



MEMORANDUM

DATE: September 19, 2019

TO: Mr. Kent Blumenthal, Ph.D., CAE
Chief Executive Officer – Green Valley Recreation, Inc.

FROM: Robert W. Browning, PCAM, RS
Browning Reserve Group

RE: Percent Funded Considerations

Green Valley Rec is in excellent financial condition with percent funded at 68.5%.

Here is why...

1. Strong Ending Balances

Over the next 30 years, despite GVR spending between \$800K to \$2M+ every single year, the reserve fund never drops below \$4.2M. And GVR only needs to raise the contribution by approximately 4% per year, which is 1.5% over the study's inflation rate. This is an extraordinary accomplishment that provides GVR with a large threshold every year, in case of cost increases, acts of god, or rampant inflation (within one year.)

2. Update Reserve Study Yearly

GVR, since BRG has been involved, has updated the reserve study every year. This is the best safety net any community could have in relation to protecting assets. Because if there are inflation increases on the components, any adjustments needed to the study can be made in real time. Also, if the interest earned projections are off target, the reserve balances are updated each year, so any fluctuations to the threshold can be dealt with in real time. If GVR starts updating the reserve study at longer intervals, say 5+ years, then GVR would be at greater risk for unforeseen circumstances.

3. Collaboration Between BRG & GVR

Every year, GVR staff provides BRG with data on all component expenditures. This creates an additional record of what is spent, but more importantly, these expenditures are the best indicator of future costs. This feedback loop is one of the best features of the reserve study and provides precision for future estimates.

4. Percent Funded Not a Good (Sole) Measure of Adequacy

When I spoke at GVR, I thought I had done a good, or at least mediocre job, of explaining the limitations of percent funded. Percent funded is not a great indicator of reserve fund adequacy. It is one indicator but needs to be taken into context of the timing on projects.

If you look at Section IV of the reserve study on page 79, the percent funded is scheduled to go even lower over the next 15 years, before it builds to 100% later. This is expected, normal, and the result of GVR performing projects as planned. Often, we find when communities are currently 100% funded that means two things. One is the community is over funded because usually the plan calls for no increases to the reserve contribution stream, despite costs going up every year by 2.5%. This means members now are paying more than they should have too. Secondly, the percent funded calculation turns into a runaway train meaning decreases to the contribution are often needed. Why ramp up the funding, just to lower it, or keep the contribution static.

A well-funded community is one where the yearly increases to the contribution are in the range of the component inflation factor, while never letting the ending reserve balance in any given year fall below a reasonable level. GVR meets this objective almost perfectly. Perfect would be 2.5% increases, yet we are projecting 4% increases.

Moreover, if the community does initiate a floor for percent funded, a corresponding cap is a terrible idea. The way percent funded is calculated, in order to have a static percent funded number, or even a range over time, is impossible without large increases and decreases to the contribution stream. And this flies in the face of one of the definitions of a reserve study which is to “create a stable and equitable funding plan.”



MEMORANDUM

DATE: October 14, 2019

TO: Mr. Kent Blumenthal, Ph.D., CAE
Chief Executive Officer – Green Valley Recreation, Inc.

FROM: Robert W. Browning, PCAM, RS
Browning Reserve Group

RE: Option to Increase Percent Funded

Thank you for this opportunity to provide more information on the reserve study for GVR. Instead of sending a bunch of drafts, and the amount of resources that often takes, I have written a narrative that explains the answers to the question, and I am using exhibits which are screengrabs from the study. Your printer will appreciate this.

When we recommend a reserve contribution goal, our main concern is to meet any objectives the client may have. Absent direction from the client, we use a combination of what we feel is in the best interest of the members along with best practices.

The challenge comes when a client has a goal, they are currently nowhere near achieving. For example, at GVR, the goal in the CPM calls for a target of 85% funding. But currently the funding for the 2020 budget year is projected at 68.5%. So, what do we do? Stick in a big increase for 2020? Ramp up the contribution to get there at some point? And once you get to a goal set this high, in most cases, the fund overbuilds so the contribution has to drop. The result is to ramp up the contribution, just to bring it back down.

