergency backup generator.

12 The last item recommended for exclusion was the hypochlorite chlorination units. These
13 units have several benefits, including maintaining the health and safety of the community.
14 However, the disinfection of the water also performs an important function for the arsenic
15 treatment plant as discussed in the February 8, 2006 letter from Severn Trent to
16 WestLand, a copy of which is attached as Exhibit AR-5. This letter discusses the role of
17 chlorination prior to arsenic treatment as a means of oxidizing the arsenic compounds
from As (III) to As (V), which is the form of arsenic most readily adsorbed in the
adsorption process. For this reason, we believe the chlorination units are a necessary part
of the arsenic treatment system.

18 In terms of the cost reductions recommended by Ms. Hains, her direct testimony included
19 costs reductions on four items: Item No. 4) 12-inch water main; Item No. 8) Well No. 6
20 backwash tank; Item No. 10) Well No. 5 backwash tank; and Item No. 16) 3,000-gallon
hydropneumatic tank.

21 ACC staff suggested that an appropriate cost for 12-inch water main was \$36.70 per foot
22 rather than \$65.00 per lineal foot. We believe this cost is inadequate for this project due
23 to the large increases in construction cost and pipe materials over the last year, the design
24 requirement to include approximately 110 lineal feet of pipeline boring under
jurisdictional washes, and a newly paved road, and approximately 1,600 square yards of
chip seal pavement replacement. The Smyth Steel construction cost estimate for these
items is approximately \$79.65 per lineal foot.

25 ACC staff recommended a reduction in backwash tank prices from WestLand's \$25,000
26 to \$13,400 for Well No. 6 and \$4,000 to \$3,600 for Well No. 5. These two items were
27 priced by Smyth Steel, and both items include the equipment cost, the cost of delivery,
28

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2 fittings, and installation. The Smyth Steel cost estimate supported WestLand's cost
3 estimate of October 12, 2005.

4 The last recommended reduction was reducing the cost of the 3,000-gallon
5 hydropneumatic tank from \$18,000, to \$12,000. Based upon the current cost of steel and
6 an ASME-rated tank, including all connections, controls, and installation, Smyth Steel's
7 cost estimate for the 3,000-gallon hydropneumatic tank is \$20,000.

8 Based upon the project-specific factors described, current construction costs, local
9 construction conditions, and the experience of Smyth Steel, we believe the construction
10 cost estimate provided in Exhibit AR-3 is the most accurate current cost for the project.

11 Q. 21 Please summarize again why you believe that the arsenic treatment program developed
12 by WestLand Resources and adopted by the company's Board of Directors will enable
13 Las Quintas Serenas Water Co. to (i) comply with the EPA's arsenic concentration
14 regulations, and (ii) continue to provide adequate and reliable water service to customers.

15 A. 21 Over a year ago, the LQS Board of Directors retained WestLand to evaluate the LQS
16 water system for its ability to provide water to its customers with the two corporate
17 policy goals of (i) complying with the EPA's arsenic concentration regulations, and (ii)
18 continuing to provide adequate and reliable water service to its customers. We prepared
19 the analysis and our recommendations based on accepted engineering practices and
20 current industry standards. Our analysis included water quality concern, (in this case,
21 arsenic) and a review of the system's ability to provide adequate service while
22 maintaining appropriate operational pressures and well capacities.

23 The ultimate objective of the LQS Board of Directors was to provide the best overall
24 service to its customers in the most economical fashion. As a professional engineer, my
25 personal goal, and the goal of our firm, is to provide a recommendation to the water
26 company that will address all the issues facing that company and offer the best and most
27 economical improvements addressing long-term health and safety, operational cost, and
28 system reliability for LQS customers. In this instance, achieving this goal requires that
our recommendation include (a) storage for peaking demands, (b) a booster station, and
(c) an emergency generator. This program will deliver water at rates to match customer
demand and (i) reduce long-term operation energy cost, (ii) reduce pressures upon old
pipelines, (iii) reduce pressures on well heads to maintain or increase well capacity and
(iv) reduce long-term operation maintenance, as well as provide an adequate and efficient
arsenic treatment system.

We firmly believe that the system detailed in our Plan and in this and previous testimony
provides all of these features and provides the greatest benefits to the customers of LQS.
We do not believe that building a system that performs only one of these functions and
later has to be retrofitted to address other issues, or creates other water system issues that
cannot easily be addressed, is in the best interest of the water system customers.

MUNGER CHADWICK, P.L.C.
ATTORNEYS AT LAW
NATIONAL BANK PLAZA
333 NORTH WILMOT, SUITE 300
TUCSON, ARIZONA 85711
(520) 721-1900

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Q. 22 Does that complete your rebuttal testimony?

A. 22 Yes

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Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-1**

Miller Brooks Arsenic Program
2/20/2006

SMYTH STEEL

ITEM	Per Miller Brooks		
	WELL 5	WELL 6	WELL 7
EQUIPMENT	\$ 121,544.00	\$ 218,985.00	\$ 284,523.00
SITE WORK / CONCRETE	\$ 5,964.00	\$ 25,500.00	\$ 20,286.00
PIPING	\$ 12,888.00	\$ 41,600.00	\$ 53,281.00
ELECTRICAL	\$ 8,680.00	\$ 16,720.00	\$ 17,538.00
SAND SEPERATOR	\$ 1,445.00	\$ 4,205.00	\$ 5,255.00
CLORINATOR	\$ 1,050.00	\$ 2,000.00	\$ 2,000.00
SUB TOTALS	\$ 151,571.00	\$ 309,010.00	\$ 382,883.00
MARK UP 10%	\$ -	\$ 30,901	\$ 38,288
FREIGHT	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
INSTALLATION	\$ -	\$ 35,000.00	\$ 35,000.00
TOTALS	\$ 154,071	\$ 377,411	\$ 458,671

Taxes TOTAL \$ 990,153

TAXES Sahuarita 5.59% \$ 55,350.00
 BONDS \$ 10,410.00
 TOTAL \$ 1,056,913

EXCLUDES: PERMITS

Well # 5 per Miller Brooks Estimate.

This is based on information provided to us.

Electrical assumes all controls and disconnects included with package plant price.

Miller Brooks Arsenic Program
2/20/2006

SMYTH STEEL

ITEM	Per Miller Brooks WELL 5	WELL 6	WELL 7
EQUIPMENT	\$ 121,544.00	\$ 218,985.00	\$ 284,523.00
SITE WORK / CONCRETE	\$ 5,984.00	\$ 25,500.00	\$ 20,286.00
PIPING	\$ 12,888.00	\$ 41,600.00	\$ 53,281.00
ELECTRICAL	\$ 8,680.00	\$ 16,720.00	\$ 17,538.00
SAND SEPERATOR	\$ 1,445.00	\$ 4,205.00	\$ 5,255.00
CLORINATOR	\$ 1,050.00	\$ 2,000.00	\$ 2,000.00
SUB TOTALS	\$ 151,571.00	\$ 309,010.00	\$ 382,883.00
MARK UP 10%	\$ -	\$ 30,901	\$ 38,288
FREIGHT	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
INSTALLATION	\$ -	\$ 35,000.00	\$ 35,000.00
TOTALS	\$ 154,071	\$ 377,411	\$ 458,671

Taxes TOTAL \$ 990,153

TAXES Sahuarita 5.59% \$ 55,350.00
 BONDS \$ 10,410.00
 TOTAL \$ 1,055,913

EXCLUDES: PERMITS

Well # 5 per Miller Brooks Estimate.

This is based on information provided to us.

Electrical assumes all controls and disconnects included with package plant price.

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-2**

February 16, 2006

Mr. Steve Gay, Operation/Manager
LAS QUINTAS WATER COMPANY
P.O. Box 68
Sahuarita, Arizona 85629

Re: WATER SYSTEM STORAGE REQUIREMENTS

Dear Steve:

This is in response to your request to clarify the rules and regulations pertaining to water system storage requirements for public water systems.

