



# REGIONAL DISTRICT OF NORTH OKANAGAN

## GREATER VERNON ADVISORY COMMITTEE SPECIAL MEETING

Thursday, June 13, 2013  
8:00 am

### AGENDA

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#### A. APPROVAL OF AGENDA

##### 1. Special Meeting Agenda – June 13, 2013

###### **RECOMMENDATION 1**

That the Agenda of the June 13, 2013 Greater Vernon Advisory Committee - Special Meeting be approved as presented.

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#### B. UNFINISHED BUSINESS

##### 1. Master Water Plan

- Presentation of Technical Memorandum 10

###### **RECOMMENDATION 2**

That it be recommended to the Board of Directors that Technical Memorandum No. 10 be received for information; and further,

That staff be directed to implement Option 2 – Treatment at Duteau Creek Water Treatment Plant and Mission Hill Water Treatment Plant with Partial System Separation with the provision that twinning the transmission main be oversized for Option 3 - Treatment at Duteau Creek Water Treatment Plant and Mission Hill Water Treatment Plant with Complete System Separation; and further,

That the Financial Plan be amended to include the capital projects and associated time frame identified under Option 2 - Partial System Separation, Water Treatment Plant at Mission Hill and Duteau Creek with the addition of the twinning transmission main oversizing included in Option 3 as follows:

<b>Water Supply and Treatment</b>	<b>Year</b>	<b>2012 Cost Estimate (Million)</b>
1. Duteau Creek WTP – Stage 1, 110 ML/d	2017	\$26.5
2. Mission Hill WTP – Stage 1, 56 ML/d	2022	\$30
3. Aberdeen Dam Improvements – Raise Dam by 4 m	2022	\$6.41
4. Gold-Paradise Extension	2037	\$3.60
5. Domestic System Distribution Investments	2013 - 2017	\$9.80
6. Lavington System Separation	2013 - 2017	\$19.5
7. Twinning Transmission Main (Oversizing)	2013 - 2017	\$3.5
8. Okanagan Lake Pump Station	2021	\$2.6

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#### C. ADJOURNMENT



Greater Vernon Water (GVW)

## Technical Memorandum No. 10 GVW Financial Plan (DRAFT)

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### AECOM Job Number:

60224916

### Date:

June 2013

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## Revision Log

Revision #	Revised By	Date	Issue / Revision Description
1	David Main	June 6, 2013	Draft submission for client review.

## AECOM Signatures

**Report Prepared By:**

\_\_\_\_\_   
David Main

**Report Reviewed By:**

\_\_\_\_\_   
Brett deWynter, P.Eng.

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## **1. Introduction**

Technical Memorandum (TM) 9 provided technical details on seven options that could address all of the water requirements specified in earlier portions of the Master Water Plan. Each option includes a range of benefits and each has a different cost life cycle. Following consultation with the Technical Advisory Committee (TAC) in May, 2013, the TAC recommended to the Greater Vernon Advisory Committee (GVAC) that Option 1, 2 and 3 be examined in closer financial detail and that Option 2 (Treatment at Duteau and Mission Hill with partial separation) be the recommended Option. Option 3 would be considered should the GVAC wish to pursue devolution. The GVAC also recommended to the Board that the Draft Master Water Plan proceed under the general direction provided under Option 2 – Treatment at Duteau and Mission Hill with Partial System Separation under the subject that the trunk irrigation line be sized for Option 3 - Treatment at Duteau and Mission Hill with Complete System Separation

While some aspects of the financial plan will remain uncertain, such as the amount of grant funding that can be obtained for proposed capital works, the basic financial plan and forecast for Options 1, 2 and 3 can be established for the purposes of making a comparison to identify the difference in cost between each of the options. Specifically, the objectives of this Technical Memorandum are to:

- Compare the total life cycle costs of Options 1, 2 and 3.
- Prepare a long range cash flow forecast of Options 1, 2 and 3.
- Determine the approximate impact on water rates that will be required in order to support the Master Water Plan for Options 1, 2 and 3.
- Identify financial variables that could materially impact the option life cycle costs.
- Identify any outstanding financial matters.

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## **2. Financial Comparison of Options 1, 2 and 3**

The purpose of this financial comparison is to identify the long term funding requirements for these technical options (presented in TM 9). Since it was agreed by the TAC that the financial comparison should take into account full lifecycle costs, the forecast has been extended to a 50 year horizon. It is important to note that the financial comparison includes only the following:

- Revenue requirements for operating and maintaining all current GVW infrastructure (for both domestic and irrigation customers).
- Revenue requirements of servicing current debt obligations.
- Revenue requirements for operating and maintaining the new infrastructure required under each option.
- Revenue requirements of acquiring the new capital investment under each option (both new debt and/or pay as you go acquisitions through cash or withdrawals from reserves).
- Revenue requirements of administering and managing the GVW under each option.
- Revenue requirements of sustaining capital expenditures that have not been included in the Master Water Plan. This is an estimate that is based on past history and is reasonable to carry forward as a yearly requirement.

