

**INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE'S
TECHNICAL REVIEW COMMITTEE**

MEETING SUMMARY

July 29, 2013, 1:00 p.m.

Colorado River Conference Room, Southern Nevada Water Authority
100 City Parkway, Seventh Floor, Las Vegas, Nevada

Technical Review Committee Members Present: Mike Alastuey, Marcus Conklin, Paula Eylar-Lauzon, John Restrepo, Bob Kasner

Technical Review Committee Members Absent: None

Staff Present: John Entsminger, Randall Buie, Katie Horn

Others Present: Guy Hobbs, Thomas Toepfer, Brian Thomas

PUBLIC COMMENT

Ed Uehling, Las Vegas, Nevada, provided information to the committee for review and discussed the meeting's backup material, meeting recordings, power and groundwater banking savings, and Southern Nevada Water Authority (SNWA) revenues and expenses.

SUMMARY OF ACTIVITIES

The Southern Nevada Water Authority's (SNWA) Integrated Resource Planning Advisory Committee's (IRPAC) Technical Review Committee met Monday, July 29, 2013. The meeting began at 1:00 p.m.

Review purpose and scope of Technical Review Committee.

Guy Hobbs, Hobbs, Ong and Associates, noted the package of materials that was provided to committee members prior to the meeting. Mr. Hobbs referenced the Integrated Resource Planning Advisory Committee (IRPAC) and how the Technical Review Committee was established to validate the assumptions used in the rate model. He recognized Bob Kasner and John Restrepo as members of both this committee and IRPAC.

He outlined the assumptions that the committee will be reviewing, which included growth in sales tax figures, connection charge revenues, operating expenses, water sales, debt service schedules and price elasticity. Other model drivers can be considered, including interest earnings. He noted the goal would be to agree upon the rate model assumptions and provide to IRPAC for final consideration.

Paula Eylar-Lauzon asked why the committee must complete its analysis by the end of July. Mr. Hobbs and John Entsminger, SNWA Senior Deputy General Manager, discussed IRPAC's recommendation to phase-in rates, and the legally-mandated steps required before a rate increase can go into effect. Lead time is required before a proposed January 2014 implementation, including public outreach, public meetings and the preparation of Business Impact Statements. Ms. Eylar-Lauzon noted that it is a short time frame considering the work being asked of the committee.

Review and make recommendations on the model assumptions used by the Integrated Resource Planning Advisory Committee.

Mr. Hobbs proposed addressing each assumption with the committee, beginning with sales tax projections. He referred the committee to Exhibit A, which is an overview of the rate model. He provided a background on the sales tax, how the SNWA collects sales tax, and how it's used as a revenue source. He noted the tax is set to sunset in 2025 unless the Clark County Board of Commissioners removes the sunset clause.

Bob Kasner noted the issues outside SNWA control that impact sales tax, such as the tax itself is under legislative control and the narrowing amount of items subject to sales tax. He stated that 4 percent is the highest assumption with which he would be comfortable. Mr. Hobbs agreed with Mr. Kasner's comments and stated that when developing the model and its assumptions, they considered using a decreasing rate of growth.

Mike Alastuey noted the State of Nevada's two-year time frame within its budget cycle projects a 5 percent sales tax increase within the near term. He recommended a tapered projection.

Ms. Eylar-Lauzon asked if the sales tax figures used within the model have been adjusted with the May sales tax projections, and agreed with Mr. Alastuey to use a more aggressive percentage increase for the first few years and then taper the increase down in the out years.

Marcus Conklin clarified that the sales tax was a local option tax, and not collected statewide. He also discussed the challenges associated with trying to predict exactly what amount the sales tax is going to generate, and instead suggested using an assumption that is reasonable.

Following questions from committee members about the powers of IRPAC and the SNWA Board, Mr. Hobbs answered questions about what IRPAC was formed to do and how the SNWA Board of Directors considers recommendations, but ultimately has the final decision regarding policy. He also shared that IRPAC is looking at policy recommendations that address variances within the model, should finances outperform projections.

Mr. Hobbs recognized the dialogue among committee members around using a tapered projection and asked them for a specific projection. Committee members discussed the issue and came to consensus around the following sales tax projection:

	2014	2015	2016	2017	2018	2019	2020	2021
Projected Increase (%)	5	5	4.5	4	3.5	3	2.5	2

Ms. Eylar-Lauzon noted that she would like to see the impacts of these projections within the model.

The committee went on to discuss connection charges. Mr. Hobbs mentioned to the IRPAC members that the model has been updated to reflect a more current connection charge estimate. Mr. Hobbs explained that the connection charge estimate used in the model is based off of population projections. The committee discussed other ways to project connection charges including building permits. Mr. Restrepo said that over time, population projections are a more stable predictor than other means to predict connection charge revenue.

Committee members recognized the volatility of the connection charge revenue. Mr. Kasner shared that some members of IRPAC have proposed a policy that would capture revenues in excess of the 2014 budgeted amount and allocate the funds separate from SNWA revenues used within the model, which would ultimately

minimize the volatility within the model. Mr. Hobbs noted that staff is investigating whether there are any restrictions on connection charge revenues. Brian Thomas pointed out that if connection charge revenues are capped within the rate model, then additional revenue would be required through water rates.

Ms. Eylar-Lauzon requested information related to the connection charge revenue rates over time and connection charge collections over time. Mr. Alastuey and Mr. Conklin recognized the volatility in the charge and the concerns if the revenue was over-estimated, and felt more comfortable with a conservative estimate. Both were comfortable with the model's projections. Mr. Kasner and Mr. Restrepo were comfortable with the model's assumption for connection charge revenues and recognized that IRPAC may set a policy that caps the connection charge revenues within the model. Ms. Eylar-Lauzon noted her concern with the proposed policy that IRPAC may recommend, citing that the SNWA has spent millions of dollars on capital projects and may need additional revenue to support future debt.

Mr. Hobbs moved onto SNWA operating costs, and noted that the model assumed a three percent growth rate in operating expenses, a typical amount for government budgets. Mr. Alastuey suggested 3 percent was a conservative estimate for government budgets, but wanted to know more information about the SNWA's future capital plans, as operating expenses seem to reflect ongoing capital costs. Ms. Eylar-Lauzon said she was uncomfortable recommending any growth rate, and requested more information regarding capitalized labor expenses.