Pima County Department of Environmental Quality's policy is to approve plans and designs, which adhere to the minimum standards and guidelines found in Arizona Administrative Code, Title 18, Chapter 5 and ADEQ's Engineering Bulletin #10. Neither of these codes and bulletins have been significantly revised in the past 14 years, while historical documentation and examples on what works and what doesn't continues to grow showing a need for these codes and bulletins to be significantly revised.

The rest of this letter is a personal recommendation, which is based on 13 years of experience working for Pima County Department of Environmental Quality, and with over 200 Public Water Systems within Pima County.

Per the Arizona Revised Statues R18-5-503 Storage Requirements, ..."the minimum storage capacity shall be equal to the average daily demand during the peak month of the year." This is the minimum storage capacity typically required for public water systems in order to provide adequate above ground storage. This storage is required to provide peak capacity during the peak hour demands through the summer months, and also emergency storage when a large well is out of service. In addition to this minimum storage capacity requirement, all fire flow requirements needs to be in addition to this volume. The Arizona Administrative Code also includes a caveat that states the following; "The minimum storage capacity for a multiple well system may be reduced by the amount of the total daily demand minus the production from the largest producing well." While this option may allow the water company to reduce the minimum storage capacity required for water systems, typically using this equation produces a negative net requirement of storage capacity and from my personal experience this only works with very small water system with populations under a few hundred. While it is the option of the water company to choose this methodology for determining storage, it is my strong recommendation that the minimum storage capacity for a water system be equal to or greater than the average daily demands during the peak month of the year for all water systems. This volume of above-ground storage provides adequate capacity to serve a water system during peak hour demands, throughout the peak demands of the summer months, and also provides emergency storage for well outages. I believe this will better provide a water system with greater reliability, public safety, and provide the greatest level of service to the customers.

Sincerely,



Mike Redmond, R.S.
Sr. Civil Engineering Assistant

cc: Mike Wood, Director, LQS Board Director
Rohn Hourseholder, LQS Board Director
John S. Gay, Director, LQS Board Director

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-3**

OPINION OF PROBABLE CONSTRUCTION COST

Project Name: Las Quintas Serenas Water System and Arsenic Program
2/20/2006

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	Site Demolition and Removal of Abandoned Facilities at Well Sites	LS	1	\$12,500	\$12,500	Well No. 6.
2	Site Piping Well Site No. 6	EA	1	\$92,000	\$92,000	Includes flow control valves and connections to treatment units
3	Concrete Slabs for Site Equipment	CY	30	\$600	\$18,000	Well Nos. 5 and 6
4	12-inch water main SDR-11 HDPE	LF	2,500	\$79.65	\$199,125	Well No. 7 to Well No. 6 site, includes 1600 sy chip seal, and 110 lf jack & bore.
5	400,000 gallon reservoir	LS	1	\$270,000	\$270,000	Well No. 6 site
6	1000-gpm transfer booster station	LS	1	\$220,000	\$220,000	Well No. 6 site
7	1,190 gpm Adsorption Arsenic Treatment System	LS	1	\$400,000	\$400,000	To treat Well Nos. 6 and 7 (Severn Trent)
8	Well No. 6 site backwash tank	LS	1	\$25,000	\$25,000	For Well No. 6 facility includes recycle pump.
9	200 gpm Adsorption Arsenic Treatment System	LS	1	\$150,071	\$150,071	To treat Well No. 5, per Miller Brooks estimate
10	Well No. 5 Backwash tank	LS	1	\$4,000	\$4,000	For Well No. 5 facility
11	Back-up Generator	LS	1	\$60,000	\$60,000	Well No. 6
12	Fencing and Site Work at Well Sites	EA	1	\$43,000	\$43,000	Well No. 6, includes grading for floodplain
13	Re-equip well	EA	2	\$15,000	\$30,000	Well Nos. 6 and 7, to remove bowls
14	Hypochlorite chlorination units	EA	3	\$2,000	\$6,000	All three well sites
15	Sand Separators	LS	1	\$13,827	\$13,827	All three well sites
16	3,000 gallon hydro pneumatic tank	EA	1	\$20,000	\$20,000	Well No. 6 Site
17	Electrical	EA	1	\$47,800	\$47,800	
18	Furnish, install new air compressor	EA	1	\$5,000	\$5,000	
19	Disinfection, and Testing	LS	1	\$5,000	\$5,000	
	Subtotal				\$1,621,323	
	TOTAL				\$1,621,323	

TAX SAHUARITA @ 5.59% \$90,632

BOND \$10,800

Excludes: Permits, This is based on information provided.

Electrical assumes all controls and disconnects included in package plant price.

TOTAL \$1,722,755

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-4**

SMYTH STEEL
4010 E. ILLINOIS ST.
TUCSON, AZ 85714
PHONE (520) 750-8719
FAX (520) 750-9544

FACSIMILE TRANSMITTAL SHEET

TO: Mark Taylor	FROM: Al Heimpel
COMPANY: Westland Resources	DATE: FEBRUARY 17, 2006
FAX- 206-9518	TOTAL NO. OF PAGES INCLUDING COVER: 2
PHONE NUMBER-	

RE: Las Quintas	YOUR REFERENCE NUMBER:
--------------------	------------------------

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY

NOTES/COMMENTS

As requested.
The estimated cost deduction to replace the proposed 400,000 gallon reservoir with a 250,000 gallon reservoir would be \$ 80,000.00

Al

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and
W-01583A-05-0340

**Applicant's
Exhibit AR-5**

SEVERN

TRENT

SERVICES

Filtration
Products

8 February 2006

Mr. Jeff A. Lowy
Westland Resources
2343 E. Broadway Boulevard, Suite 202
Tucson, AZ 85719

Subject: Prechlorination for Las Quintas Water Co SORB 33® As Removal System

Dear Mr. Lowy:

We understand that Westland Resources has proposed chlorination treatment upstream of both of Severn Trent Services' SORB 33® As Removal Systems for the purpose of ensuring that all of the water's arsenic is oxidized to the As(V) state. The water analysis provided to Hennesy Mechanical Sales and to STS date March 31, 2004 did not report speciation of As(III) but only the total As assay. Therefore, the presence of As(III) and its concentration relative to total As is unknown for each of the 3 wells.

Prechlorination of water for SORB 33® As treatment can only be beneficial to the process. Although the Bayoxide® E33 GFO media can remove As in its reduced +3 state, the adsorption process is most efficient when treating water with oxidized As(V).

Please feel free to contact me at the numbers below on my cell phone at (813) 601-7966 or e-mail at rdennis@severntrentservices.com if you have any questions on this subject.

Very Truly Yours,



Richard S. Dennis
Separation Products Manager

Enclosures

cc: Mr. Steven C. Wood - STS
Mr. Jeff Pals - Hennesy

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PREPARED REBUTTAL CASE TESTIMONY
OF
RONALD L. KOZOMAN, CPA
ON BEHALF OF
LAS QUINTAS SERENAS WATER CO.
IN
DOCKET NOS. W-01583A-04-0178, W-01583A-05-0326 AND W-01583A-05-0340

- Q. 1 Please state your name and professional status.
- A. 1 My name is Ronald L. Kozoman. I am a Certified Public Accountant, with a concentration in public utility accounting and regulation.
- Q. 2 Are you the same Ronald L. Kozoman who previously submitted direct case testimony on behalf of Las Quintas Serenas Water Co. ("LQS") in these consolidated proceedings?
- A. 2 Yes.
- Q. 3 Before beginning with your rebuttal testimony, is there a matter you would like to clarify with regard to your previously filed prepared direct testimony?
- A. 3 Yes, I used a gross-up factor based on the test year income tax rate that was used. However, Staff is using an income tax gross up tax factor using the actual income tax rates which would be incurred depending on how much principal on the proposed loan is repaid. I was under the impression that the income tax conversion could not be changed for purposes of these consolidated proceedings. Therefore, I used 26.459% on the loan.
- This was the tax rate used in the last rate case. Thus, the income tax factor needs to be changed. Instead of a uniform tax rate of 26.459%, the income tax gross-up varies based on whether the principal repaid (which would be taxable income to the utility) causes the Company to end up in the higher federal tax brackets. The tax factors are shown on Exhibit AR-6
- Q. 4 Have you reviewed the prefiled testimony and exhibits of the Arizona Corporation Commission Staff ("Staff") in these consolidated proceedings?
- A. 4 Yes.