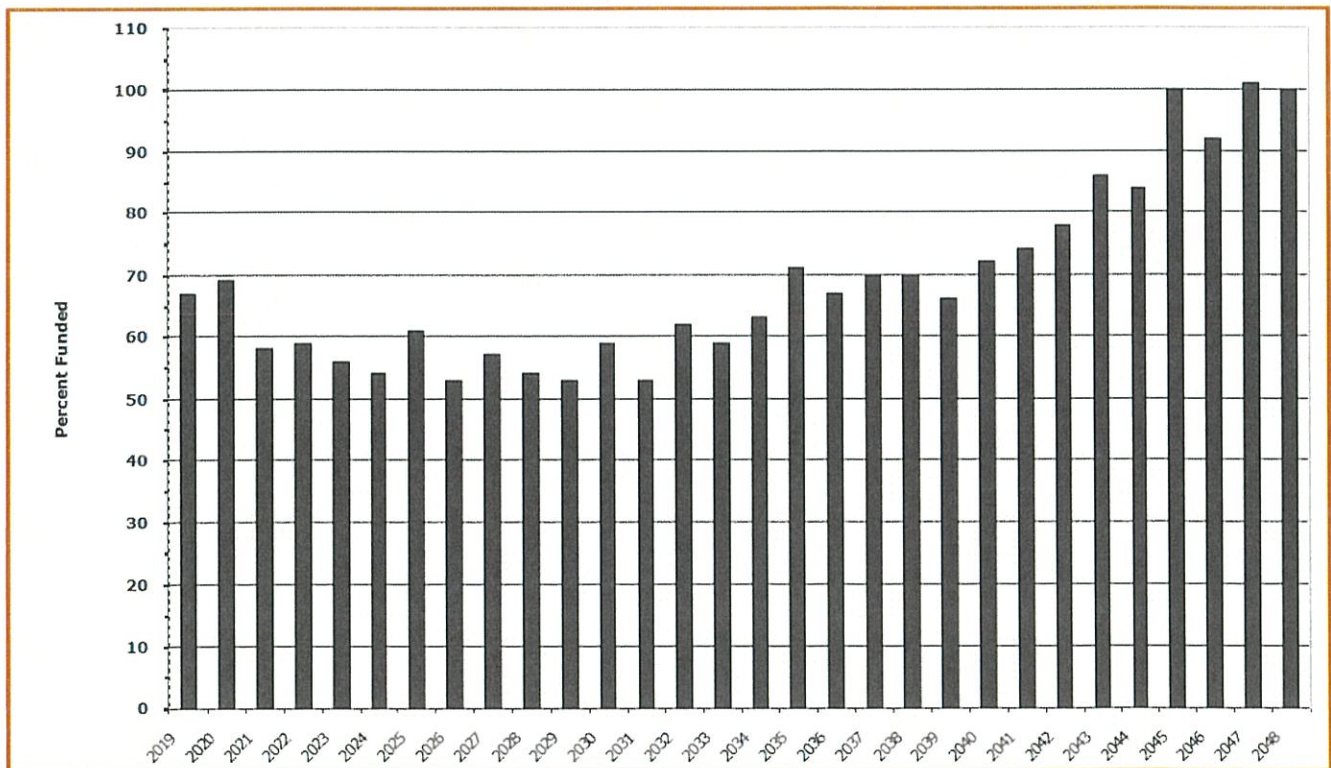
The board member's request to see the impact of what would be needed as an extra one-time infusion so future increases are inflationary at 2.5%, is exactly what we think demonstrates a reserve fund that is adequate. I mentioned this in my last letter. Provided the reserve fund in its lowest year has an adequate buffer. Here is where we may part company on this plan. By using

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Option to Increase Percent Funded
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85% funding as the “low-year” we will be displaying a reserve fund that is extremely conservative. This is because the balance will be high in the low year using 85% as the floor. If you think about it, GVR is a small step from the 2.5% contribution increase goal anyway. We have 4% increases, which are only 1.5% over the 2.5% inflation rate for the components. And the fund never drops below \$4M over the life of the study, and \$6M within 13 years. That is a big buffer.

Let’s take a closer look.

Current Funding Plan Percent Funded Chart- 85% achieved in 2043. This is a long time to get to the 85% goal, but at the low year in 2026, the cash balance is at \$4M+. This is really saying, if we have misjudged expenses by \$3.5M by 2026, GVR will still have \$500K in the fund at the end of the year as a buffer! This is incredible. Please see below for a copy of the chart in the Final study published in August 2019. **Notice the trend over 30 years is upwards.**