Randall Buie, SNWA Comptroller, explained that Operating Expenses include some ranch expenses, annual fees for water rights, and other miscellaneous expenses. Mr. Alastuey asked if the numbers they were reviewing for 2013/2014 was a reasonable expectation of expenses in later years. Mr. Kasner also asked if the expenses will be capitalized at the same rate going forward. Mr. Buie explained that the rate depends on the asset that was built. Ms. Eylar-Lauzon asked for a schedule that shows that information. Mr. Entsminger shared that a three percent increase on operating expenses is reasonable at this time, but recognized the Colorado River's poor hydrology, which may require facility improvements – costs of which at this time are unknown.

Mr. Alastuey noted the increase in Operating Expenses from 2013 to 2014 and asked if the increase – larger in this year than in future years – is anticipated to be repeated. Mr. Buie said he would provide that information.

The committee continued to discuss the capitalized labor costs. Ms. Eylar-Lauzon requested a history of these costs. Mr. Kasner asked why capitalized labor costs did not decline over time as capital construction projects were completed. Mr. Entsminger explained that these employees are reassigned to other capital projects or work to maintain ongoing capital projects. The SNWA plans to retain these individuals through the model's planning horizon of 2021. Mr. Hobbs explained that the rate model does not assume any additional debt issue.

Ms. Eylar-Lauzon asked for an update on the third intake. Mr. Entsminger reported that the third intake has been funded and approved. He estimated that approximately 75-80 percent of those funds have been expended. Many of the major components have been completed and the project is estimated to be completed in fall 2014.

Ms. Eylar-Lauzon asked questions about the funding of the third intake. Thomas Toepfer reviewed the SNWA's debt restructuring schedule and explained how the SNWA has restructured its debt to smooth the increases through 2015. She also asked if the SNWA plans to issue any debt within the model's timeframe. Mr. Hobbs stated that there are no plans to issue any debt within the next year and a half; however, there is ongoing

maintenance required. He noted a smaller debt issue could be absorbed by the model; however, a large debt issue as a result from a significant capital project may require another IRPAC process.

The committee again discussed the capitalized labor, noting that the model assumes costs will increase over time. Mr. Conklin asked if there was money within the capitalized labor allocated to future projects. Mr. Buie answered that the capitalized labor costs include only labor charged to the approved Major Capital and Construction Plan. Mr. Conklin noted that there is a reasonable expectation associated with holding onto technical staff between projects because firing and hiring new labor forces is inefficient.

Ms. Eylar-Lauzon suggested modifying the labor costs to reflect the capital costs of what has been approved. Mr. Kasner added on to her suggestion, noting that you would move the labor associated with completed projects to operating expenses. Mr. Thomas noted that he will work with SNWA staff to analyze the estimated capitalized labor increases within the model to reflect the projects approved within the MCCP. Ms. Eylar-Lauzon also requested a list of deferred projects and a history of capitalized labor expenses.

Ms. Eylar-Lauzon asked for more background about the operating expenses, such as groundwater recharge. Mr. Toepfer explained that groundwater recharge expenses aren't anticipated for this year because there is no recharge occurring in the valley. Recharge costs will increase when recharge activities begin, which is estimated in 2014. She also asked for an explanation on the increase in payroll in years 2013-2014, which staff agreed to provide.

Mr. Hobbs said that water sale projections are based on SNWA short-term water sales forecasts for years 2014-2016; in years 2017 and beyond, water sales are estimated to increase as population grows. Ms. Eylar-Lauzon noted the assumption is conservative and thinks water sales will be lower than projected, but was fine with the assumption. Without any other comments or discussions, the committee moved on to price elasticity assumptions.

Mr. Hobbs reviewed the model's price elasticity assumptions. The committee did not have any changes.

The committee then discussed interest earnings. Mr. Kasner stated that he felt the interest earnings were under estimated and suggested projecting a higher yield of returns. He suggested using the following estimate:

	2014	2015	2016	2017	2018	2019	2020	2021
Projected Increase (%)	1	2	3	3	3	3	3	3

Following discussions around existing earnings, the committee accepted Mr. Kasner's suggestion. Mr. Kasner also provided a summary of NRS 355, which outlines investment guidelines for local governments.

Mr. Kasner recognized Mr. Uehling's comments made during public comment and asked staff to explain the Arizona Groundwater Banking agreement and the savings from the agreement. Mr. Entsminger summarized the agreement, noting that the SNWA had been paying Arizona on an annual basis to bank groundwater in Arizona. In 2013, the SNWA revised the agreement to fund groundwater banking on a pay-as-you-go basis, relieving the SNWA of approximately \$250 million in future payments. The savings, Mr. Entsminger noted, was only an obligation, but not actual cash that the SNWA sold bonds to fund.

The committee recognized that the assumptions used to project operating expenses remains outstanding and will be discussed at the July 31 meeting. Mr. Entsminger noted that staff will provide information to support the requests made at today's meeting and then opened up the meeting for public comment.

Public Comment

Brian McAnallen, Las Vegas Chamber, recognized the committee's work and effort to analyze the information and felt they raised important questions during its review.

Ed Uehling, Las Vegas, agreed with Mr. McAnallen's statement and asked who he can speak with to answer questions. He also discussed ranch expenses, the drought, and Colorado River operations.

There being no other related business, Mr. Entsminger closed the meeting at 3:11 p.m.

Propaganda

ED NEWLINX
@V1112@cox.net

75% fixed costs - false
US.

25% fixed income (infrastructure)
Sales ~~tax~~ shown to be consistent

Nothing about \$40,000,000 savings
as a result of abrogating ~~debt~~
agreement w/ Arizona (for physical
storage)

Nothing about \$20,000,000 in power
savings as a result of
changing power supplier

Everything designed to make
mgt. and bureaucracy comfortable
no concern for customers.

Basically SNAWA has taken free
resources ~~at least~~ plus massive
debt into debt payments and
employee compensation (salary,
benefits & pensions)

SNAWA is wholesaler yet spends
25% of gross revenue on compensation
vs. WLU & Henderson, retailers
who spend about 18% on personnel

Dear Technical Review Committee member,

Your willingness to participate as a member of the Technical Review Committee, in support of the Southern Nevada Water Authority's (SNWA) Integrated Resource Planning Advisory Committee (IRPAC) planning process, is sincerely appreciated. SNWA staff and technical advisors are aware of your professional commitments and are working to ensure this technical review of the SNWA rate model and underlying assumptions is made as efficient as possible.