Investment requirements that are not included in the comparison are:

- Revenue requirements to renew aging infrastructure. TM 8 noted that significant portions of existing GVW infrastructure will require replacement or renewal over the forecast horizon and that the magnitude of this investment will be substantial (TM 8 estimated that a 25 year average annual requirements will be approximately \$3 million per year). Since the infrastructure renewal program will be identical in all of the options, omitting the financial impact of an adequate renewal program will not limit the ability to make financial comparisons between the options.
- Future revenue requirements to fund significant capital improvements that have not been identified in this MWP. Since this MWP includes the next 10 year planning horizon for all water quality improvements, it is not possible to plan or estimate capital projects required after 2023 (with the exception of the capacity expansion project that is anticipated in 25 years) even though this forecast extends to 50 years.

### **2.1 Financial Comparison Assumptions**

This financial forecast was prepared for the purpose of comparing Technical Options. To enable the process the following assumptions have been incorporated into the model:

- The projections are based on an inflation rate of 2% per year and a discount rate of 5% (which reflects an estimate for the long term cost of capital).
- Water rates will be determined through a political process that has not been included in this Master Water Plan.
- It is assumed that over the long run, transfers of funds to and from the Capital Reserve will net out to zero and no estimates have been made to compute specific yearly transfers to or from these reserves.
- Some of the forecasted capital projects are at least partially attributable to meet the needs of future growth. The portion that is attributable to meet the needs of growth will be eligible for DCC funding. DCC revenues in future years can be used to offset the annual debt payment associated with the DCC eligible facilities. Since GVWU will need to incur and carry the debt in advance of DCC revenue collection, the full cost of these facilities has been budgeted through rates.

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- The future capital costs for new, local distribution systems have not been included in the revenue requirement projections since these will be 100% funded by developers and assume no impact on water rates.
- In the past, some of the capital projects in each option would have qualified for partial assistance from infrastructures grants from senior levels of government, particularly capital projects associated with enhancing the quality of drinking water. Since this investment needs to occur regardless of the availability of grant funding, the financial comparison assumes no grant funding and that the entire investment will be paid by customers. If grants do become available through the implementation horizon, this will serve to reduce the program cost to rate payers.

## **2.2 Option Financial Cost Summary**

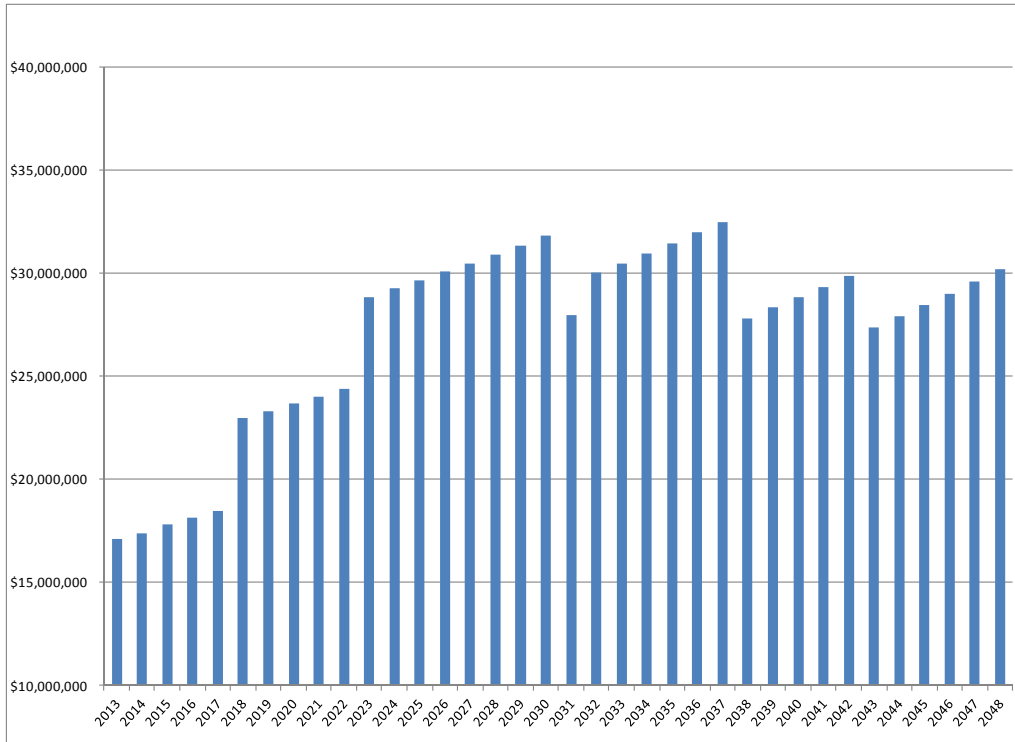
Appendix A presents the detailed annual revenue requirement forecast for each of Options 1, 2 and 3. Each forecast includes:

- The specific capital investment program that is anticipated under the option. Major investments are assumed to be debt funded and the resulting bond payment is calculated for the revenue requirements for the term of the debt. Where feasible, smaller capital projects are assumed to be paid in the year of their acquisition either from reserves or directly from rate revenue.
- The O&M cost implications with the new capital investment program under each option. Anticipated O&M expenses for each new facility are estimated individually and are assumed to extend through the remainder of the forecast once the facility is commissioned.
- Existing O&M costs associating with current GVW facilities are assumed to extend through the remainder of the forecast unless the facility is no longer required.
- Sustaining Capital Expenditures include ongoing capital requirements that are not part of the MWP program. These could be capital replacements, renewals or minor betterments to enhance existing GVW facilities. This estimate is based on past history and is the same for each option.

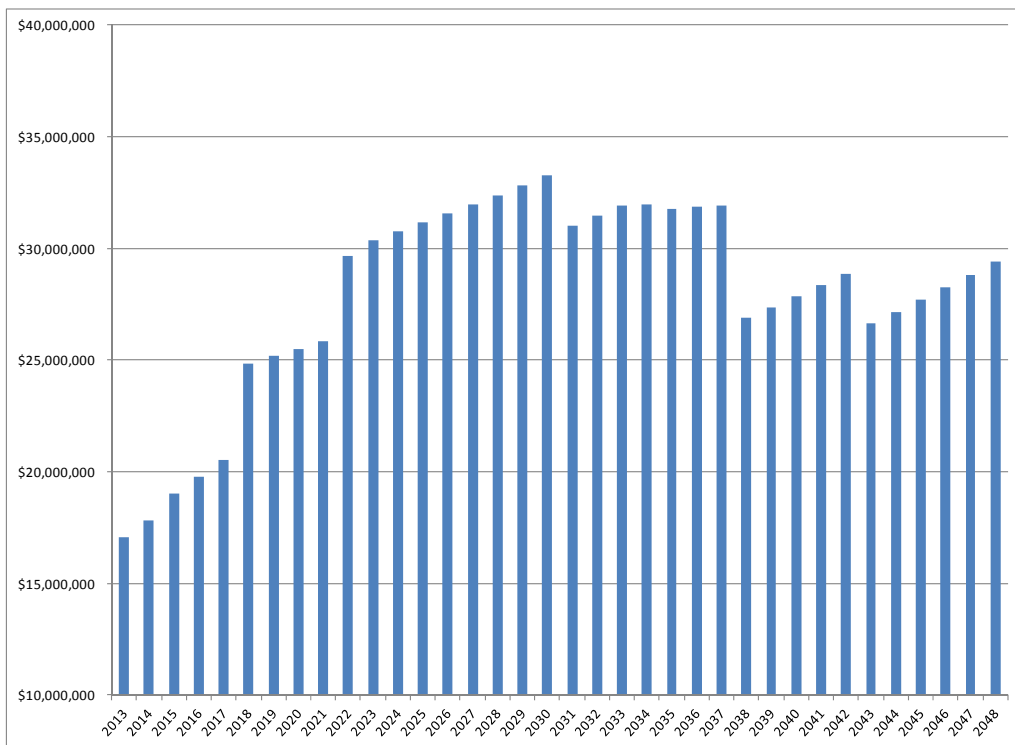
The year to year revenue requirements of each option are presented in Figures 2.1 to 2.3 on the following pages. To simplify each figure, the forecast is graphed for only 35 years of the 50 year forecast. All debt obligations are fully paid in 2043 and after this time, the revenue requirements increase at the same rate in all three options because of the inflation (2%) factor.

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**Figure 2.1: Annual Revenue Requirements for Option 1: Treatment at Duteau and Mission Hill With No Additional Separation**