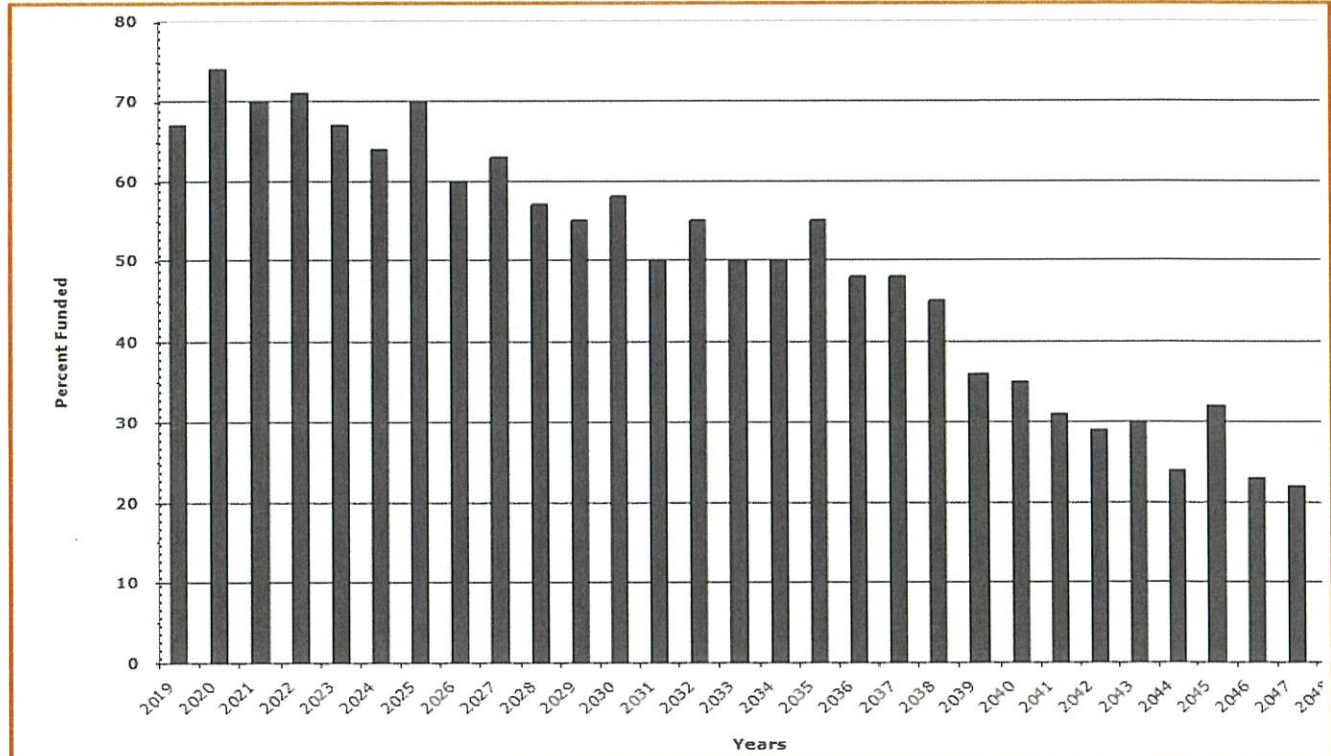
Now, on the next page, let’s look at what happens to the above chart by inserting \$500K in 2020 and \$500K in 2021. And starting in 2020, increases are reduced to an inflationary 2.5%.

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Option to Increase Percent Funded
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	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Beginning Balance	5,881,453	5,584,742	6,153,981	5,972,951	5,730,498	5,408,832	5,125,993	5,541,177	5,150,840	5,283,590
Inflated Expenditures @ 2.5%	1,404,592	1,066,165	1,845,988	1,427,564	1,525,829	1,506,205	837,148	1,670,992	1,173,441	1,543,482
Reserve Contribution	966,323	990,481	1,015,243	1,040,624	1,066,640	1,093,306	1,120,639	1,148,655	1,177,371	1,206,805
Household/yr @ 13,610	71.00	72.78	74.60	76.46	78.37	80.33	82.34	84.40	86.51	88.67
Percentage Increase		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Special Assessments / Other	0	500,000	500,000	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	141,558	144,923	149,715	144,487	137,523	130,060	131,693	132,000	128,820	127,881
Ending Balance	5,584,742	6,153,981	5,972,951	5,730,498	5,408,832	5,125,993	5,541,177	5,150,840	5,283,590	5,074,794

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Beginning Balance	5,074,794	4,905,965	5,269,675	4,830,123	5,297,297	5,153,335	5,333,660	6,089,228	5,932,045	5,975,099
Inflated Expenditures @ 2.5%	1,529,024	1,029,814	1,863,837	989,943	1,638,370	1,348,667	819,966	1,775,968	1,611,081	1,899,485
Reserve Contribution	1,236,975	1,267,899	1,299,596	1,332,086	1,365,388	1,399,523	1,434,511	1,470,374	1,507,133	1,544,811
Household/yr @ 13,610	90.89	93.16	95.49	97.88	100.32	102.83	105.40	108.04	110.74	113.51
Percentage Increase	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	123,219	125,625	124,689	125,030	129,020	129,469	141,023	148,411	147,002	144,944
Ending Balance	4,905,965	5,269,675	4,830,123	5,297,297	5,153,335	5,333,660	6,089,228	5,932,045	5,975,099	5,765,369