By way of background, the SNWA Board of Directors appointed 21 community stakeholders to participate in a public advisory committee in May 2012. The committee, along with ratepayers appointed by SNWA member agencies, is tasked with developing water rate recommendations related to the SNWA's future funding needs for SNWA Board consideration. The committee has been meeting for nearly a year and has reached consensus as to the method by which future SNWA water rates will be structured, along with other related matters.

The Technical Review Committee was established by the SNWA Board to provide for additional assurance that the rate model – which is central to the work that is being performed by IRPAC – is founded upon reasonable and sound assumptions. The Technical Review Committee's work is limited to a review of the assumptions used in the modeling process, and does not include a review of the direction or decisions of the IRPAC group as the parameters of the rate model have largely been finalized by IRPAC. What remains is a review of specific model drivers that may affect the actual calculation of the water rates, within the confines of the model adopted by IRPAC, in the coming years.

As you conduct your review of the model's assumptions and data, please reach out to us with questions or requests for more information. Any comments or suggestions regarding the assumptions provided in advance of our meeting in late July will be aggregated for discussion and consideration at our meeting, at which time we would finalize the committee's positions. Providing comments in advance of the meeting may help insure that we can conclude the committee's work before the end the month.

For more information, please review the attached materials, which provide more detail about the model assumptions for review and analysis. Also included is a timeline of important dates related to both the Technical Review Committee and the larger Integrated Resource Planning Advisory Committee.

Again, please do not hesitate to contact me at 702-733-7223 with any comments or questions.

Sincerely,

Guy Hobbs
Hobbs, Ong and Associates

Refused to even
consider my model
to reduce some water costs
& increase sales ~~so~~
enough to pay increased
financial costs

SOUTHERN NEVADA WATER AUTHORITY
Integrated Resource Planning Advisory Committee
Technical Review Committee Materials

BACKGROUND

In April 2012, the SNWA Board of Directors approved an integrated resource planning process to evaluate current and long-term Authority initiatives including long-term funding strategies to pay for critical infrastructure needed to supply Southern Nevada with a reliable water supply. To support this effort, the Board established a Citizens Advisory Committee to discuss these issues comprehensively. The 21-member committee has been meeting for nearly a year along with ratepayers appointed by SNWA member agencies and has reached consensus as to the method by which future SNWA water rates will be structured, along with other related matters. The IRPAC objective is to forward to the SNWA Board for consideration a rate structure that is not unduly burdensome or disproportionate, and that any differences in rate structure between customer classes are not arbitrary, unreasonable or unjustified.

In April 2013, the SNWA Board established a Technical Review Committee to review and verify the rate model data and output used by IRPAC in developing their recommendations. At the June 24, 2013 IRPAC meeting, the committee nominated five individuals to be considered for appointment by the SNWA Board. The five-member committee was subsequently appointed by the SNWA Board and includes the following individuals:

- Mike Alastuey
- Paula Eylar-Lauzon
- Marcus Conklin
- Bob Kasner
- John Restrepo

Bob Kasner and John Restrepo are also members of the IRPAC.

Technical Review Committee members will participate in at least one meeting scheduled for July 23, 2013. These meetings will be open to the public and posted in compliance with Nevada's Open Meeting Laws.

TIMELINE

Given the schedule that has been set forth by IRPAC and the SNWA, the Technical Review Committee will use the month of July to conduct and complete their analysis. The findings and recommendations of the committee will be presented to IRPAC on or before their regular meeting on August 7, 2013. Assuming that IRPAC concurs with the recommendations of the Technical Review Committee, the recommendations will be incorporated into the final version of the rate model prior to IRPAC's rate recommendations going before the SNWA Board for consideration in September.

ANALYSIS

The Technical Review Committee's scope is limited to a review of the following model assumptions:

- Growth rate for sales tax
- Growth rate for connection charge revenue
- Growth rate for operating expenses
- Growth rate for water sales
- Data related to the debt service schedule
- Data related to price elasticity assumptions

Committee members will be provided with a copy of the current rate model (which incorporates assumptions about each of the drivers listed above) for discussion and review. A more detailed explanation regarding the assumptions that have been used thus far in the modeling process are outlined later in these materials along with some data regarding each driver that may assist you with developing a sense of the reasonableness of these assumptions.

In addition to validating the above model assumptions, the Technical Review Committee is also being asked to provide comments regarding the rate model output and illustrations of impacts upon customer bills resulting from the changes to the rate structure. This phase of the rate-setting process becomes the true measure of transparency of the process, as this is the step whereby projected rate impacts become available for stakeholder review. This aspect of the Technical Review Committee charge is discussed in greater detail later in this summary.

SNWA REVENUES

The SNWA, as the wholesale water agency for Southern Nevada, generates its revenues within its New Expansion Debt Service Fund from a mix of fixed and variable charges. These include the Regional Connection Charge ("Connection Charge"), Reliability Surcharge, Infrastructure Charge, Sales Tax and Regional Commodity Charge ("Commodity Charge").

- The Commodity Charge is a volumetric, or variable, charge that is charged based upon the amount of water that is delivered or sold.
- The Regional Connection Charge is a one-time charge that is levied when new users connect to the water delivery system.
- The Infrastructure Charge is a fixed-fee assessed based on the size of the customer's meter.
- The Reliability Surcharge is a percentage charge that is applied to water bills.
- Per a ballot question approved by the voters, the SNWA receives a portion of a .25 percent sales tax levy to help fund its capital program.

Approximately 25 percent of the revenue received by the SNWA is characterized as fixed revenue, while the remaining 75 percent is considered variable revenue.

On the expenditure side, costs are dominated by fixed expenses – primarily debt service. For fiscal year 2014, it is estimated that the SNWA's funding need for its New Expansion Debt Service Fund will be approximately \$170 million; \$137 million of which is for debt service on outstanding debt. It is within the New Expansion Debt Service Fund that the Connection Charge, Reliability Surcharge, Sales Tax, and Commodity Charge revenues are receipted, and from which a vast majority of the debt of the SNWA

(that debt associated with system improvements and expansion) is paid. It is the activity of this fund that has been modeled in support of the water rate process undertaken by IRPAC.