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2 Q. 5 Are there matters contained in the Staff testimony and exhibits that you wish to address
3 in this rebuttal testimony?

4 A. 5 Yes. I would like to discuss several inaccuracies or shortcomings I observed in the
5 testimony and exhibits of Staff financial witness Daniel Zivan. Mark Taylor of
6 WestLand Resources, Inc. will discuss the testimony and exhibits of Staff engineering
7 witness Dorothy Hains in his rebuttal case testimony.

8 My concern with Mr. Zivan is that he isn't telling the whole story on Staff's proposed
9 Water Infrastructure Financing Authority ("WIFA") loan "solution". Many important
10 elements are left out of his testimony description of the requirements for a WIFA loan,
11 although some of these facts are spelled out in the Staff Report Summary which goes to
12 the Director of the Utility's Division.

13 Q. 6 Please describe the manner in which Mr. Zivan has failed to provide an accurate and
14 complete description of the requirements and process which must be followed in order to
15 obtain a loan from WIFA.

16 A. 6 Mr. Zivan does not list all the criteria involved with the WIFA loan process. As an
17 example, he does not set forth the fact that the WIFA loan will be approximately 2.00%
18 over prime rate (which is now 7.50%) multiplied by 80% (a subsidy from WIFA). So,
19 for example, that 2.00% would be added to the current prime rate of 7.50% which equals
20 9.50%. When that amount is multiplied by 80%, the resulting effective loan interest rate
21 is 7.60%, as opposed to Mr. Zivan's understated rate of 7.50%. In addition, and
22 significantly, the Staff does not disclose that WIFA requires borrowers to accumulate (or
23 fund) 20% of the loan principal amount (over a sixty (60) month period) as a debt reserve
24 against the prospect of a borrower not having the funds to make payments on the loan
25 and/or for money being available to be used for needed repairs. That amount is
26 significant. For example, 20% times Staff's recommended loan amount of \$1,324,688
27 would be \$264,938, which funded over sixty (60) months equals \$4,418 per month.
28 Thus, when Mr. Zivan talks about keeping the Company whole "cash wise," he is
omitting a very important and relevant cost factor.

I agree with Mr. Zivan that theoretically it would be less expensive for the Company's
customers if the Commission approves funding with WIFA, due to the twenty (20) year
repayment term (using traditional rate base regulation), because the cost of debt would be
set at approximately 7.60% in the cost of capital model vs. 8.00% for the bank loan.

However, I strongly disagree with his suggestion that this is the cheapest cost for the
Company or its customers. To the contrary, in reality, the Company and its customers
would repay more cash to WIFA than if the Company used the Bank loan with
Commerce Bank of Arizona. To illustrate this point, we can use the analogy of a house
loan or mortgage that could be financed over fifteen (15) years or thirty (30) years. The

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2 thirty (30) year loan would result in a lower monthly payment, but the borrower would
3 pay back less total dollars with fifteen (15) year loan.

4 Q. 7 Have you prepared exhibits that illustrate this point?

5 A. 6 Yes. I have prepared Exhibit AR-7 (loan with Commerce Bank of Arizona for ten years)
6 and AR-8 (loan with WIFA over twenty years). To make the loans comparable, I
7 assumed a ten (10) year loan at Staff's recommended loan amount vs. a twenty (20) year
8 WIFA loan in the same amount. That loan amount is \$1,324,688. For the bank loan I
9 assumed an 8.00% fixed interest rate. For the WIFA loan I assumed the Staff's interest
rate of 7.50% (and not the correct 7.60% that WIFA would charge if the loan were made
today.)

10 With the ten (10) year loan the total payments to Commerce Bank of Arizona would total
11 approximately **\$1,938,890** (assuming uniform monthly payments) including closing fees
12 of **\$10,235**. This is shown on Exhibit AR-7. These total payments consist of interest of
\$603,966, closing fees of \$10,235, and the principal payment of \$1,324,688.

13 With the twenty (20) year loan with WIFA, the sum of the payments would total
14 **\$2,561,183** and consist of interest of \$1,236,495 and the principal payment of
\$1,324,688. This is shown on Exhibit AR-8.

15 So the customers will actually pay \$622,293 more for the twenty (20) year WIFA loan
16 than for the ten (10) year Commerce Bank of Arizona loan, even when the loan
origination fees are included.

17 The monthly payments with a ten (10) year loan at 8.00% interest rate are noticeably
18 higher than the same loan amortized over a twenty (20) year period with WIFA at the
19 Staff's assumed interest rate 7.50%. However, when you add in the previously
20 mentioned WIFA debt reserve requirement, the difference between the bank and WIFA
21 monthly payments is substantially smaller, for the first five (5) years. Additionally, the
aggregate amount actually paid for the WIFA loan is substantially more than for the bank
loan.

22 Q. 8 Do you agree with the prime rate that Mr. Zivan used?

23 A. 8 No. Mr. Zivan used a prime rate of 7.37% in his computations, which does not exist and
24 never has. Apparently he used the known prime rate (At the date he prepared his
25 testimony of 7.25% and added 0.125% as an assumed prime rate increase. He apparently
26 went half way between a .25% interest hike and no rate hike. However, I am not faulting
Mr. Zivan on this item, as trying to out guess the Federal Reserve is next to impossible.

27 I commend Mr. Zivan's use of the actual tax rate rather than the test year tax rate. At
28 least that helps with the first year income tax payments. However, the second year

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2 income taxes will be understated as the principal payments increase. My computations
3 have the same problem.

4 Q. 9 Will the company have increased property taxes and income taxes (in future years) due to
5 the amounts that are recommended by either you or the Staff?

6 A. 9 Yes. As additional revenues are recorded, the property taxes, which are revenue based,
7 will increase. And, as the principal on either loan is reduced, the income taxes will
8 increase, as the Company will have less interest expense to deduct. Thus, the company is
9 not kept whole as to cash flow unless it files another rate case and its rates are adjusted to
10 reflect this situation. A rate case can be an expensive and time consuming undertaking.

11 Q. 10 Assuming that the Commission does not allow the operating expenses of \$21,000
12 associated with the operation of the arsenic treatment equipment, or the amortization of
13 the loan origination fees of \$1,267, will the income taxes be higher or lower than what
14 the Staff has computed?

15 A. 10 The income taxes would be lower, as there is no provision for not deducting these
16 expenses for income taxes, unless the Company gets an accounting order from this
17 Commission to defer them and collect them at a later date.

18 Alternatively, the Commission could grant an adjuster mechanism for the operating and
19 maintenance costs.

20 Q. 11 Have you reviewed Mark Taylor's rebuttal case testimony?

21 A. 11 Yes, I have.

22 Q. 12 Have you computed the latest monthly customer charge under the proposed Arsenic Cost
23 Recovery Mechanism, based on the latest cost estimate for the arsenic treatment plant
24 recommended by WestLand Resources, and adopted by LQS's Board of Directors?

25 A.12 Yes. I have prepared Exhibit AR-9 which reflects that the monthly customer charge for
26 an equivalent 5/8 inch meter would be \$27.62 as a result of the updated estimated cost of
27 the proposed arsenic treatment program and related income tax consequences, including
28 "gross up" on loan principal payments.