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Beginning Balance	5,765,369	4,732,648	4,389,753	3,877,239	3,599,640	3,851,022	3,195,863	4,278,737	3,521,226	3,351,923
Inflated Expenditures @ 2.5%	2,745,758	2,078,534	2,278,168	2,075,088	1,588,414	2,533,664	845,701	2,736,008	2,183,414	3,113,604
Reserve Contribution	1,583,431	1,623,017	1,663,592	1,705,182	1,747,812	1,791,507	1,836,295	1,882,202	1,929,257	1,977,488
Household/yr @ 13,610	116.34	119.25	122.23	125.29	128.42	131.63	134.92	138.30	141.75	145.30
Percentage Increase	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	129,605	112,622	102,062	92,307	91,983	86,999	92,279	96,296	84,854	69,597
Ending Balance	4,732,648	4,389,753	3,877,239	3,599,640	3,851,022	3,195,863	4,278,737	3,521,226	3,351,923	2,285,404



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Option to Increase Percent Funded
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As you can see on the previous page, with an extra \$1 Million added over 2020 and 2021, and the contributions reduced to an inflationary rate of 2.5% per year, the percent funded trends downward and never reached 85% funded status. And the low year is now year 30 at \$2.2M. That is a small buffer for 30 years from now.

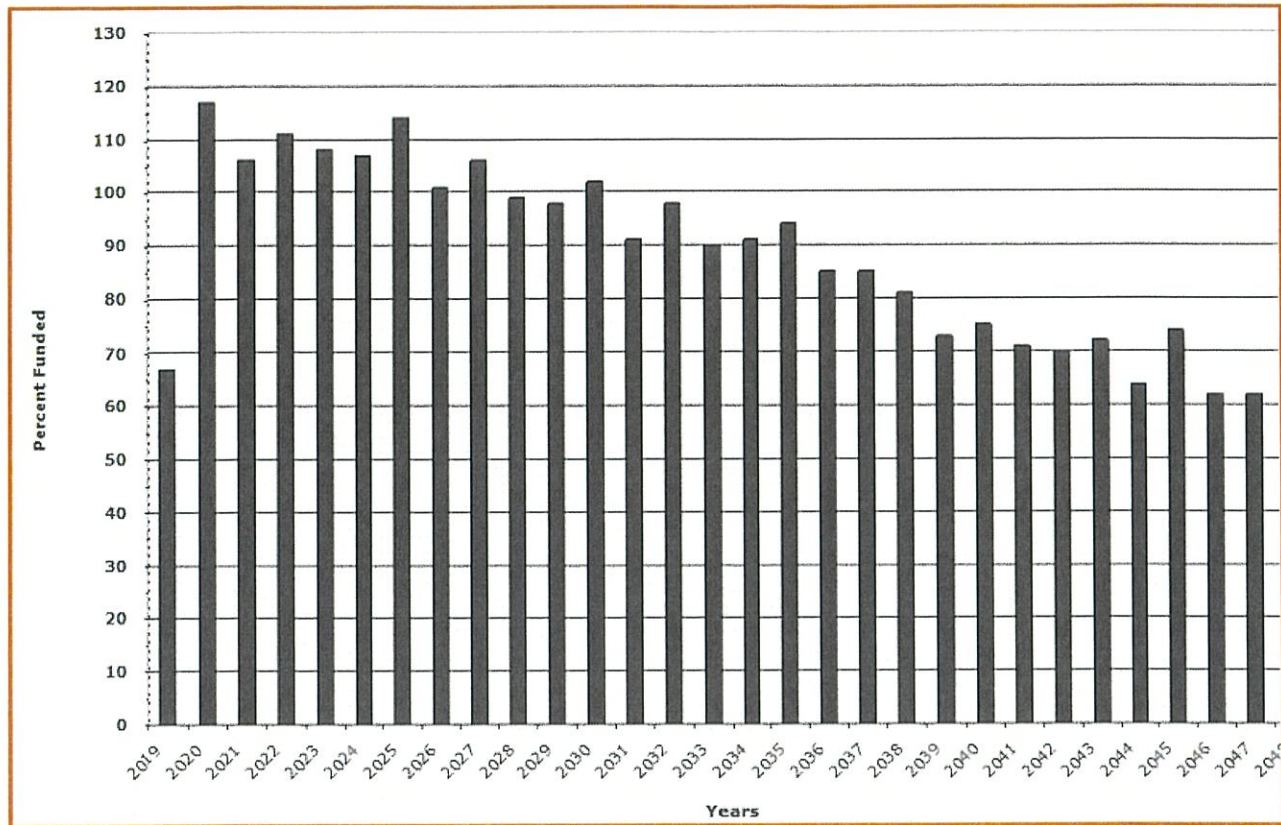
Let's look at how much would have to be added to the reserve fund in 2020, so that future increases are at 2.5% and GVR's goal of 85% funding is sought.