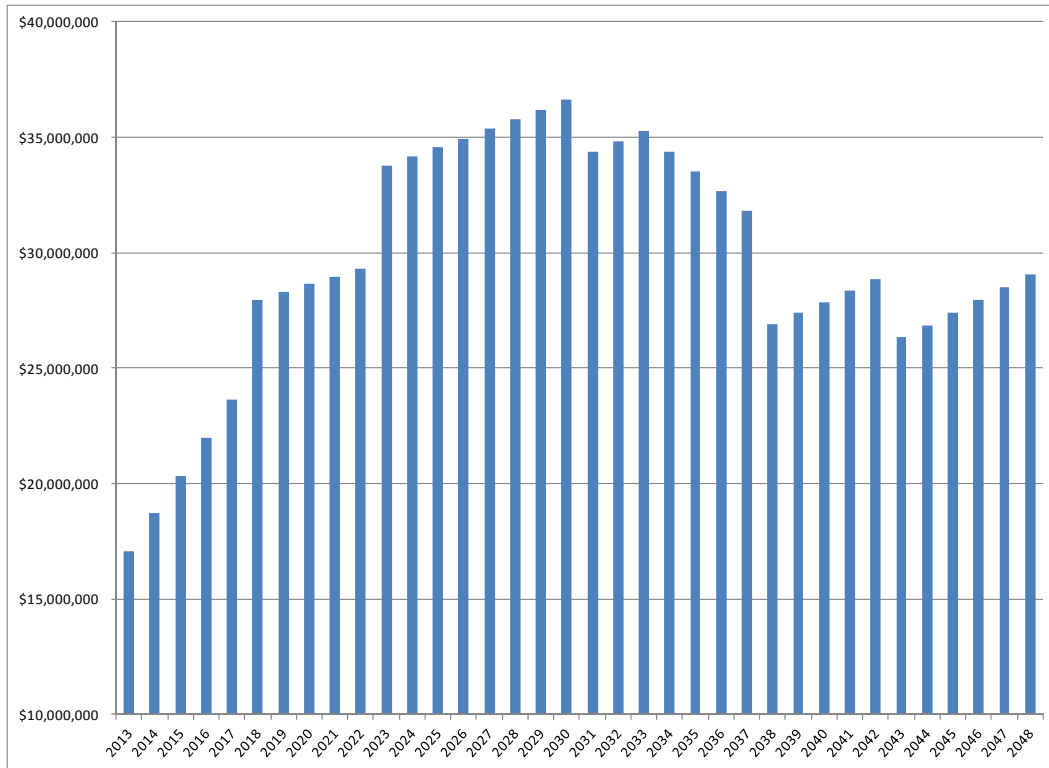
**Figure 2.2: Annual Revenue Requirements for Option 2: Treatment at Duteau and Mission Hill With Incremental Separation**





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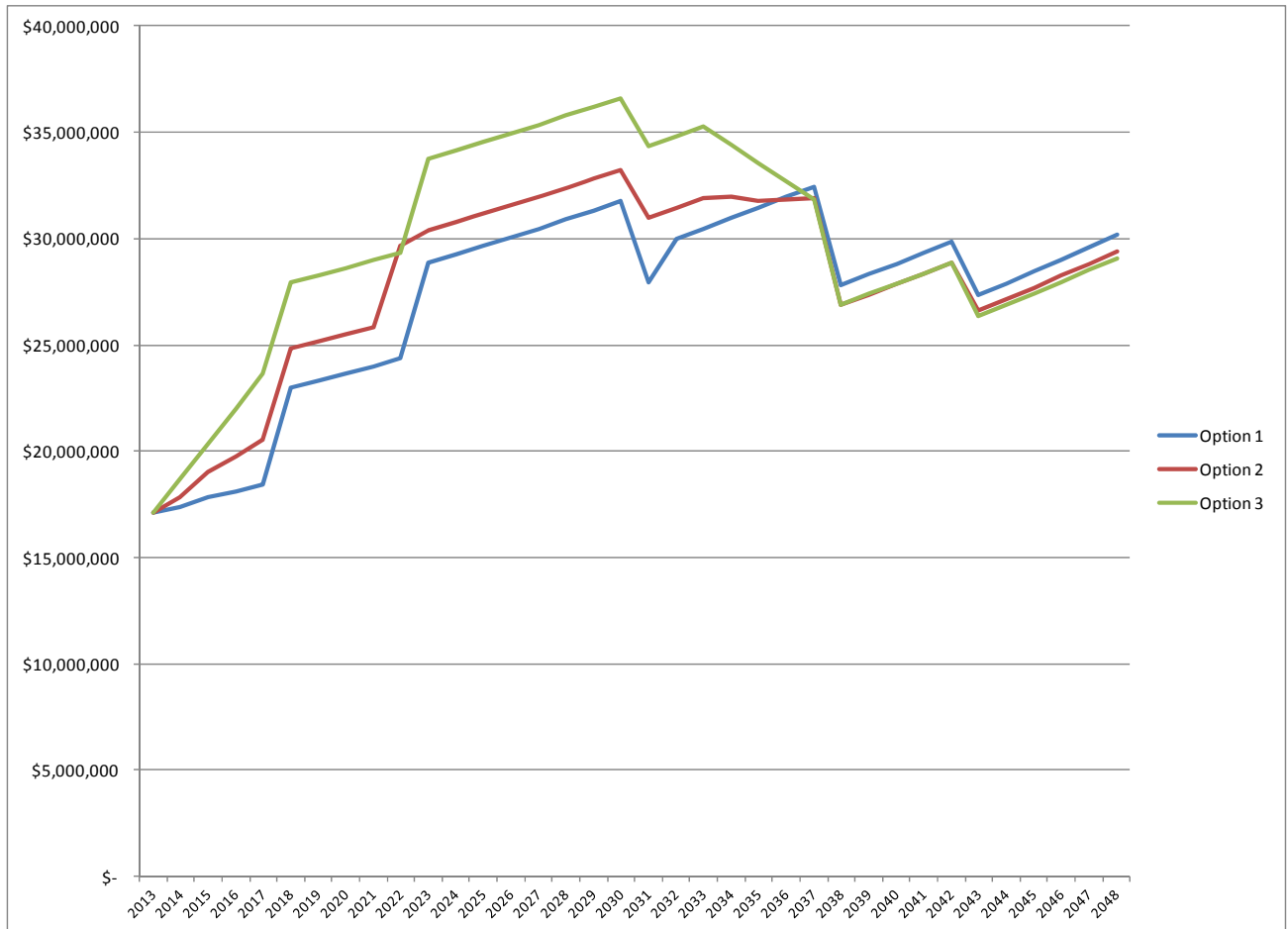
**Figure 2.3: Annual Revenue Requirements for Option 3: Treatment at Duteau and Mission Hill With Full Separation**