Q. 13 Does that conclude your rebuttal case testimony?

A. 13 Yes it does.

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-6**

Las Quinta Sernas Water Company
Incremental Income Rates

Exhibit AR-6
Witness: Kozoman

Staffs Prior
Taxable
Income +
(Commerce
Bank's
Plus
Principal
Repayments)
1st Year

	Income Tax Brackets for 2006				(a) Staffs Taxable Income	Staffs Taxable Income from Last Rate Plus Incremental Principal Payments of \$20,000				Staffs Prior Taxable Income + (Commerce Bank's Plus Principal Repayments) 1st Year
	2006	2006	2006	2006						
Taxable Income	50,000	75,000	100,000	500,000	18,260	38,260	58,260	78,260	98,260	146,823
Less Arizona Income Tax	3,484	5,226	6,968	34,840	1,272	2,666	4,060	5,453	6,847	10,231
Arizona Income Tax Rate =	6.968%									

Federal Income Before Taxes	50,000	75,000	100,000	500,000	18,260	38,260	58,260	78,260	98,260	146,823
Less Arizona Income Taxes	3,484	5,226	6,968	34,840	1,272	2,666	4,060	5,453	6,847	10,231
Federal Taxable Income	46,516	69,774	93,032	465,160	16,988	35,594	54,200	72,807	91,413	136,592

FEDERAL INCOME TAXES:

15% BRACKET UP TO \$50,000	6,977	7,500	7,500	7,500	2,548	5,339	7,500	7,500	7,500	7,500
25% BRACKET ON NEXT \$25,000	-	4,944	6,250	6,250	-	-	1,050	5,702	6,250	6,250
34% BRACKET ON NEXT \$25,000	-	-	6,131	8,500	-	-	-	-	5,581	8,500
39% BRACKET ON NEXT \$25,000	-	-	-	91,650	-	-	-	-	-	14,271
34% BRACKET OVER \$335,000	-	-	-	44,254	-	-	-	-	-	-

Federal Income Taxes	6,977	12,444	19,881	158,154	2,548	5,339	8,550	13,202	19,331	36,521
Total Income Tax	10,461	17,670	26,849	192,994	3,821	8,005	12,610	18,655	26,177	46,751

Tax Rate	20.92%	23.56%	26.85%	38.60%	20.92%	20.92%	21.64%	23.84%	26.64%	31.84%
Effective Income Tax Rates										
State	6.968%	6.968%	6.968%	6.968%	6.968%	6.968%	6.968%	6.968%	6.968%	6.968%
Federal	15.00%	17.83%	21.37%	34.00%	15.00%	15.00%	15.77%	18.13%	21.15%	26.74%
Total Tax Rate	21.97%	24.80%	28.34%	40.97%	21.97%	21.97%	22.74%	25.10%	28.11%	33.71%

Revenue Conversion Factor (1 / (1 plus tax rate))	128.15%	132.98%	139.54%	169.40%	128.15%	128.15%	129.44%	133.51%	139.11%	150.84%
Increment Tax (Staff Method)	28.15%	32.98%	39.54%	69.40%	28.15%	28.15%	29.44%	33.51%	39.11%	50.84%

(a) From Staff Exhibit DTZ-1 Income Taxes of \$3,458 and Operating Income of \$14,802.

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-7**

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Company Requested Loan at 8.00%

Exhibit No. AR-7
 Witness: Kozoman

Assumes Uniform Monthly Payments

ACC Staff Recommended Loan

Bank Interest (fixed) Interest Rate / Annual
 Bank Interest Rate (fixed) / Monthly
 Term In Years
 Term In months
 Monthly Annuity Factor
 Monthly Payment
 Staff Payments without Income Tax
Loan Fees = (.75% x Loan Amount = \$9,935.16) + \$300

Commerce
Bank
 \$ 1,324,688
8.00%
 0.666667%
 10
 120
 82.4215
 \$ 16,072.12
 \$ 16,072.00
 \$ 10,235.16

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
				\$ 1,324,688.00		
1	\$ 16,072.12	\$ 8,831.25	\$ 7,240.87	1,317,447.13		
2	16,072.12	8,782.98	\$ 7,289.14	1,310,157.99		
3	16,072.12	8,734.39	\$ 7,337.73	1,302,820.26		
4	16,072.12	8,685.47	\$ 7,386.65	1,295,433.61		
5	16,072.12	8,636.22	\$ 7,435.90	1,287,997.71		
6	16,072.12	8,586.65	\$ 7,485.47	1,280,512.24		
7	16,072.12	8,536.75	\$ 7,535.37	1,272,976.87		
8	16,072.12	8,486.51	\$ 7,585.61	1,265,391.26		
9	16,072.12	8,435.94	\$ 7,636.18	1,257,755.08		
10	16,072.12	8,385.03	\$ 7,687.09	1,250,067.99		
11	16,072.12	8,333.79	\$ 7,738.33	1,242,329.66		
12	16,072.12	8,282.20	\$ 7,789.92	1,234,539.74	\$ 90,148.26	Year 1
13	16,072.12	8,230.26	\$ 7,841.86	1,226,697.88		
14	16,072.12	8,177.99	\$ 7,894.13	1,218,803.74		
15	16,072.12	8,125.36	\$ 7,946.76	1,210,856.98		
16	16,072.12	8,072.38	\$ 7,999.74	1,202,857.24		
17	16,072.12	8,019.05	\$ 8,053.07	1,194,804.17		
18	16,072.12	7,965.36	\$ 8,106.76	1,186,697.41		
19	16,072.12	7,911.32	\$ 8,160.80	1,178,536.60		
20	16,072.12	7,856.91	\$ 8,215.21	1,170,321.39		
21	16,072.12	7,802.14	\$ 8,269.98	1,162,051.42		
22	16,072.12	7,747.01	\$ 8,325.11	1,153,726.30		
23	16,072.12	7,691.51	\$ 8,380.61	1,145,345.69		
24	16,072.12	7,635.64	\$ 8,436.48	1,136,909.21	\$ 97,630.53	Year 2
25	16,072.12	7,579.39	\$ 8,492.73	1,128,416.48		
26	16,072.12	7,522.78	\$ 8,549.34	1,119,867.14		
27	16,072.12	7,465.78	\$ 8,606.34	1,111,260.80		
28	16,072.12	7,408.41	\$ 8,663.72	1,102,597.08		

29

16,072.12 7,350.65 \$ 8,721.47 1,093,875.61

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Company Requested Loan at 8.00%