Please see below the \$4M deposit in 2020 & 2.5% increases throughout the plan.

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Beginning Balance	5,881,453	5,584,742	9,697,731	9,099,045	8,934,744	8,693,184	8,492,454	8,991,800	8,687,728	8,908,900
Inflated Expenditures @ 2.5%	1,404,592	1,066,165	1,845,988	1,427,564	1,525,829	1,506,205	837,148	1,670,992	1,173,441	1,543,482
Reserve Contribution	966,323	990,481	1,015,243	1,040,624	1,066,640	1,093,306	1,120,639	1,148,655	1,177,371	1,206,805
<i>Household/yr @ 13,610</i>	71.00	72.78	74.60	76.46	78.37	80.33	82.34	84.40	86.51	88.67
<i>Percentage Increase</i>		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Special Assessments / Other	0	4,000,000	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	141,558	188,673	232,059	222,639	217,629	212,168	215,855	218,266	217,242	218,514
Ending Balance	5,584,742	9,697,731	9,099,045	8,934,744	8,693,184	8,492,454	8,991,800	8,687,728	8,908,900	8,790,737
	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Beginning Balance	8,790,737	8,714,806	9,173,738	8,831,788	9,399,003	9,357,584	9,643,015	10,506,317	10,459,561	10,615,803
Inflated Expenditures @ 2.5%	1,529,024	1,029,814	1,863,837	989,943	1,638,370	1,348,667	819,966	1,775,968	1,611,081	1,899,485
Reserve Contribution	1,236,975	1,267,899	1,299,596	1,332,086	1,365,388	1,399,523	1,434,511	1,470,374	1,507,133	1,544,811
<i>Household/yr @ 13,610</i>	90.89	93.16	95.49	97.88	100.32	102.83	105.40	108.04	110.74	113.51
<i>Percentage Increase</i>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	216,118	220,846	222,290	225,071	231,563	234,575	248,757	258,838	260,190	260,962
Ending Balance	8,714,806	9,173,738	8,831,788	9,399,003	9,357,584	9,643,015	10,506,317	10,459,561	10,615,803	10,522,090
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Beginning Balance	10,522,090	9,608,287	9,387,283	8,999,707	8,850,170	9,232,815	8,712,202	9,932,984	9,316,829	9,292,417
Inflated Expenditures @ 2.5%	2,745,758	2,078,534	2,278,168	2,075,088	1,588,414	2,533,664	845,701	2,736,008	2,183,414	3,113,604
Reserve Contribution	1,583,431	1,623,017	1,663,592	1,705,182	1,747,812	1,791,507	1,836,295	1,882,202	1,929,257	1,977,488
<i>Household/yr @ 13,610</i>	116.34	119.25	122.23	125.29	128.42	131.63	134.92	138.30	141.75	145.30
<i>Percentage Increase</i>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	248,523	234,513	227,000	220,369	223,247	221,543	230,187	237,652	229,744	218,109
Ending Balance	9,608,287	9,387,283	8,999,707	8,850,170	9,232,815	8,712,202	9,932,984	9,316,829	9,292,417	8,374,410

Please see next page for percent funded graph for the above funding plan.

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Option to Increase Percent Funded
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I tried to show a middle of the road presentation because the 85% funding goal moves closer to 2019, or further from 2019, depending on the size of the one-time infusion.

I am displaying the \$4M infusion. The result is the fund is overfunded in 2020 and the percent funded trend line drops like a rock, almost every year, with the inflationary increases. **With the \$4M infusion, the 85% goal passes downwards through 2038 and keeps falling.**

At a \$5M infusion, that buys a few more years and the fund is at 85% in 2044 and at \$6M it buys you until 2048, year 30, before the percentage drops to below 85%.