The funding gap being addressed by IRPAC is the result of two primary factors. First, Connection Charge revenue has been dramatically reduced since the onset of the housing crisis and recession. In fiscal year 2006, the Connection Charge produced \$188 million in revenue. For fiscal year 2014, it is anticipated that this source will produce roughly \$13 million. This dramatic drop in the revenue source has clearly impacted the revenue available to pay current obligations. It should be noted here that the Connection Charge was put into place several years ago in an effort to provide a means for growth to help pay for growth (as manifested by increased costs to expand the water delivery system to accommodate growth). For many years, revenue from the Connection Charge provided a significant source of revenue to pay debt service. However, as noted above, these revenues are (and for the foreseeable future will be) insufficient to make a significant contribution to retiring debt.

Second, the combined debt service for the SNWA – currently at a level of \$137 million in fiscal year 2014 – will increase to \$238.5 million by fiscal year 2017. Debt service will remain fairly constant for several years beyond fiscal year 2017. Thus, the challenge that has been before IRPAC has been to identify a blend of revenue sources that will fill the gap created by the reduction in Connection Charge revenue and the increase in the debt service schedule.

Exhibit A is a copy of the IRPAC rate model for review by Technical Review Committee members, followed by an illustration of the combined debt service (Exhibit B).

Assumptions have been made to account for the growth in the various revenue sources and operating expenses. It is for these line items that we are seeking the input of the Technical Review Committee with regard to the growth rates that have been assumed in the model. Other elements of the model are fixed and constant. For example, the debt service is contractually obligated and, thus, is known. Likewise, the ending fund balance has been set to orient toward and never fall below \$280 million. This value represents the equivalent of one year of principal and interest on outstanding debt, and constitutes the debt reserves for SNWA debt service. Finally, the Infrastructure Surcharge is a product of a fixed charge multiplied by the number of service and fire meters connected to the water system and is, thus, a calculated value driven by the assumption regarding growth.

MODEL ASSUMPTIONS

This section discusses the various assumptions that have been used to date for each of the line items that are a part of your review. These will be reviewed in an order that reflects the relative size of each line item as it relates to the total funding gap.

Sales Tax – As is shown on the model output, revenue from the portion of the .25 percent Sales Tax received by the SNWA amounts to \$47.95 million for fiscal year 2014. On a going forward basis, we have assumed a growth rate of four percent for Sales Tax. We have attached for your reference a summary of taxable sales in Clark County over the past ten years (Exhibit C). The SNWA's Sales Tax revenue is derived from a countywide levy of the .25 percent tax. Thus, the history of taxable sales should give you a good sense as to the performance of this revenue source in recent years.

Please note that month to month comparisons of taxable sales in this versus the prior year will tend to reflect higher percentages than the four percent that we have assumed. This is where it is important to bear in mind that our projection horizon for the revenues is through fiscal year 2021. We would expect

the current percentage growth rates over the prior year to be higher, while we also expect the percentage growth rates to increase at a decreasing rate. An alternative to using the constant four percent growth rate over the eight year projection horizon would be to model different growth rates for each year, reflecting higher near-term growth rates and lower growth rates in the out years. We chose to use a constant growth rate as a matter of simplicity.

Regional Commodity Charge - Referring again to the rate model, the amount of revenue budgeted for fiscal year 2014 from the Regional Commodity Charge is \$39.3 million. This source of revenue is a product of the amount of water sold by the SNWA through its purveyors, multiplied by the Regional Commodity Charge. Exhibit D provides a summary of actual and projected water sales, along with the commodity rate that was in effect for each of the years shown. The water sales that are shown through fiscal year 2012 are actual water sales. The estimates used in the rate model through 2017 have been provided by the SNWA, based upon their water demand forecasting process. Beyond 2017, water sales are assumed in the rate model to grow at the rate of forecasted population growth. Exhibit E provides a comparison of population growth rates as forecast by UNLV's Center for Business and Economic Research, the Nevada State Demographer, and by Applied Analysis. Population forecasts are also used as a proxy growth rate for the Regional Connection Charge, discussed below.

Regional Connection Charge - Exhibit F provides a summary of the revenue from the Regional Connection Charge over the past ten years. This revenue is a product of the charges for connecting new users to the water system multiplied by the number of new connections each year. This revenue source is highly dependent upon growth and, as such, the level of revenue from year to year will vary as new connections to the water delivery system are made. The revenue is highly volatile, as demonstrated by collections of nearly \$188.5 million in fiscal year 2006, and a low of \$5.3 million recorded just four years later in fiscal year 2010. The budget filed for fiscal year 2014 anticipates revenue from the Regional Connection Charge of \$13.1 million. For fiscal year 2015 and beyond, the rate model uses forecasted population growth as a proxy for growth in Regional Connection Charge revenue. The rate model does not include any increase in the Connection Charge. For fiscal years 2015 through 2021, the assumed population growth rate in the model averages 1.14 percent.

Operating Expenses – Exhibit G provides a ten-year history of the operating expenses in the New Expansion Debt Service Fund. The rate model assumes that operating expenses will grow at a rate of three percent annually beyond the \$32.7 million budgeted for fiscal year 2014. It should be added that variations in the levels of operating expenses in the historical values are largely attributable to the level of charges to the New Expansion Debt Service Fund made on behalf of other SNWA divisions in support of various capital projects. Further, there have been reductions in staffing levels within SNWA over the past few fiscal years that may make a simple trend analysis challenging for this line item.

Other Revenue Sources – As noted in the background section, revenue from the Reliability Surcharge is a product of a fixed percentage applied at the bottom line of the water bill. Since there are no changes to the Reliability Surcharge rates anticipated, this revenue source will be a simple function of the combination of other rates and charges that make up the aggregate water bill. Likewise, the Infrastructure Surcharge is a product of the number of service and fire meters per size category multiplied by the schedule of rates that are being generated by the rate model. The number of service and fire meters has been held constant on a going forward basis for all meter categories other than small residential (5/8" and 3/4" meters). For the small residential meters, the SNWA supplied a projection for the growth in annual meters prepared by Applied Analysis.