To show a year by year comparison of the revenue requirements for each of the options, **Figure 2.4** below summarizes the individual option revenue requirement profiles in a single view. The summary is based on a 2% inflation rate and 5% discount rate.

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**Figure 2.4: Comparison of Option Spending Profiles**



**Notes and Observations**

- Option 2 and 3 physically differ in that Option 3 fully separates the domestic and irrigation distribution system between 2013 and 2017. This large scale separation program results in a rapid increase in revenue requirements over this time. The treatment plant capital programs in Option 2 and 3 are essentially the same.
- Option 3 can be considered as the premium that would be required in order to facilitate GWV devolution and a fully separated domestic and agricultural water system. The Net Present Value (NPV) of this premium is about \$32.5M over the 50 year horizon (see Section 2.3)
- Option 1 and 2 differ in that Option 1 includes no further system separation, however the Duteau Creek WTP must therefore be larger than in Option 2 and 3. This requires the Option 1 Duteau Creek WTP to be more expensive.
- Once all of the debt is repaid in about 2043, Option 1's annual O&M expense is slightly more than Option 2 and 3 due to the larger Duteau Creek WTP.

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### 2.3 Net Present Value Comparison

Net Present Value (NPV) is an indicator of the total investment required from a strategy over time. NPV can be described as the “difference amount” between the sums of discounted cash flow. It compares the present value of money today to the present value of money in the future, taking inflation and the cost of capital into account. For the purposes of comparing alternative strategies, it can be used to rank the total required investment for each alternative in comparison to one another.

NPV takes only the financial outcome into account. Using the triple bottom line evaluation approach where financial, social and environmental outcomes weigh into the final strategy selection, NPV is used only on the financial evaluation. The financial forecasts in Appendix A presents the required detail to conduct a Net Present Value assessment on each of the options over a 50 year forecasting horizon. A summary of the NPV is presented in **Table 2.1** below:

**Table 2.1: Net Present Value of Options 1, 2 and 3**

	Net Present Value	Rank	% Variation From Least Cost Option
Option 1:	\$496,658,229	1st	N/A
Option 2	\$514,370,727	2nd	3.6% more than Option 1
Option 3	\$546,856,084	3th	10.1% more than Option 1

Due to the lowest investment in new capital, Option 1 not surprisingly is the least cost option.

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### 3. Impact on Water Rates

It is understood by all GVW stakeholders that the investment required under the Master Water Plan will require water rates to increase. Once the GVW has agreed to an optimal strategy to address the Master Water Plan demands, the resulting revenue requirements will need to be translated into a rate structure that best meets the needs of the utility and the utility's customers. Since the GVW uses consumption-based water rates, larger users of water will pay a greater amount than users who practice water conservation. Further, GVW domestic and agricultural water rates presently include an inclining block structure to provide an additional financial incentive for customers to reduce water consumption during the peak summer season. If continued, this will place an even larger portion of charges to high volume water consumers.