Generally, when our client wants to be more conservative than us, we let them, with not much push back. After all, it is your community and the board's responsibility, so we can recommend, but the board is the entity that has to address the members when things go bad.

I hope this gives you a good idea of how percent funded can be useful while sometimes being a false indicator of adequacy.

Thanks, Bob

-End-



Reserve Study Transmittal Letter

Date: August 19, 2020
To: Melanie Stephenson, Green Valley Recreation Inc
From: Browning Reserve Group (BRG)

Re: Green Valley Recreation Inc; Update w/o Site Visit Review

Attached, please find the reserve study for Green Valley Recreation Inc. To assist in your understanding of the study, and to highlight key information you may need quickly, we have listed below some of the important information contained in the study. At BRG our goal is to bring clarity from complexity, so should you have any questions, please do not hesitate to contact us anytime.

1. Where do I find the recommended reserve contribution for next year's budget?

This is found in *Section III, "30 Year Reserve Funding Plan, Cash Flow Method."* **\$1,048,192** is the annual amount. Directly under the annual amount is the amount per ownership interest, per month, or other period, as applicable. **\$77.02 Household/yr @ 13,610.** For any other funding related issues, if any, see *Section III, "30 Year Reserve Funding Plan, Cash Flow Method."*

2. Where do I find the status of the reserve fund, based on the Percent Funded calculation?

This is found for the 30-year term of the study in *Section IV, "30 Year Reserve Funding Plan, Including Fully Funded Balance and % Funded."* For the year for which the study was prepared, 2021, the Project is **77.4%** funded.

Based on the 30 year cash flow projection, GVR's reserves appear adequately funded as the reserve fund ending balances remain positive throughout the replacement of all major components during the next 30 years.

Although one or more of the reserve fund percentages expressed in this report may be less than one hundred percent, those percentages do not necessarily indicate that GVR's reserves are inadequately funded.

3. Where do I find the assumptions for interest and inflation factors?

While this information is in various places in the study, it can always be found in *Section III, "30 Year Reserve Funding Plan, Cash Flow Method."* For this study the assumption is **2.50%** for the interest rate and **2.50%** for the inflation factor. Please be advised these rates estimate the values that will stand the test of time over the 30-year term of the study, not simply only next year.

Please read the two helpful sections entitled "Glossary" and "Notes to the Auditor." The glossary explains common reserve study terms as well as BRG specific terminology. The Notes to the Auditor while intended to assist the auditor, has useful information for the casual reader on how year zero, (2020) the current fiscal year is dealt with in the study.