The projected growth in the number of small residential meters is shown in the table below:

Year	New Meters
2013	2,516
2014	3,479
2015	4,077
2016	5,096
2017	5,964
2018	5,964
2019	5,964
2020	7,093
2021	8,794

Other revenue sources, such as interest earnings, federal grants and revenue from other agencies comprise a comparatively small part of the overall revenue mix (generally less than two percent) of the New Expansion Debt Service Fund. Each source has been projected using historical data particular to each source.

Combined Debt Service Costs – Referring again to Exhibit B, note the illustration of the combined debt service schedule for the New Expansion Debt Service Fund. While this schedule is not a matter of projection (since these are known obligations), the Technical Review Committee may wish to consider providing feedback with regard to the assumption that no additional debt will be incurred through fiscal year 2021. At this time, no additional debt issuances are contemplated by the SNWA. However, it may not be unreasonable to assume that, as an infrastructure-oriented agency, there will be recurring repair and replacement expenses. On one hand, if actual revenue performance is stronger than what is anticipated in the rate model it may be possible to fund repair and replacement through the use of existing cash. On the other hand, if revenues perform at the forecasted levels, additional debt may be required.

Price Elasticity – In 2006, the Las Vegas Valley Water District contracted with Red Oak Consulting to prepare the *Water Price Elasticity Report* (the “report”) for its service territory. The report concluded that the range of price elasticity for the Las Vegas Valley Water District market was from a low of -.23 to a high of -.50, with a best estimate of -.34. The Red Oak report did not distinguish between the type of charge being measured for price elasticity. The rate model uses the elasticity factor of -.34 for the Commodity Charge, and a discounted factor of -.15 for the Infrastructure Surcharge. Given that the rate methodology that is preferred by IRPAC applies 50 percent of the funding burden to the Commodity Charge and the remaining 50 percent to the fixed Infrastructure Surcharge, the assumed blended elasticity factor in the rate model approximates -24.5.

Model Output and Impact Illustrations

Upon finalization of the assumptions that are to be used in the rate model, the final version of the rate model can be prepared. The final rate model will then yield the changes to the Commodity Rate and the Infrastructure Surcharge. At this point, illustrations of projected cost impacts upon various classes of customers can be prepared. This is an essential part of the process, both from a transparency and full-disclosure perspective.

A template for illustrating these impacts has been prepared. While past efforts have focused upon showing bill impacts at the median level for each customer classification, the approach to be used for this rate-setting process has been designed to be more informative. Instead of just showing the median impact for each customer class, the approach being used includes a calculation of the median for the middle 80 percent of users within a class and the median for the highest ten percent of users. The median for the users in the bottom ten percent is not being calculated, as it is assumed that their respective cost impacts are significantly lower than those of the remaining 90 percent. This revised approach should provide for a better illustration of both median cost impacts and impacts at the upper end of the cost spectrum. Efforts will also be made to identify the customers impacted at the highest level within each user class, although these may also be considered outliers with user characteristics that are well beyond the normal or average user.

A sample of the model output that will illustrate the above approach is provided as Exhibit H. As the rate model is finalized, this illustration will need to be re-run to reflect any changes to the rate model assumptions. Updated versions of the impact illustrations will be provided to you as they are prepared.

Despite the final output values, one of the charges of the Technical Review Committee is to review the approach that is being used to illustrate the cost impacts and to provide any comments or suggestions as to how the output may be improved to meet the SNWA's objective of enhanced transparency.

Southern Nevada Water Authority
Integrated Resource Planning Advisory Committee - *Technical Review Committee*
Contact Information

John Entsminger, Senior Deputy General Manager
Southern Nevada Water Authority
john.entsminger@snwa.com
702-875-7080

Guy Hobbs, SNWA Rates Technical Advisor
Hobbs, Ong and Associates
guy@hobbson.com
702-733-7223

Julie Wilcox, Director of Public Services
Southern Nevada Water Authority
julie.wilcox@swna.com
702-258-3938

Katie Horn, IRPAC Coordinator
Southern Nevada Water Authority
katie.horn@snwa.com
702-822-8630

Southern Nevada Water Authority - New Expansion Debt Service Fund
 Projected Funding Requirements

Version 7/3/2013

Fiscal Year	in Thousands)										
	2012 Actual	2013 Estimated	2014 Budgeted	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2019 Projected	2020 Projected	2021 Projected	
Operating Expenses											
Total Operating Expenses	(\$11,607)	(\$28,500)	(\$32,754)	(\$36,836)	(\$37,918)	(\$39,031)	(\$40,174)	(\$41,340)	(\$42,540)	(\$43,763)	
Total Debt Service	(137,397)	(132,847)	(137,003)	(164,684)	(216,733)	(238,512)	(238,406)	(238,322)	(238,229)	(236,502)	
Total Funding Requirement	(\$149,004)	(\$161,346)	(\$169,756)	(\$201,521)	(\$254,651)	(\$277,542)	(\$278,581)	(\$279,662)	(\$280,769)	(\$280,264)	

Expected Revenues (Base case)											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Infrastructure Surcharge	\$16,193	\$77,900	\$76,823	\$78,677	\$78,982	\$79,340	\$79,698	\$80,056	\$80,481	\$81,009	
Regional Connection Charge	13,791	13,180	13,142	16,727	17,351	19,941	20,693	20,098	19,104	18,590	
Regional Commodity Charge	40,666	38,150	39,258	40,853	41,087	41,419	42,136	42,845	43,530	44,207	
Reliability Surcharge	4,598	4,340	4,783	4,408	4,433	4,468	4,543	4,618	4,690	4,762	
Sales Tax	45,131	45,300	47,953	49,871	51,866	53,941	56,098	58,342	60,676	63,103	
Other Revenues	(669)	3,095	1,607	2,300	2,300	2,300	2,300	2,300	2,300	2,300	
Boulder City share of common cost		547	577	597	615	633	652	672	692	713	
Interest Income	478	317	660	3,142	2,842	2,199	1,478				
Total Expected Revenue	\$120,188	\$182,828	\$184,804	\$196,574	\$199,475	\$204,240	\$207,599	\$209,704	\$211,473	\$214,684	