Exhibit No. AR-7
 Witness: Kozoman

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
30	16,072.12	7,292.50	\$ 8,779.62	1,085,095.99		
31	16,072.12	7,233.97	\$ 8,838.15	1,076,257.85		
32	16,072.12	7,175.05	\$ 8,897.07	1,067,360.78		
33	16,072.12	7,115.74	\$ 8,956.38	1,058,404.39		
34	16,072.12	7,056.03	\$ 9,016.09	1,049,388.30		
35	16,072.12	6,995.92	\$ 9,076.20	1,040,312.10		
36	16,072.12	6,935.41	\$ 9,136.71	1,031,175.40	\$ 105,733.81	Year 3
37	16,072.12	6,874.50	\$ 9,197.62	1,021,977.78		
38	16,072.12	6,813.19	\$ 9,258.94	1,012,718.84		
39	16,072.12	6,751.46	\$ 9,320.66	1,003,398.18		
40	16,072.12	6,689.32	\$ 9,382.80	994,015.38		
41	16,072.12	6,626.77	\$ 9,445.35	984,570.03		
42	16,072.12	6,563.80	\$ 9,508.32	975,061.71		
43	16,072.12	6,500.41	\$ 9,571.71	965,490.00		
44	16,072.12	6,436.60	\$ 9,635.52	955,854.48		
45	16,072.12	6,372.36	\$ 9,699.76	946,154.72		
46	16,072.12	6,307.70	\$ 9,764.42	936,390.30		
47	16,072.12	6,242.60	\$ 9,829.52	926,560.78		
48	16,072.12	6,177.07	\$ 9,895.05	916,665.73	\$ 114,509.67	Year 4
49	16,072.12	6,111.10	\$ 9,961.02	906,704.72		
50	16,072.12	6,044.70	\$ 10,027.42	896,677.29		
51	16,072.12	5,977.85	\$ 10,094.27	886,583.02		
52	16,072.12	5,910.55	\$ 10,161.57	876,421.45		
53	16,072.12	5,842.81	\$ 10,229.31	866,192.14		
54	16,072.12	5,774.61	\$ 10,297.51	855,894.64		
55	16,072.12	5,705.96	\$ 10,366.16	845,528.48		
56	16,072.12	5,636.86	\$ 10,435.26	835,093.21		
57	16,072.12	5,567.29	\$ 10,504.83	824,588.38		
58	16,072.12	5,497.26	\$ 10,574.86	814,013.52		
59	16,072.12	5,426.76	\$ 10,645.36	803,368.15		
60	16,072.12	5,355.79	\$ 10,716.33	792,651.82	\$ 124,013.91	Year 5
61	16,072.12	5,284.35	\$ 10,787.78	781,864.04		
62	16,072.12	5,212.43	\$ 10,859.69	771,004.35		
63	16,072.12	5,140.03	\$ 10,932.09	760,072.26		
64	16,072.12	5,067.15	\$ 11,004.97	749,067.29		
65	16,072.12	4,993.78	\$ 11,078.34	737,988.95		
66	16,072.12	4,919.93	\$ 11,152.19	726,836.75		
67	16,072.12	4,845.58	\$ 11,226.54	715,610.21		
68	16,072.12	4,770.73	\$ 11,301.39	704,308.82		
69	16,072.12	4,695.39	\$ 11,376.73	692,932.10		
70	16,072.12	4,619.55	\$ 11,452.57	681,479.52		

71	16,072.12	4,543.20	\$ 11,528.92	669,950.60		
72	16,072.12	4,466.34	\$ 11,605.78	658,344.81	\$ 134,307.01	Year 6

**Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Company Requested Loan at 8.00%**

Exhibit No. AR-7
Witness: Kozoman

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
73	16,072.12	4,388.97	\$ 11,683.16	646,661.66		
74	16,072.12	4,311.08	\$ 11,761.04	634,900.62		
75	16,072.12	4,232.67	\$ 11,839.45	623,061.17		
76	16,072.12	4,153.74	\$ 11,918.38	611,142.79		
77	16,072.12	4,074.29	\$ 11,997.84	599,144.95		
78	16,072.12	3,994.30	\$ 12,077.82	587,067.13		
79	16,072.12	3,913.78	\$ 12,158.34	574,908.79		
80	16,072.12	3,832.73	\$ 12,239.40	562,669.39		
81	16,072.12	3,751.13	\$ 12,320.99	550,348.40		
82	16,072.12	3,668.99	\$ 12,403.13	537,945.27		
83	16,072.12	3,586.30	\$ 12,485.82	525,459.45		
84	16,072.12	3,503.06	\$ 12,569.06	512,890.39	\$ 145,454.42	Year 7
85	16,072.12	3,419.27	\$ 12,652.85	500,237.54		
86	16,072.12	3,334.92	\$ 12,737.20	487,500.34		
87	16,072.12	3,250.00	\$ 12,822.12	474,678.22		
88	16,072.12	3,164.52	\$ 12,907.60	461,770.62		
89	16,072.12	3,078.47	\$ 12,993.65	448,776.97		
90	16,072.12	2,991.85	\$ 13,080.27	435,696.70		
91	16,072.12	2,904.64	\$ 13,167.48	422,529.22		
92	16,072.12	2,816.86	\$ 13,255.26	409,273.96		
93	16,072.12	2,728.49	\$ 13,343.63	395,930.33		
94	16,072.12	2,639.54	\$ 13,432.59	382,497.75		
95	16,072.12	2,549.98	\$ 13,522.14	368,975.61		
96	16,072.12	2,459.84	\$ 13,612.28	355,363.33	\$ 157,527.07	Year 8
97	16,072.12	2,369.09	\$ 13,703.03	341,660.30		
98	16,072.12	2,277.74	\$ 13,794.39	327,865.91		
99	16,072.12	2,185.77	\$ 13,886.35	313,979.56		
100	16,072.12	2,093.20	\$ 13,978.92	300,000.64		
101	16,072.12	2,000.00	\$ 14,072.12	285,928.52		
102	16,072.12	1,906.19	\$ 14,165.93	271,762.59		
103	16,072.12	1,811.75	\$ 14,260.37	257,502.22		
104	16,072.12	1,716.68	\$ 14,355.44	243,146.78		
105	16,072.12	1,620.98	\$ 14,451.14	228,695.64		
106	16,072.12	1,524.64	\$ 14,547.48	214,148.16		
107	16,072.12	1,427.65	\$ 14,644.47	199,503.69		
108	16,072.12	1,330.02	\$ 14,742.10	184,761.59	\$ 170,601.73	Year 9
109	16,072.12	1,231.74	\$ 14,840.38	169,921.22		
110	16,072.12	1,132.81	\$ 14,939.31	154,981.90		
111	16,072.12	1,033.21	\$ 15,038.91	139,943.00		
112	16,072.12	932.95	\$ 15,139.17	124,803.83		

113	16,072.12	832.03	\$ 15,240.10	109,563.73
114	16,072.12	730.42	\$ 15,341.70	94,222.04
115	16,072.12	628.15	\$ 15,443.97	78,778.06

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Company Requested Loan at 8.00%

Exhibit No. AR-7
 Witness: Kozoman

Payment Number	Payment	Interest Expense	Principal Payment	Balance	Principal Payment	Year
116	16,072.12	525.19	\$ 15,546.93	63,231.13		
117	16,072.12	421.54	\$ 15,650.58	47,580.55		
118	16,072.12	317.20	\$ 15,754.92	31,825.63		
119	16,072.12	212.17	\$ 15,859.95	15,965.68		
120	16,072.12	106.44	\$ 15,965.68	(0.00)	\$ 184,761.59	Year 10

Bank Loan

Actual Total Dollars Paid on Loan over 10 Years

<u>Total</u>	<u>Interest</u>	<u>Principal</u>
<u>Payments</u>	<u>Expense</u>	<u>Payment</u>
\$ 1,928,654	\$ 603,966	\$ 1,324,688
10,235	Loan Closing Costs	
<u>\$ 1,938,890</u>	Total Paid Out for Loan	

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-8**

**Las Quinta Serenas Water Company
Test Year Ended 9/30/03**

Exhibit No. AR-8
Witness: Kozoman

Staff Proposed WIFA Loan At Staff's Assumed Interest Rate

Assumes Uniform Monthly Payments	Staff's
ACC Staff Recommended Loan	WIFA LOAN
Staff's Assumed Subsidized Interest Rate / Annual	\$ 1,324,688
Subsidized Interest Rate / Monthly	7.50%
Term In Years	0.625000%
Term In months	20
Monthly Annuity Factor	240
Monthly Payment	124.1321
Staff Payments without Income Tax (rounded)	\$ 10,671.60
	\$ 10,672.00

\$ 1,324,688	
20%	Reserve "Funding" Percentage required in 5 years
<u>\$ 264,938</u>	\$ 4,415.63 Additional Funding to Monthly Payment for 1st Five Years