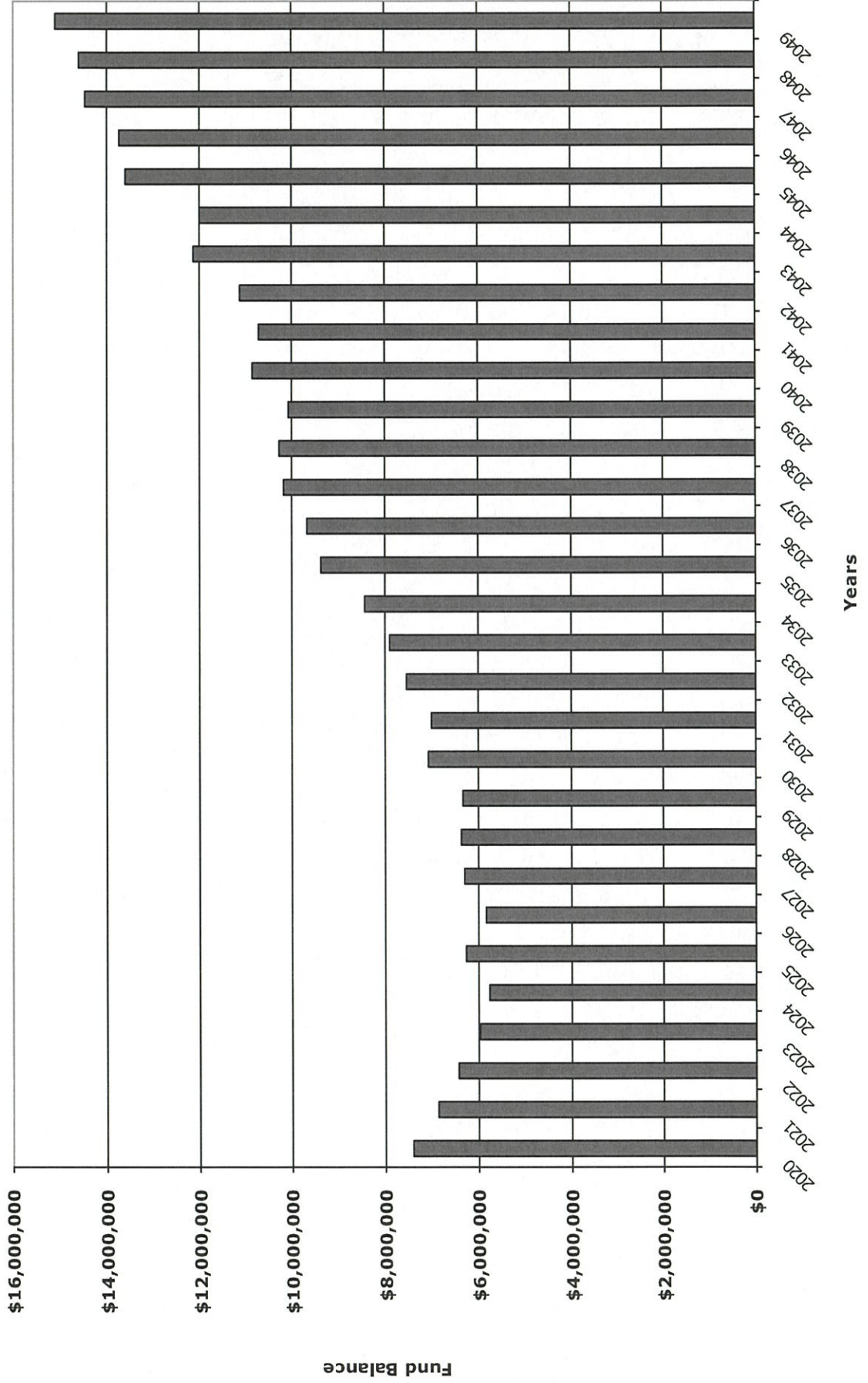


	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Beginning Balance	7,085,389	7,395,201	6,872,601	6,435,261	5,970,529	5,774,000	6,254,622	5,816,001	6,277,232	6,365,650
Inflated Expenditures @ 2.5%	874,903	1,746,938	1,693,850	1,755,979	1,527,412	903,576	1,875,236	1,029,742	1,465,692	1,629,874
Reserve Contribution	1,005,942	1,048,192	1,092,216	1,138,089	1,185,889	1,235,696	1,287,595	1,341,674	1,398,024	1,449,751
<i>Household/yr @ 13,610</i>	73.91	77.02	80.25	83.62	87.13	90.79	94.61	98.58	102.72	106.52
<i>Percentage Increase</i>		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	3.7%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	178,773	176,146	164,295	153,158	144,994	148,502	149,020	149,299	156,085	156,890
Ending Balance	7,395,201	6,872,601	6,435,261	5,970,529	5,774,000	6,254,622	5,816,001	6,277,232	6,365,650	6,342,417
Beginning Balance	6,342,417	7,065,712	7,004,927	7,546,179	7,886,836	8,424,681	9,367,609	9,666,582	10,182,236	10,291,129
Inflated Expenditures @ 2.5%	945,629	1,792,010	1,251,977	1,521,548	1,395,385	1,070,931	1,794,809	1,655,102	2,138,900	2,517,911
Reserve Contribution	1,503,392	1,557,514	1,613,585	1,671,674	1,731,854	1,794,201	1,858,792	1,925,709	1,995,035	2,064,861
<i>Household/yr @ 13,610</i>	110.46	114.44	118.56	122.83	127.25	131.83	136.58	141.49	146.59	151.72
<i>Percentage Increase</i>	3.7%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.5%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	165,532	173,712	179,643	190,531	201,377	219,658	234,990	245,047	252,758	251,615
Ending Balance	7,065,712	7,004,927	7,546,179	7,886,836	8,424,681	9,367,609	9,666,582	10,182,236	10,291,129	10,089,693
Beginning Balance	10,089,693	10,835,376	10,716,910	11,100,802	12,130,066	11,975,127	13,600,788	13,720,822	14,456,125	14,606,748
Inflated Expenditures @ 2.5%	1,649,782	2,596,475	2,174,811	1,627,013	2,904,941	1,228,334	2,844,349	2,328,962	3,016,936	2,794,489
Reserve Contribution	2,137,131	2,211,931	2,289,349	2,369,476	2,452,408	2,538,242	2,627,080	2,716,401	2,808,759	2,904,257
<i>Household/yr @ 13,610</i>	157.03	162.52	168.21	174.10	180.19	186.50	193.03	199.59	206.37	213.39
<i>Percentage Increase</i>	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.4%	3.4%	3.4%
Special Assessments / Other	0	0	0	0	0	0	0	0	0	0
Interest Pre Tax @ 2.50%	258,334	266,078	269,354	286,801	297,595	315,752	337,304	347,864	358,801	366,541
Ending Balance	10,835,376	10,716,910	11,100,802	12,130,066	11,975,127	13,600,788	13,720,822	14,456,125	14,606,748	15,083,057