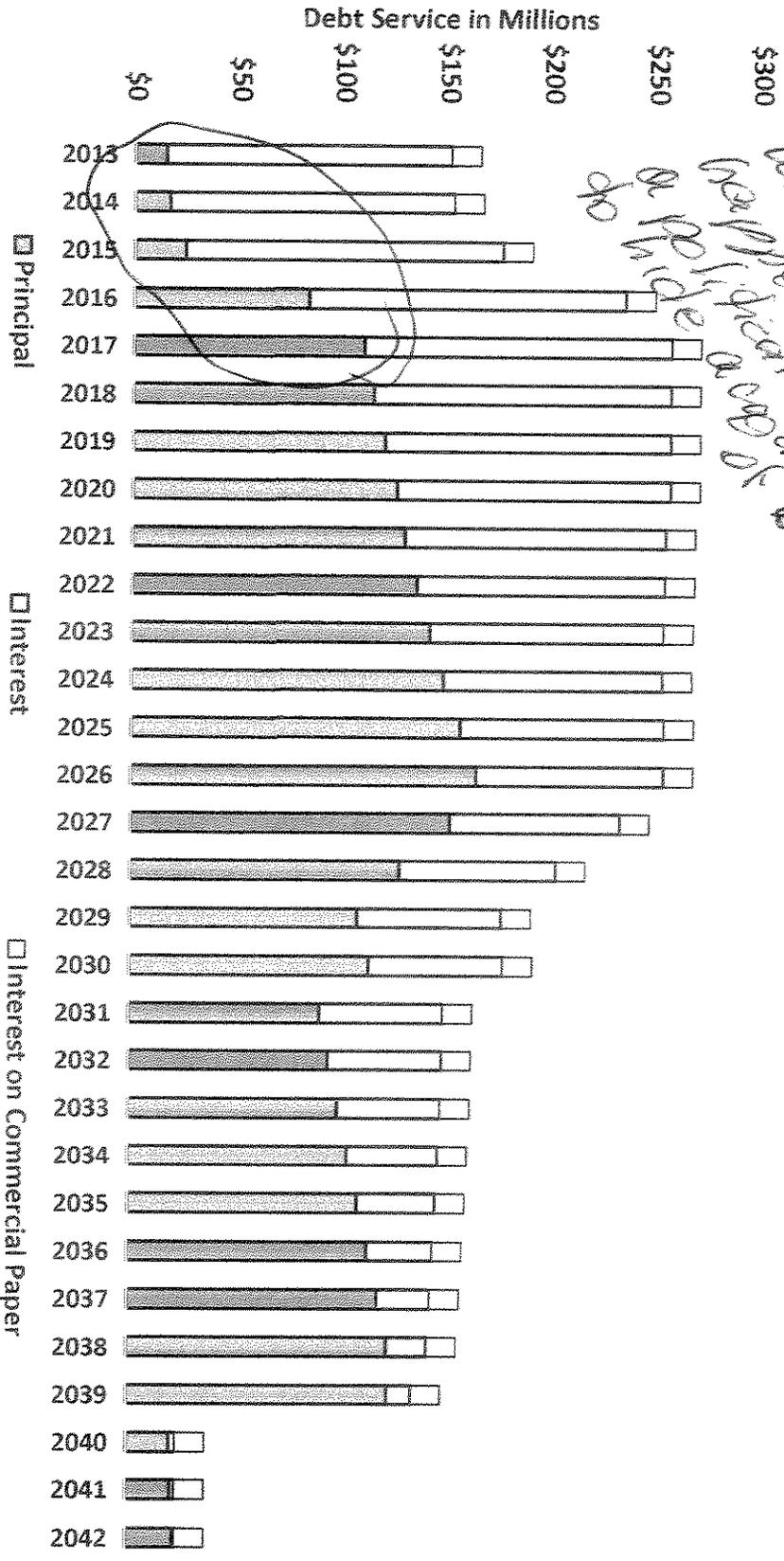
Total Funding Gap	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Beginning Fund Balance (Without New Revenues)	\$308,990	\$280,174	\$301,656	\$316,703	\$311,757	\$256,581	\$183,279	\$112,297	\$42,338	(\$26,957)
Ending Fund Balance (Without New Revenues)	\$280,174	\$301,656	\$316,703	\$311,757	\$256,581	\$183,279	\$112,297	\$42,338	(\$26,957)	(\$92,537)
New Commodity Charge Revenue			\$2,696	\$9,407	\$17,419	\$26,064	\$31,127	\$31,651	\$32,157	\$32,657
Implicit Add: Reliability Surcharge Revenue			30	105	194	291	347	353	359	364
New Infrastructure Revenue			3,053	9,691	17,480	26,679	31,824	32,102	32,433	32,844
Estimated Price Elasticity			(136)	(458)	(843)	(1,278)	(1,535)	(1,561)	(1,586)	(1,611)
Implicit Add: Interest Earnings			6	151	419	855	1,434	2,073	2,804	2,796
Ending Fund Balance (With New Revenues)			\$322,352	\$336,303	\$315,797	\$295,106	\$287,322	\$281,982	\$278,854	\$280,324

Assumptions:

- 013 numbers reflect SNWA's year end estimates based on first 9 months of fiscal year. 2014 numbers reflect SNWA's adopted 2014 budget.
- Projections assume a 3% increase of operating expense. Operating expenses also assume cost for recharge of groundwater basin of 10,000 Acre-Feet from 2015 on.
- Debt service costs are based on existing debt and 3.5% interest cost for the Authority's commercial paper program.
- Regional Connection Charges assume that new connections reflect population growth, with no change in connection fees.
- Commodity Charge Revenue is based on SNWA water sales projections through 2017 and then grows with population.
- Commodity Tax revenues are assumed to grow at 4%.
- Infrastructure Surcharge revenues are based on the 2012 adopted rates, net of fire meter credit using the meter count as of April 2013.
- Water Sales (acre-feet) are based on SNWA forecast through 2017 and then grow at same rate as population.

EXHIBIT B

Southern Nevada Water Authority
Fiscal Year Debt Services



Who let this happen?
 Maximize the use of the debt
 do a PRIDE

Note: (1) July 1 payments are included in prior fiscal year - effective cash outflow

(2) Debt Service shown includes debt service dedicated to the New Expansion Debt Service Fund as well as the Whole Sale Delivery Operations Fund.