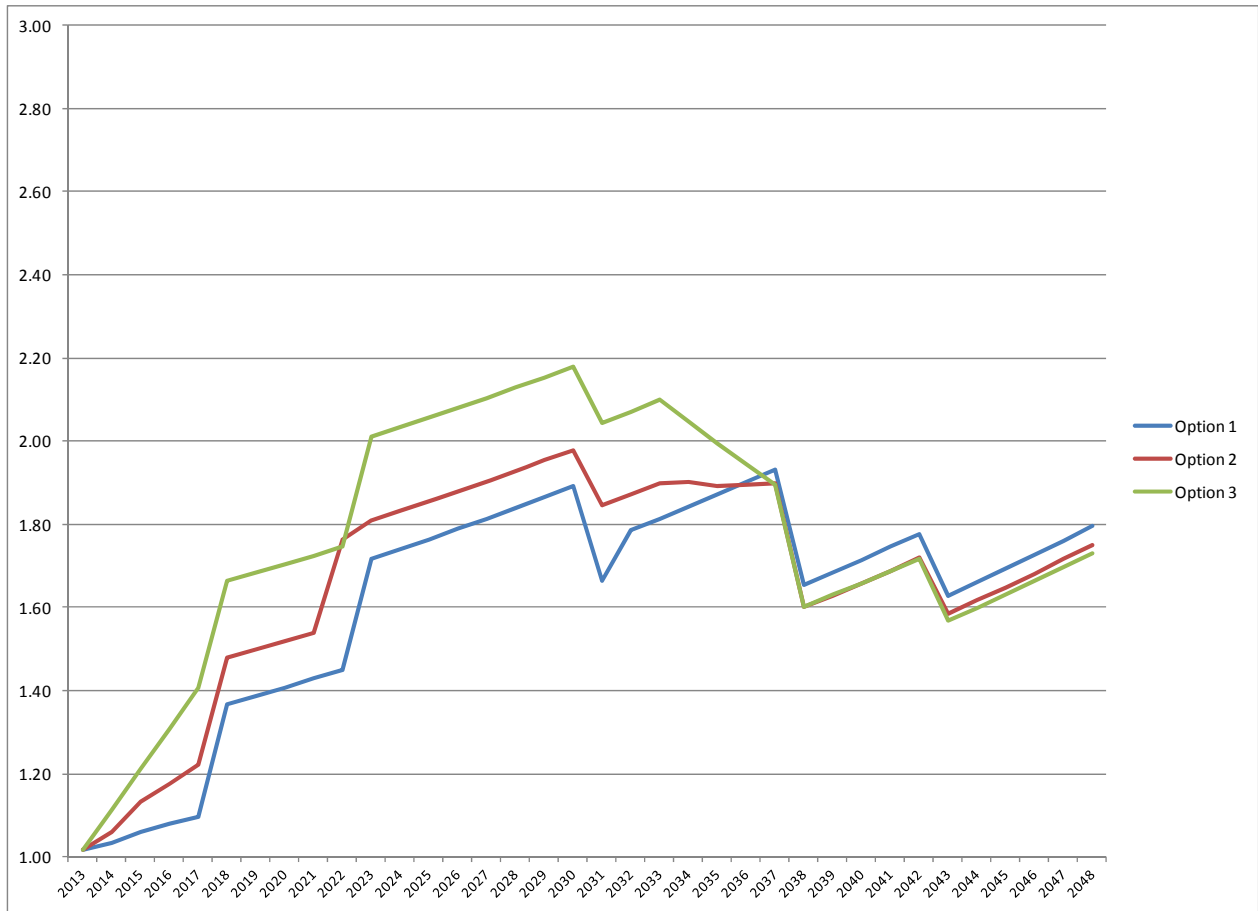
Since the water rate setting process is directed by a range of policy objectives (as noted in TM 8), it is not possible to predict precise water rates for the different customer classifications and different consumption behaviors within each customer classification as a result of the required new investment. It is also possible that water rate policy changes may result in alternative approaches to setting water rates in the future. For example, the 2012 water rate bylaw saw an increase to the fixed portion of the water charge to reduce the risk of revenue shortages in wetter than average summers). At the end of the day however, the additional required revenue must be collected and the source of the revenue will be the water customers. It is therefore important that the GVW inform water customers about the impact of the Master Water Plan on the cost of water over the planning horizon.

#### 3.1 Indexed Against Current Domestic Rates

To simplify a comparison of current domestic rate water rates and their impact under the different options, the use of an index is presented in **Figure 3.1**. The current GVW average single family detached household that consumed 350M<sup>3</sup> per year in 2012 is proposed as the base index of 1.0. In this case, this household's annual water bill was \$625 in 2012, and was split 50% from the base fee and 50% from volumetric charges. Figure 3.1 projects the impact of each of the three options as a year to year change of the index that is based on an average single family detached dwelling (which essentially mirrors the investment profile of each option).