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
				\$ 1,324,688.00		
1	\$ 10,671.60	\$ 8,279.30	\$ 2,392.30	1,322,295.70		
2	\$ 10,671.60	8,264.35	2,407.25	1,319,888.46		
3	\$ 10,671.60	8,249.30	2,422.29	1,317,466.16		
4	\$ 10,671.60	8,234.16	2,437.43	1,315,028.73		
5	\$ 10,671.60	8,218.93	2,452.67	1,312,576.06		
6	\$ 10,671.60	8,203.60	2,468.00	1,310,108.07		
7	\$ 10,671.60	8,188.18	2,483.42	1,307,624.65		
8	\$ 10,671.60	8,172.65	2,498.94	1,305,125.70		
9	\$ 10,671.60	8,157.04	2,514.56	1,302,611.14		
10	\$ 10,671.60	8,141.32	2,530.28	1,300,080.87		
11	\$ 10,671.60	8,125.51	2,546.09	1,297,534.77		
12	\$ 10,671.60	8,109.59	2,562.00	1,294,972.77	\$ 29,715.23	Year 1
13	\$ 10,671.60	8,093.58	2,578.02	1,292,394.75		
14	\$ 10,671.60	8,077.47	2,594.13	1,289,800.62		
15	\$ 10,671.60	8,061.25	2,610.34	1,287,190.28		
16	\$ 10,671.60	8,044.94	2,626.66	1,284,563.63		
17	\$ 10,671.60	8,028.52	2,643.07	1,281,920.55		
18	\$ 10,671.60	8,012.00	2,659.59	1,279,260.96		
19	\$ 10,671.60	7,995.38	2,676.22	1,276,584.74		
20	\$ 10,671.60	7,978.65	2,692.94	1,273,891.80		
21	\$ 10,671.60	7,961.82	2,709.77	1,271,182.03		
22	\$ 10,671.60	7,944.89	2,726.71	1,268,455.32		
23	\$ 10,671.60	7,927.85	2,743.75	1,265,711.57		
24	\$ 10,671.60	7,910.70	2,760.90	1,262,950.67	\$ 32,022.10	Year 2
25	\$ 10,671.60	7,893.44	2,778.15	1,260,172.52		
26	\$ 10,671.60	7,876.08	2,795.52	1,257,377.00		
27	\$ 10,671.60	7,858.61	2,812.99	1,254,564.01		
28	\$ 10,671.60	7,841.03	2,830.57	1,251,733.44		
29	\$ 10,671.60	7,823.33	2,848.26	1,248,885.17		
30	\$ 10,671.60	7,805.53	2,866.06	1,246,019.11		

**Las Quinta Serenas Water Company
Test Year Ended 9/30/03**

Exhibit No. AR-8
Witness: Kozoman

Staff Proposed WIFA Loan At Staff's Assumed Interest Rate

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
31	\$ 10,671.60	7,787.62	2,883.98	1,243,135.13		
32	\$ 10,671.60	7,769.59	2,902.00	1,240,233.13		
33	\$ 10,671.60	7,751.46	2,920.14	1,237,312.99		
34	\$ 10,671.60	7,733.21	2,938.39	1,234,374.60		
35	\$ 10,671.60	7,714.84	2,956.76	1,231,417.85		
36	\$ 10,671.60	7,696.36	2,975.23	1,228,442.61	\$ 34,508.06	Year 3
37	\$ 10,671.60	7,677.77	2,993.83	1,225,448.78		
38	\$ 10,671.60	7,659.05	3,012.54	1,222,436.24		
39	\$ 10,671.60	7,640.23	3,031.37	1,219,404.87		
40	\$ 10,671.60	7,621.28	3,050.32	1,216,354.55		
41	\$ 10,671.60	7,602.22	3,069.38	1,213,285.17		
42	\$ 10,671.60	7,583.03	3,088.56	1,210,196.61		
43	\$ 10,671.60	7,563.73	3,107.87	1,207,088.74		
44	\$ 10,671.60	7,544.30	3,127.29	1,203,961.45		
45	\$ 10,671.60	7,524.76	3,146.84	1,200,814.61		
46	\$ 10,671.60	7,505.09	3,166.51	1,197,648.11		
47	\$ 10,671.60	7,485.30	3,186.30	1,194,461.81		
48	\$ 10,671.60	7,465.39	3,206.21	1,191,255.60	\$ 37,187.01	Year 4
49	\$ 10,671.60	7,445.35	3,226.25	1,188,029.35		
50	\$ 10,671.60	7,425.18	3,246.41	1,184,782.94		
51	\$ 10,671.60	7,404.89	3,266.70	1,181,516.24		
52	\$ 10,671.60	7,384.48	3,287.12	1,178,229.12		
53	\$ 10,671.60	7,363.93	3,307.66	1,174,921.45		
54	\$ 10,671.60	7,343.26	3,328.34	1,171,593.12		
55	\$ 10,671.60	7,322.46	3,349.14	1,168,243.98		
56	\$ 10,671.60	7,301.52	3,370.07	1,164,873.91		
57	\$ 10,671.60	7,280.46	3,391.13	1,161,482.77		
58	\$ 10,671.60	7,259.27	3,412.33	1,158,070.44		
59	\$ 10,671.60	7,237.94	3,433.66	1,154,636.79		
60	\$ 10,671.60	7,216.48	3,455.12	1,151,181.67	\$ 40,073.93	Year 5
61	\$ 10,671.60	7,194.89	3,476.71	1,147,704.96		
62	\$ 10,671.60	7,173.16	3,498.44	1,144,206.52		
63	\$ 10,671.60	7,151.29	3,520.31	1,140,686.21		
64	\$ 10,671.60	7,129.29	3,542.31	1,137,143.91		
65	\$ 10,671.60	7,107.15	3,564.45	1,133,579.46		
66	\$ 10,671.60	7,084.87	3,586.72	1,129,992.73		
67	\$ 10,671.60	7,062.45	3,609.14	1,126,383.59		
68	\$ 10,671.60	7,039.90	3,631.70	1,122,751.89		
69	\$ 10,671.60	7,017.20	3,654.40	1,119,097.50		
70	\$ 10,671.60	6,994.36	3,677.24	1,115,420.26		
71	\$ 10,671.60	6,971.38	3,700.22	1,111,720.04		
72	\$ 10,671.60	6,948.25	3,723.35	1,107,996.69	\$ 43,184.98	Year 6

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Staff Proposed WIFA Loan At Staff's Assumed Interest Rate