(3) Debt service does not include the 35% interest subsidy from the federal government for the Authority's Build America Bonds

EXHIBIT C

Clark County, Nevada
Monthly Taxable Sales

Cal Year	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Y	\$2,129,568,100	\$2,502,676,833	\$2,803,223,044	\$2,988,756,161	\$2,949,041,209	\$2,804,710,224	\$2,226,329,429	\$2,348,467,652	\$2,409,795,520	\$2,539,432,97
August	2,235,477,282	2,526,404,918	2,836,104,800	3,019,621,174	2,863,299,942	3,028,823,555	2,239,397,922	2,324,474,175	2,405,676,010	2,599,638,33
September	2,241,320,683	2,687,553,644	2,965,840,319	3,067,621,728	3,072,639,757	2,810,093,816	2,345,206,333	2,324,288,829	2,568,457,773	2,693,558,41
October	2,207,086,111	2,616,671,511	2,817,680,674	2,797,827,872	2,978,696,314	2,775,719,539	2,249,382,524	2,308,689,753	2,524,421,518	2,656,143,26
November	2,097,664,447	2,531,344,140	2,807,337,050	2,779,541,641	2,849,511,000	2,527,775,823	2,257,786,914	2,277,517,915	2,474,324,762	2,602,152,98
December	2,600,606,846	3,139,381,372	3,434,358,989	3,440,233,486	3,486,276,330	2,904,092,942	2,658,794,916	2,732,096,715	2,991,533,872	3,171,185,14
January	2,157,044,281	2,445,576,990	2,732,989,954	2,787,632,414	2,669,668,978	2,317,513,593	2,124,884,724	2,252,455,357	2,331,731,702	2,522,777,35
February	2,136,964,660	2,451,238,736	2,742,463,284	2,845,222,374	2,757,376,322	2,216,004,004	2,106,459,995	2,173,862,905	2,416,156,106	2,414,452,31
March	2,612,777,641	3,066,372,035	3,243,537,998	3,340,636,408	3,226,099,420	2,758,267,538	2,498,872,118	2,738,038,542	2,791,427,988	2,982,307,68
April	2,390,258,612	2,812,176,545	2,950,035,735	2,908,759,432	2,915,083,192	2,415,844,521	2,499,247,898	2,477,489,748	2,598,232,945	2,695,277,09
May	2,443,621,688	2,840,978,246	3,168,291,638	3,047,736,794	3,031,255,238	2,368,769,090	2,336,068,995	2,467,047,138	2,713,778,331	
June	2,604,929,990	3,006,853,961	3,243,187,815	3,238,798,674	3,131,426,094	2,450,627,281	2,426,856,596	2,622,292,335	2,855,344,030	
Year Total	\$27,857,320,341	\$32,627,228,931	\$35,745,051,300	\$36,262,388,158	\$35,930,373,796	\$31,378,241,926	\$27,969,288,364	\$29,046,721,064	\$31,080,880,557	\$26,876,875,55
Change from prior year	-	17.1%	9.6%	1.4%	-0.9%	-12.7%	-10.9%	3.9%	7.0%	5.4% (1)

There has been a growth of 5.4% when comparing July through April Taxable Sales of FY 2011-12 in the amount of \$25,511,758,136 to the taxable sales for the same period in FY 2012-13.

URCE: Nevada Department of Taxation, Monthly Taxable Sales Reports

Sales tax growth of 4% is unrealistic with decrease growth of 1%

EXHIBIT D

Southern Nevada Water Authority
Regional Commodity Charge Collections

Fiscal Year	Collections	Gallons	Applicable Commodity Charge
2003-04	\$7,103,502	142,070,032	\$0.05/1,000 gallons (July 1, 1997 to Oct. 31, 2005)
2004-05	\$6,845,803	136,916,065	\$0.05/1,000 gallons (July 1, 1997 to Oct. 31, 2005)
2005-06	\$10,773,671	144,362,118	\$0.05/1,000 gallons (July 1, 1997 to Oct. 31, 2005)
2006-07	\$15,050,349	150,503,494	\$0.05/1,000 gallons (July 1, 1997 to Oct. 31, 2005)
2007-08	\$14,799,831	147,998,314	\$0.10/1,000 gallons (Nov. 1, 2005 to December 31, 2009)
2008-09	\$14,483,269	144,832,688	\$0.10/1,000 gallons (Nov. 1, 2005 to December 31, 2009)
2009-10	\$18,434,662	136,944,401	\$0.10/1,000 gallons (Nov. 1, 2005 to December 31, 2009)
2010-11	\$32,853,776	139,322,923	\$0.20/1,000 gallons (Jan. 1, 2010 to December 31, 2010)
2011-12	\$40,666,192	135,418,419	\$0.30/1,000 gallons (Jan. 1, 2011 to June 30, 2013)
2012-13(1)	\$36,686,223	122,165,124	\$0.30/1,000 gallons (Jan. 1, 2011 to June 30, 2013)
Total	\$240,715,343	2,260,894,861	

(1) 11 months through May 2013

SOURCE: SNWA

Failed to include most recent increases of about \$10/cc. ft.

*Consumption
2002 - 3256 acre/ft
2010 - 2204 acre/ft
Population not indicated
of consumption always*