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**Figure 3.1: Range of O&M Allocations to be Testing in Option Life Cycle Assessment**



**Notes and Observations**

1. In actuality, water rates would attempt to smooth the lines so that year to year downward and upward movements would be minimized.
2. The water rate under each option will rise at different rates during the first few years of the program. While Option 1’s rate of increase is based mostly on inflation (factored at 2% per year), Option 2 and 3 will see major investments in separating the domestic water system from the agricultural system.
3. Once the separation work is complete, the lines associated with each option move roughly parallel
4. Option 3 breaks through the 2.0 Index (indicating a doubling of 2012 costs) in 10 years (2023) and peaks in 2029. Option 1 and 2 do not break the 2.0 index level.

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**Appendix A Option 1 - Duteau / Mission Hill WTP With No Additional Separation**

	2012	NPV	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>MWP Capital Expenditures</b>																				
Duteau WTP Filtration	36,000,000	31,142,743	-	-	-	-	39,746,909	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	36,569,833	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	2,705,040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	7,813,754	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	10,500,000	9,083,300	-	-	-	-	11,592,848	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>89,110,000</b>	<b>71,671,378</b>	-	<b>2,705,040</b>	-	-	<b>51,339,757</b>	-	-	-	-	<b>44,383,587</b>	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																				
Duteau WTP Filtration	701,301	15,030,445	-	-	-	-	-	789,779	805,574	821,686	838,120	854,882	871,980	889,419	907,208	925,352	943,859	962,736	981,991	1,001,631
Mission Hill WTP Filtration	844,331	14,745,203	-	-	-	-	-	-	-	-	-	-	1,049,819	1,070,816	1,092,232	1,114,077	1,136,358	1,159,086	1,182,267	1,205,913
Okanagan Lake Pump Station	156,462	3,771,445	-	-	166,039	169,360	172,747	176,202	179,726	183,320	186,987	190,726	194,541	198,432	202,400	206,448	210,577	214,789	219,085	223,466
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	93,861	2,011,652	-	-	-	-	-	105,703	107,817	109,973	112,173	114,416	116,704	119,038	121,419	123,848	126,325	128,851	131,428	134,057
	<b>1,795,955</b>	<b>35,558,745</b>	-	-	<b>166,039</b>	<b>169,360</b>	<b>172,747</b>	<b>1,071,684</b>	<b>1,093,117</b>	<b>1,114,979</b>	<b>1,137,280</b>	<b>1,160,024</b>	<b>2,233,044</b>	<b>2,277,705</b>	<b>2,323,259</b>	<b>2,369,725</b>	<b>2,417,119</b>	<b>2,465,462</b>	<b>2,514,771</b>	<b>2,565,067</b>
<b>Baseline Operating Costs</b>																				
Baseline	2,725,000	70,903,516	2,779,500	2,835,090	2,891,792	2,949,628	3,008,620	3,068,793	3,130,168	3,192,772	3,256,627	3,321,760	3,388,195	3,455,959	3,525,078	3,595,580	3,667,491	3,740,841	3,815,658	3,891,971
Duteau WTP	1,876,655	48,829,884	1,914,188	1,952,472	1,991,521	2,031,352	2,071,979	2,113,418	2,155,687	2,198,800	2,242,776	2,287,632	2,333,385	2,380,052	2,427,653	2,476,206	2,525,731	2,576,245	2,627,770	2,680,325
Mission Hill WTP	959,639	24,969,460	978,832	998,408	1,018,377	1,038,744	1,059,519	1,080,709	1,102,324	1,124,370	1,146,857	1,169,795	1,193,190	1,217,054	1,241,395	1,266,223	1,291,548	1,317,379	1,343,726	1,370,601
Distribution	5,538,706	144,115,129	5,649,480	5,762,470	5,877,719	5,995,273	6,115,179	6,237,483	6,362,232	6,489,477	6,619,266	6,751,652	6,886,685	7,024,418	7,164,907	7,308,205	7,454,369	7,603,456	7,755,526	7,910,636
	<b>11,100,000</b>	<b>288,817,989</b>	<b>11,322,000</b>	<b>11,548,440</b>	<b>11,779,409</b>	<b>12,014,997</b>	<b>12,255,297</b>	<b>12,500,403</b>	<b>12,750,411</b>	<b>13,005,419</b>	<b>13,265,526</b>	<b>13,530,839</b>	<b>13,801,455</b>	<b>14,077,483</b>	<b>14,359,033</b>	<b>14,646,214</b>	<b>14,939,139</b>	<b>15,237,921</b>	<b>15,542,680</b>	<b>15,853,533</b>
<b>Sustaining Capital Expenditure</b>																				