Exhibit No. AR-8
 Witness: Kozoman

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
73	\$ 10,671.60	6,924.98	3,746.62	1,104,250.08		
74	\$ 10,671.60	6,901.56	3,770.03	1,100,480.04		
75	\$ 10,671.60	6,878.00	3,793.60	1,096,686.45		
76	\$ 10,671.60	6,854.29	3,817.31	1,092,869.14		
77	\$ 10,671.60	6,830.43	3,841.16	1,089,027.98		
78	\$ 10,671.60	6,806.42	3,865.17	1,085,162.80		
79	\$ 10,671.60	6,782.27	3,889.33	1,081,273.48		
80	\$ 10,671.60	6,757.96	3,913.64	1,077,359.84		
81	\$ 10,671.60	6,733.50	3,938.10	1,073,421.74		
82	\$ 10,671.60	6,708.89	3,962.71	1,069,459.03		
83	\$ 10,671.60	6,684.12	3,987.48	1,065,471.55		
84	\$ 10,671.60	6,659.20	4,012.40	1,061,459.15	\$ 46,537.54	Year 7
85	\$ 10,671.60	6,634.12	4,037.48	1,057,421.68		
86	\$ 10,671.60	6,608.89	4,062.71	1,053,358.97		
87	\$ 10,671.60	6,583.49	4,088.10	1,049,270.86		
88	\$ 10,671.60	6,557.94	4,113.65	1,045,157.21		
89	\$ 10,671.60	6,532.23	4,139.36	1,041,017.85		
90	\$ 10,671.60	6,506.36	4,165.23	1,036,852.61		
91	\$ 10,671.60	6,480.33	4,191.27	1,032,661.34		
92	\$ 10,671.60	6,454.13	4,217.46	1,028,443.88		
93	\$ 10,671.60	6,427.77	4,243.82	1,024,200.06		
94	\$ 10,671.60	6,401.25	4,270.35	1,019,929.71		
95	\$ 10,671.60	6,374.56	4,297.04	1,015,632.68		
96	\$ 10,671.60	6,347.70	4,323.89	1,011,308.79	\$ 50,150.37	Year 8
97	\$ 10,671.60	6,320.68	4,350.92	1,006,957.87		
98	\$ 10,671.60	6,293.49	4,378.11	1,002,579.76		
99	\$ 10,671.60	6,266.12	4,405.47	998,174.29		
100	\$ 10,671.60	6,238.59	4,433.01	993,741.28		
101	\$ 10,671.60	6,210.88	4,460.71	989,280.57		
102	\$ 10,671.60	6,183.00	4,488.59	984,791.97		
103	\$ 10,671.60	6,154.95	4,516.65	980,275.33		
104	\$ 10,671.60	6,126.72	4,544.88	975,730.45		
105	\$ 10,671.60	6,098.32	4,573.28	971,157.17		
106	\$ 10,671.60	6,069.73	4,601.86	966,555.31		
107	\$ 10,671.60	6,040.97	4,630.63	961,924.68		
108	\$ 10,671.60	6,012.03	4,659.57	957,265.11	\$ 54,043.67	Year 9
109	\$ 10,671.60	5,982.91	4,688.69	952,576.42		
110	\$ 10,671.60	5,953.60	4,717.99	947,858.43		
111	\$ 10,671.60	5,924.12	4,747.48	943,110.95		
112	\$ 10,671.60	5,894.44	4,777.15	938,333.80		
113	\$ 10,671.60	5,864.59	4,807.01	933,526.79		
114	\$ 10,671.60	5,834.54	4,837.05	928,689.73		
115	\$ 10,671.60	5,804.31	4,867.29	923,822.45		
116	\$ 10,671.60	5,773.89	4,897.71	918,924.74		

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Staff Proposed WIFA Loan At Staff's Assumed Interest Rate

Exhibit No. AR-8
 Witness: Kozoman

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
117	\$ 10,671.60	5,743.28	4,928.32	913,996.42		
118	\$ 10,671.60	5,712.48	4,959.12	909,037.30		
119	\$ 10,671.60	5,681.48	4,990.11	904,047.19		
120	\$ 10,671.60	5,650.29	5,021.30	899,025.89	\$ 58,239.22	Year 10
121	\$ 10,671.60	5,618.91	5,052.68	893,973.21		
122	\$ 10,671.60	5,587.33	5,084.26	888,888.94		
123	\$ 10,671.60	5,555.56	5,116.04	883,772.90		
124	\$ 10,671.60	5,523.58	5,148.02	878,624.89		
125	\$ 10,671.60	5,491.41	5,180.19	873,444.69		
126	\$ 10,671.60	5,459.03	5,212.57	868,232.13		
127	\$ 10,671.60	5,426.45	5,245.15	862,986.98		
128	\$ 10,671.60	5,393.67	5,277.93	857,709.05		
129	\$ 10,671.60	5,360.68	5,310.91	852,398.14		
130	\$ 10,671.60	5,327.49	5,344.11	847,054.03		
131	\$ 10,671.60	5,294.09	5,377.51	841,676.52		
132	\$ 10,671.60	5,260.48	5,411.12	836,265.40	\$ 62,760.49	Year 11
133	\$ 10,671.60	5,226.66	5,444.94	830,820.47		
134	\$ 10,671.60	5,192.63	5,478.97	825,341.50		
135	\$ 10,671.60	5,158.38	5,513.21	819,828.29		
136	\$ 10,671.60	5,123.93	5,547.67	814,280.62		
137	\$ 10,671.60	5,089.25	5,582.34	808,698.27		
138	\$ 10,671.60	5,054.36	5,617.23	803,081.04		
139	\$ 10,671.60	5,019.26	5,652.34	797,428.70		
140	\$ 10,671.60	4,983.93	5,687.67	791,741.04		
141	\$ 10,671.60	4,948.38	5,723.21	786,017.82		
142	\$ 10,671.60	4,912.61	5,758.98	780,258.84		
143	\$ 10,671.60	4,876.62	5,794.98	774,463.86		
144	\$ 10,671.60	4,840.40	5,831.20	768,632.66	\$ 67,632.74	Year 12
145	\$ 10,671.60	4,803.95	5,867.64	762,765.02		
146	\$ 10,671.60	4,767.28	5,904.32	756,860.70		
147	\$ 10,671.60	4,730.38	5,941.22	750,919.49		
148	\$ 10,671.60	4,693.25	5,978.35	744,941.14		
149	\$ 10,671.60	4,655.88	6,015.71	738,925.42		
150	\$ 10,671.60	4,618.28	6,053.31	732,872.11		
151	\$ 10,671.60	4,580.45	6,091.15	726,780.96		
152	\$ 10,671.60	4,542.38	6,129.22	720,651.75		
153	\$ 10,671.60	4,504.07	6,167.52	714,484.23		
154	\$ 10,671.60	4,465.53	6,206.07	708,278.16		
155	\$ 10,671.60	4,426.74	6,244.86	702,033.30		
156	\$ 10,671.60	4,387.71	6,283.89	695,749.41	\$ 72,883.25	Year 13
157	\$ 10,671.60	4,348.43	6,323.16	689,426.25		
158	\$ 10,671.60	4,308.91	6,362.68	683,063.56		
159	\$ 10,671.60	4,269.15	6,402.45	676,661.12		

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Staff Proposed WIFA Loan At Staff's Assumed Interest Rate

Exhibit No. AR-8
 Witness: Kozoman

<u>Payment Number</u>	<u>Payment</u>	<u>Interest Expense</u>	<u>Principal Payment</u>	<u>Balance</u>	<u>Principal Payment</u>	<u>Year</u>
160	\$ 10,671.60	4,229.13	6,442.46	670,218.65		
161	\$ 10,671.60	4,188.87	6,482.73	663,735.92		
162	\$ 10,671.60	4,148.35	6,523.25	657,212.67		
163	\$ 10,671.60	4,107.58	6,564.02	650,648.66		
164	\$ 10,671.60	4,066.55	6,605.04	644,043.61		
165	\$ 10,671.60	4,025.27	6,646.32	637,397.29		
166	\$ 10,671.60	3,983.73	6,687.86	630,709.43		
167	\$ 10,671.60	3,941.93	6,729.66	623,979.77		
168	\$ 10,671.60	3,899.87	6,771.72	617,208.04	\$ 78,541.37	Year 14
169	\$ 10,671.60	3,857.55	6,814.05	610,394.00		
170	\$ 10,671.60	3,814.96	6,856.63	603,537.36		
171	\$ 10,671.60	3,772.11	6,899.49	596,637.87		
172	\$ 10,671.60	3,728.99	6,942.61	589,695.27		
173	\$ 10,671.60	3,685.60	6,986.00	582,709.26		
174	\$ 10,671.60	3,641.93	7,029.66	575,679.60		
175	\$ 10,671.60	3,598.00	7,073.60	568,606.00		
176	\$ 10,671.60	3,553.79	7,117.81	561,488.19		
177	\$ 10,671.60	3,509.30	7,162.30	554,325.90		
178	\$ 10,671.60	3,464.54	7,207.06	547,118.84		
179	\$ 10,671.60	3,419.49	7,252.10	539,866.73		
180	\$ 10,671.60	3,374.17	7,297.43	532,569.31	\$ 84,638.74	Year 15
181	\$ 10,671.60	3,328.56	7,343.04	525,226.27		
182	\$ 10,671.60	3,282.66	7,388.93	517,837.33		
183	\$ 10,671.60	3,236.48	7,435.11	510,402.22		
184	\$ 10,671.60	3,190.01	7,481.58	502,920.64		
185	\$ 10,671.60	3,143.25	7,528.34	495,392.30		
186	\$ 10,671.60	3,096.20	7,575.39	487,816.90		
187	\$ 10,671.60	3,048.86	7,622.74	480,194.16		
188	\$ 10,671.60	3,001.21	7,670.38	472,523.78		
189	\$ 10,671.60	2,953.27	7,718.32	464,805.46		
190	\$ 10,671.60	2,905.03	7,766.56	457,038.89		
191	\$ 10,671.60	2,856.49	7,815.10	449,223.79		
192	\$ 10,671.60	2,807.65	7,863.95	441,359.84	\$ 91,209.46	Year 16
193	\$ 10,671.60	2,758.50	7,913.10	433,446.75		
194	\$ 10,671.60	2,709.04	7,962.55	425,484.19		
195	\$ 10,671.60	2,659.28	8,012.32	417,471.87		
196	\$ 10,671.60	2,609.20	8,062.40	409,409.47		
197	\$ 10,671.60	2,558.81	8,112.79	401,296.69		
198	\$ 10,671.60	2,508.10	8,163.49	393,133.19		
199	\$ 10,671.60	2,457.08	8,214.51	384,918.68		
200	\$ 10,671.60	2,405.74	8,265.85	376,652.83		
201	\$ 10,671.60	2,354.08	8,317.52	368,335.31		
202	\$ 10,671.60	2,302.10	8,369.50	359,965.81		