Browning
RESERVE GROUP

Section III-a
Green Valley Recreation Inc
30 Year Reserve Funding Plan Cash Flow Method - Ending Balances
2020 Update- 4
Prepared for the 2021 Fiscal Year





30 Year Reserve Funding Plan Including Fully Funded Balance and % Funded

2020 Update- 4

Prepared for the 2021 Fiscal Year

Year	Beginning Balance	Fully Funded Balance	Percent Funded	Inflated Expenditures @ 2.50%	Reserve Contribution	Special Assessments & Other Contributions	Interest	Ending Balance
2020	7,085,389	8,430,787	87.7%	874,903	1,005,942	0	178,773	7,395,201
2021	7,395,201	8,882,798	77.4%	1,746,938	1,048,192	0	176,146	6,872,601
2022	6,872,601	8,550,261	75.3%	1,693,850	1,092,216	0	164,295	6,435,261
2023	6,435,261	8,302,742	71.9%	1,755,979	1,138,089	0	153,158	5,970,529
2024	5,970,529	8,017,225	72.0%	1,527,412	1,185,889	0	144,994	5,774,000
2025	5,774,000	7,991,520	78.3%	903,576	1,235,696	0	148,502	6,254,622
2026	6,254,622	8,638,093	67.3%	1,875,236	1,287,595	0	149,020	5,816,001
2027	5,816,001	8,339,202	75.3%	1,029,742	1,341,674	0	149,299	6,277,232
2028	6,277,232	8,934,652	71.2%	1,465,692	1,398,024	0	156,085	6,365,650
2029	6,365,650	9,134,201	69.4%	1,629,874	1,449,751	0	156,890	6,342,417
2030	6,342,417	9,207,415	76.7%	945,629	1,503,392	0	165,532	7,065,712
2031	7,065,712	10,021,696	69.9%	1,792,010	1,557,514	0	173,712	7,004,927
2032	7,004,927	10,027,629	75.3%	1,251,977	1,613,585	0	179,643	7,546,179
2033	7,546,179	10,627,049	74.2%	1,521,548	1,671,674	0	190,531	7,886,836
2034	7,886,836	11,005,944	76.5%	1,395,385	1,731,854	0	201,377	8,424,681
2035	8,424,681	11,565,449	81.0%	1,070,931	1,794,201	0	219,658	9,367,609
2036	9,367,609	12,514,373	77.2%	1,794,809	1,858,792	0	234,990	9,666,582
2037	9,666,582	12,788,981	79.6%	1,655,102	1,925,709	0	245,047	10,182,236
2038	10,182,236	13,258,690	77.6%	2,138,900	1,995,035	0	252,758	10,291,129
2039	10,291,129	13,290,412	75.9%	2,517,911	2,064,861	0	251,615	10,089,693
2040	10,089,693	12,981,755	83.5%	1,649,782	2,137,131	0	258,334	10,835,376
2041	10,835,376	13,603,712	78.8%	2,596,475	2,211,931	0	266,078	10,716,910
2042	10,716,910	13,320,569	83.3%	2,174,811	2,289,349	0	269,354	11,100,802
2043	11,100,802	13,513,507	89.8%	1,627,013	2,369,476	0	286,801	12,130,066
2044	12,130,066	14,324,989	83.6%	2,904,941	2,452,408	0	297,595	11,975,127
2045	11,975,127	13,900,415	97.8%	1,228,334	2,538,242	0	315,752	13,600,788
2046	13,600,788	15,238,621	90.0%	2,844,349	2,627,080	0	337,304	13,720,822
2047	13,720,822	15,010,110	96.3%	2,328,962	2,716,401	0	347,864	14,456,125
2048	14,456,125	15,361,807	95.1%	3,016,936	2,808,759	0	358,801	14,606,748
2049	14,606,748	15,076,214	100.0%	2,794,489	2,904,257	0	366,541	15,083,057



Browning
RESERVE GROUP

Section IV-a
Green Valley Recreation Inc
30 Year Reserve Funding Plan Cash Flow Method - Percent Funded
2020 Update- 4
Prepared for the 2021 Fiscal Year

