



Memorandum

To: Jerry Rolwing, General Manager

From: Hannah Phan/Sanjay Gaur

Date: July 22, 2013

Re: Rams Hill Golf Course ID1 Spare Capacity Cost Analysis

Borrego Water District (District) engaged Raftelis Financial Consultants, Inc. (RFC) to conduct an ID1 spare capacity cost analysis for Rams Hill Golf Course (RHGC), located within Improvement District (ID) 1. The District is interested in determining a non-potable, interruptible annual cost for ID 1 spare capacity for use during non-peak periods for RHGC irrigation purposes. The total available ID 1 spare capacity during the first three years is assumed to be a maximum of 2,100 AF (700 AF per year average for 3-year period) from all sources for this annual ID 1 spare capacity cost analysis. Thereafter, the spare capacity available under this rate methodology will be determined by the District's engineer and may decrease.

For this analysis, RFC reviewed the fiscal year (FY) 2014 budget, the total assets value, and historical water usage data in ID 1. Based on the District engineering documents, the water system peaking factor is 2.25, which means that costs that can be attributed to providing water service would be allocated 44 percent to non-peak usage and 56 percent to peak usage. Based on discussion with District staff and the available data, RFC allocated the operations and maintenance (O&M) and capital costs between peaking and non-peaking categories to determine the costs related to providing non-peak spare capacity.

The various components of the ID1 spare capacity cost are described below:

- **Pumping cost** – this cost is associated with electrical costs related to pumping water from various wells. The District incurs electrical costs for every acre-foot (AF) pumped from its wells. The pumping rate is estimated based on projected electrical costs for the foreseeable future. This represents the minimum marginal cost of providing water to RHGC.
- **Non-peaking O&M cost** – this cost is associated with various O&M expenses, excluding the pumping costs, the District incur as part of its operations, including repairs and maintenance (plus contingencies), personnel, and benefits costs, allocated to non-peak usage. This rate is determined based on the current total water sales within ID 1.
- **Well 12 escalator cost** – this cost is related to escalator clause specified in the Well 12 agreement. Since this escalator cost occurs due to usage at RHGC, it is allocated entirely to the

RHGC water usage. This rate is determined based on the total maximum spare capacity that can be leased to RHGC, which is 700 AF per year.

- **Non-peaking assets replacement cost** – this is the annual replacement depreciation cost, allocated to non-peak usage, of the assets used to serve ID 1. As assets age, the District will need to replace those assets to continue provide water service to its customers. RFC used the 20-city construction cost index to determine the replacement costs of each asset in ID 1 and calculated the annual depreciation expenses of the replacement costs based on the useful life of each asset. This rate is determined based on the current total water sales and the total maximum spare capacity that can be leased to RHGC, which is 700 AF per year.

Table 1 shows the various cost components of the total proposed ID1 spare capacity cost for RHGC at different annual “leased” capacity maximums. O&M costs, such as pumping and other non-peaking O&M costs, do not vary based on the amount of spare capacity leased. Capital costs, such as the well 12 escalator and non-peaking assets replacement costs, on the other hand, do vary based on the amount of spare capacity leased. At 700 AF per year, the total proposed annual spare capacity cost results in \$624 per AF with the escalator component and \$519 per AF without. At 200 AF per year, which is the District’s proposed minimum leased capacity, the total proposed spare capacity cost is \$1,009 per AF with the escalator component and \$643 per AF without.

The total proposed spare capacity cost at lower “leased” capacity is higher than the current commercial retail water rate, which is \$910 per AF, due to the fixed escalator cost for well 12, which RHGC will have to pay whether it takes 200 AF or 700 AF, the projected higher pumping cost, and the non-peaking assets replacement cost. It should be noted that the current retail water rate of \$910 per AF may not presently include all those cost components.

Table 1
RHGC Spare Capacity Cost Scenarios

Spare Capacity Leased	Effective Total Rate	Without Well 12 Cost	Pumping Cost	Other O&M Cost	Well 12 Escalator	Assets Replacement
100 AF	\$1,435	\$704	\$314	\$82	\$731	\$308
200 AF	\$1,009	\$643	\$314	\$82	\$366	\$247
300 AF	\$846	\$602	\$314	\$82	\$244	\$206
400 AF	\$755	\$572	\$314	\$82	\$183	\$176
500 AF	\$697	\$550	\$314	\$82	\$147	\$154
600 AF	\$655	\$533	\$314	\$82	\$122	\$137
700 AF	\$624	\$519	\$314	\$82	\$105	\$123

Figure 1 shows the graphical representation of **Table 1**. The blue line represents the effective proposed RHGC leasing rate; the red line represents the proposed rate without the escalator component.

Figure 1
RHGC Spare Capacity Cost Scenarios