203 \$ 10,671.60 2,249.79 8,421.81 351,544.00

Las Quinta Serenas Water Company
Test Year Ended 9/30/03
Staff Proposed WIFA Loan At Staff's Assumed Interest Rate

Exhibit No. AR-8
 Witness: Kozoman

Payment Number	Payment	Interest Expense	Principal Payment	Balance	Principal Payment	Year
204	\$ 10,671.60	2,197.15	8,474.45	343,069.55	\$ 98,290.29	Year 17
205	\$ 10,671.60	2,144.18	8,527.41	334,542.14		
206	\$ 10,671.60	2,090.89	8,580.71	325,961.43		
207	\$ 10,671.60	2,037.26	8,634.34	317,327.10		
208	\$ 10,671.60	1,983.29	8,688.30	308,638.79		
209	\$ 10,671.60	1,928.99	8,742.60	299,896.19		
210	\$ 10,671.60	1,874.35	8,797.25	291,098.94		
211	\$ 10,671.60	1,819.37	8,852.23	282,246.72		
212	\$ 10,671.60	1,764.04	8,907.55	273,339.16		
213	\$ 10,671.60	1,708.37	8,963.23	264,375.94		
214	\$ 10,671.60	1,652.35	9,019.25	255,356.69		
215	\$ 10,671.60	1,595.98	9,075.62	246,281.07		
216	\$ 10,671.60	1,539.26	9,132.34	237,148.73	\$ 105,920.82	Year 18
217	\$ 10,671.60	1,482.18	9,189.42	227,959.32		
218	\$ 10,671.60	1,424.75	9,246.85	218,712.47		
219	\$ 10,671.60	1,366.95	9,304.64	209,407.82		
220	\$ 10,671.60	1,308.80	9,362.80	200,045.02		
221	\$ 10,671.60	1,250.28	9,421.31	190,623.71		
222	\$ 10,671.60	1,191.40	9,480.20	181,143.51		
223	\$ 10,671.60	1,132.15	9,539.45	171,604.06		
224	\$ 10,671.60	1,072.53	9,599.07	162,004.99		
225	\$ 10,671.60	1,012.53	9,659.07	152,345.93		
226	\$ 10,671.60	952.16	9,719.43	142,626.49		
227	\$ 10,671.60	891.42	9,780.18	132,846.31		
228	\$ 10,671.60	830.29	9,841.31	123,005.00	\$ 114,143.73	Year 19
229	\$ 10,671.60	768.78	9,902.82	113,102.19		
230	\$ 10,671.60	706.89	9,964.71	103,137.48		
231	\$ 10,671.60	644.61	10,026.99	93,110.49		
232	\$ 10,671.60	581.94	10,089.66	83,020.84		
233	\$ 10,671.60	518.88	10,152.72	72,868.12		
234	\$ 10,671.60	455.43	10,216.17	62,651.95		
235	\$ 10,671.60	391.57	10,280.02	52,371.93		
236	\$ 10,671.60	327.32	10,344.27	42,027.66		
237	\$ 10,671.60	262.67	10,408.92	31,618.73		
238	\$ 10,671.60	197.62	10,473.98	21,144.75		
239	\$ 10,671.60	132.15	10,539.44	10,605.31		
240	\$ 10,671.60	66.28	10,605.31	\$ 0	\$ 123,005.00	Year 20

WIFA Loan
Actual Total Dollars Paid on Loan Over 20 Years

Total Interest Principal

<u>Payments</u>	<u>Expense</u>	<u>Payment</u>
\$ 2,561,183	\$ 1,236,495	\$ 1,324,688
\$ 2,561,183	Total Paid Out for Loan For WIFA Loan	

Las Quintas Serenas Water Company

Docket Nos. W-01583A-04-0178, W-01583A-05-0326 and

W-01583A-05-0340

**Applicant's
Exhibit AR-9**

Las Quinta Serras Water Company
 Test Year Ended 9/30/03
 Latest Cost for Arsenic Treatment Equipment

Exhibit AR-9
 Witness: Kozoman

Line No.	Description	Amount	Equivalent Annual 5/8-Inch Meters	Monthly Present Rates	Proposed Surcharge	Proposed Monthly Minimum	Percent Change
1	Total Payments 1st Year on Loan of \$1,650,000	\$ 240,229	700	10.00	\$ 27.62	\$ 37.62	136.20%
2	Additional Debt of \$ 239,168 = (\$ 1,889,168 - 1,650,000)	34,821	0	22.50	41.43	63.93	154.30%
3		\$ 275,050	90	25.00	69.05	94.05	136.20%
4	Total of Principal Payments on the Loan for \$1,650,000	\$ 112,287	30	55.00	138.11	193.11	139.82%
5	Total of Principal Payments on the Loan for \$239,168 at 8.00%	16,276	32	70.00	220.98	290.98	131.68%
6	Total Principal Paid	\$ 128,563	0	125.00	441.95	566.95	128.28%
7	Gross-up for Income Tax Purposes	50.84% (Gross-up Tax rate with Staff's Prior Income + Principal Payments)	25	225.00	690.55	915.55	132.58%
8	Total Gross Up Tax	65,363	0	350.00	1,381.10	1,731.10	125.34%
9	Total Payments + Income Tax Gross-up on Principal Paid	340,413	150	10.10	27.62	37.72	136.57%
10	Equivalent Customers (Annual Basis)	12,324	1				
11	Divide by Equivalent Customers	\$ 27.62					
12	Monthly Customer Charge for Equivalent 5/8-Inch Meter						
13							
14							
15							
16							
17							
18							
19							
20							
21							
22	Meter Size						
23	5/8 x 3/4-inch Meter	700	700	10.00	27.62	37.62	136.20%
24	3/4-inch Meter	36	0	22.50	41.43	63.93	154.30%
25	1-inch Meter	6	90	25.00	69.05	94.05	136.20%
26	1 1/2-inch Meter	4	30	55.00	138.11	193.11	139.82%
27	2-inch Meter	1	32	70.00	220.98	290.98	131.68%
28	3-inch Meter	1	0	125.00	441.95	566.95	128.28%
29	4-inch Meter	1	25	225.00	690.55	915.55	132.58%
30	6-inch Meter	150	0	350.00	1,381.10	1,731.10	125.34%
31	Standpipe	897	150	10.10	27.62	37.72	136.57%
32	Totals	1,027	1,027				
33		12,324	12,324				