EXHIBIT E

**Population Projections
Clark County, Nevada**

*+ 25% increase
in population*

Source: UNLV			
Year	Population		Growth in Population (Percent)
	Forecast	Forecast	
2011	1,966,630	15,361	0.80%
2012	1,982,000	15,370	0.80%
2013	2,002,000	20,000	1.00%
2014	2,057,000	55,000	2.70%
2015	2,112,000	55,000	2.70%
2016	2,167,000	55,000	2.60%
2017	2,220,000	53,000	2.40%
2018	2,274,000	54,000	2.40%
2019	2,321,000	47,000	2.10%
2020	2,365,000	44,000	1.90%
2021	2,405,000	40,000	1.70%
2022	2,443,000	38,000	1.60%
2023	2,478,000	35,000	1.40%
2024	2,512,000	34,000	1.40%
2025	2,545,000	33,000	1.30%
2026	2,576,000	31,000	1.20%
2027	2,608,000	32,000	1.20%
2028	2,638,000	30,000	1.20%
2029	2,669,000	31,000	1.20%
2030	2,699,000	30,000	1.10%
2031	2,729,000	30,000	1.10%
2032	2,759,000	30,000	1.10%
2033	2,789,000	30,000	1.10%
2034	2,818,000	29,000	1.00%
2035	2,848,000	30,000	1.10%
2036	2,879,000	31,000	1.10%
2037	2,909,000	30,000	1.00%
2038	2,939,000	30,000	1.00%
2039	2,969,000	30,000	1.00%
2040	2,999,000	30,000	1.00%
2041	3,029,000	30,000	1.00%
2042	3,059,000	30,000	1.00%
2043	3,089,000	30,000	1.00%
2044	3,119,000	30,000	1.00%
2045	3,149,000	30,000	1.00%
2046	3,178,000	29,000	0.90%
2047	3,207,000	29,000	0.90%
2048	3,235,000	28,000	0.90%
2049	3,264,000	29,000	0.90%
2050	3,291,000	27,000	0.80%

Source: NV Demographer			
Year	Population		Growth in Population (Percent)
	Forecast	Forecast	
2011	1,967,722	20,770	1.10%
2012	1,988,492	24,464	1.20%
2013	2,012,956	26,306	1.30%
2014	2,039,262	27,587	1.40%
2015	2,066,849	28,473	1.40%
2016	2,095,322	28,791	1.40%
2017	2,124,113	29,446	1.40%
2018	2,153,559	27,510	1.30%
2019	2,181,069	25,684	1.20%
2020	2,206,753	24,166	1.10%
2021	2,230,919	22,730	1.00%
2022	2,253,649	21,624	1.00%
2023	2,275,273	20,953	0.90%
2024	2,296,226	20,277	0.90%
2025	2,316,503	19,818	0.90%
2026	2,336,321	19,590	0.80%
2027	2,355,911	19,634	0.80%
2028	2,375,545	20,026	0.80%
2029	2,395,571	20,155	0.80%
2030	2,415,726	20,550	0.90%
2031	2,436,276		

Source: Applied Analysis			
Year	Population		Growth in Population (Percent)
	Forecast	Forecast	
2011 [a]	1,966,630	42,024	2.14%
2012 [a]	2,008,654	18,078	0.90%
2013	2,026,732	22,294	1.10%
2014	2,049,026	28,686	1.40%
2015	2,077,713	30,175	1.45%
2016	2,107,887	35,181	1.67%
2017	2,143,068	37,118	1.73%
2018	2,180,186	36,674	1.68%
2019	2,216,860	35,448	1.60%
2020	2,252,307	35,046	1.56%
2021	2,287,353	32,917	1.44%
2022	2,320,271	30,744	1.33%
2023	2,351,014	28,095	1.20%
2024	2,379,109	26,860	1.13%
2025	2,405,969	24,652	1.02%
2026	2,430,601	23,455	0.97%
2027	2,454,056	22,451	0.91%
2028	2,476,508	20,865	0.84%
2029	2,497,372	20,558	0.82%
2030	2,517,931	20,492	0.81%
2031	2,538,423	20,460	0.81%
2032	2,558,882	20,471	0.80%
2033	2,579,353	20,635	0.80%
2034	2,599,988	20,800	0.80%
2035	2,620,788	21,134	0.80%
2036	2,641,754	21,303	0.80%
2037	2,662,888	21,474	0.80%
2038	2,684,191	21,645	0.80%
2039	2,705,665	21,818	0.80%
2040	2,727,310	21,993	0.80%
2041	2,749,129	22,169	0.80%
2042	2,771,122	22,346	0.80%
2043	2,793,291	22,525	0.80%
2044	2,815,637	22,705	0.80%
2045	2,838,162	22,887	0.80%
2046	2,860,868	23,070	0.80%
2047	2,883,754	23,255	0.80%
2048	2,906,824	23,441	0.80%
2049	2,930,079		
2050	2,953,520		

[a]: 2011 and 2012 actuals per Clark County Comprehensive Planning.

EXHIBIT F

Southern Nevada Water Authority Regional Connection Charge (1)

Fiscal Year	Amount	% Change
2002-03	\$118,537,371	--
2003-04	\$153,994,053	29.9%
2004-05	177,493,165	15.3%
2005-06	188,454,011	6.2%
2006-07	119,561,208	-36.6%
2007-08	57,318,104	-52.1%
2008-09	26,789,155	-53.3%
2009-10	5,309,547	-80.2%
2010-11	6,602,728	24.4%
2011-12	13,892,856	110.4%
2012-13 (Estimated)	13,180,000	-5.1%
2013-14 (Budget)	13,142,254	-0.3%

(1) Fiscal years 2006-07 through 2011-12 have been adjusted by a refund contingency – and may not reflect total amount collected.

SOURCE: Southern Nevada Water Authority FY 2011-12
CAFR, FY 2011-12 Final Budget

EXHIBIT G

Southern Nevada Water Authority
New Expansion Debt Service Fund

Fiscal Year	Actual 2003-04	Actual 2004-05	Actual 2005-06	Actual 2006-07	Actual 2007-08	Actual 2008-09	Actual 2009-10	Actual 2010-11	Actual 2011-12	Estimated 2012-13	Budget 2013-14
Uses of Funds											
Other Operating Expenses	\$116,092,079	\$74,245,090	\$203,572,230	\$137,436,901	\$123,660,220	\$66,741,261	\$17,247,498	\$12,838,325	\$13,714,862	\$27,961,203	\$32,753,593
Debt Service	103,476,485	109,165,346	124,496,644	120,858,070	135,321,973	149,245,308	149,993,442	144,065,661	137,396,943	132,189,123	137,002,809
Total Uses of Funds	\$219,568,564	\$183,410,436	\$328,068,874	\$258,294,971	\$258,982,193	\$215,986,569	\$167,240,940	\$156,903,986	\$151,111,805	\$160,150,326	\$169,756,402

SOURCE: SNWA

NOTE: Beginning with fiscal 2012/2013, the New Expansion Debt Service fund began paying all capitalized labor except the amount generated by the Engineering department.