Baseline	1,900,000	49,437,314	1,938,000	1,976,760	2,016,295	2,056,621	2,097,754	2,139,709	2,182,503	2,226,153	2,270,676	2,316,089	2,362,411	2,409,659	2,457,853	2,507,010	2,557,150	2,608,293	2,660,459	2,713,668
<b>Debt Servicing</b>																				
Baseline	2,700,000	31,561,885	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000
Duteau WTP	-	32,445,780	-	-	-	-	-	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842
Mission Hill WTP	-	23,390,060	-	-	-	-	-	-	-	-	-	-	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238
Other	-	7,346,786	-	-	-	-	-	752,400	752,400	752,400	752,400	752,400	752,400	752,400	752,400	752,400	752,400	752,400	752,400	752,400
Debt Servicing Costs	2,700,000	87,397,725	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	6,022,842	6,022,842	6,022,842	6,022,842	6,022,842	9,080,080	9,080,080	9,080,080	9,080,080	9,080,080	9,080,080	9,080,080	9,080,080
<b>New Debt</b>																				
Duteau WTP	-	31,142,743	-	-	-	-	39,746,909	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	22,450,705	-	-	-	-	-	-	-	-	-	36,569,833	-	-	-	-	-	-	-	-
Other	-	7,051,735	-	-	-	-	9,000,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	60,645,184	-	-	-	-	48,746,909	-	-	-	-	36,569,833	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>																				
Contributions	1,100,000	19,746,456	1,122,000	1,144,440	1,167,329	1,190,675	1,214,489	1,238,779	1,263,554	1,288,825	1,314,602	1,340,894	1,367,712	1,395,066	1,422,967	1,451,427	1,480,455	1,510,064	1,540,266	1,571,071
Withdrawals	-	11,026,194	-	2,705,040	-	-	2,592,848	-	-	-	-	7,813,754	-	-	-	-	-	-	-	-
	1,100,000	30,772,651	1,122,000	3,849,480	1,167,329	1,190,675	3,807,337	1,238,779	1,263,554	1,288,825	1,314,602	9,154,648	1,367,712	1,395,066	1,422,967	1,451,427	1,480,455	1,510,064	1,540,266	1,571,071
<b>MWP Reserve Fund Balance</b>	-	-	1,122,000	(438,600)	728,729	1,919,404	541,045	1,779,824	3,043,378	4,332,203	5,646,805	(826,055)	541,657	1,936,723	3,359,690	4,811,117	6,291,572	7,801,636	9,341,902	10,912,973
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>496,658,229</b>	<b>17,082,000</b>	<b>17,369,640</b>	<b>17,829,072</b>	<b>18,131,653</b>	<b>18,440,287</b>	<b>22,973,417</b>	<b>23,312,427</b>	<b>23,658,218</b>	<b>24,010,926</b>	<b>24,370,688</b>	<b>28,844,702</b>	<b>29,239,993</b>	<b>29,643,192</b>	<b>30,054,456</b>	<b>30,473,943</b>	<b>30,901,820</b>	<b>31,338,256</b>	<b>31,783,419</b>
<b>Cumulative Funding Requirements</b>			17,082,000	34,451,640	52,280,712	70,412,365	88,852,652	111,826,069	135,138,495	158,796,713	182,807,638	207,178,326	236,023,028	265,263,020	294,906,212	324,960,667	355,434,610	386,336,430	417,674,685	449,458,104
<b>Year to Year % Increase</b>			1.68%	1.68%	2.65%	1.70%	1.70%	24.58%	1.48%	1.48%	1.49%	1.50%	18.36%	1.37%	1.38%	1.39%	1.40%	1.40%	1.41%	1.42%
<b>Index based on Average SFD Wa</b>	1.00		1.02	1.03	1.06	1.08	1.10	1.37	1.39	1.41	1.43	1.45	1.72	1.74	1.76	1.79	1.81	1.84	1.87	1.89

	2012	NPV	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
<b>MWP Capital Expenditures</b>																				
Duteau WTP Filtration	36,000,000	31,142,743	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	5,906,182	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	10,500,000	9,083,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>89,110,000</b>	<b>71,671,378</b>	-	-	-	-	-	-	<b>5,906,182</b>	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																				
Duteau WTP Filtration	701,301	15,030,445	1,021,663	1,042,096	1,062,938	1,084,197	1,105,881	1,127,999	1,150,559	1,173,570	1,197,041	1,220,982	1,245,402	1,270,310	1,295,716	1,321,630	1,348,063	1,375,024	1,402,525	1,430,575
Mission Hill WTP Filtration	844,331	14,745,203	1,230,031	1,254,631	1,279,724	1,305,319	1,331,425	1,358,053	1,385,214	1,412,919	1,441,177	1,470,001	1,499,401	1,529,389	1,559,977	1,591,176	1,623,000	1,655,460	1,688,569	1,722,340
Okanagan Lake Pump Station	156,462	3,771,445	227,936	232,494	237,144	241,887	246,725	251,659	256,692	261,826	267,063	272,404	277,852	283,409	289,077	294,859	300,756	306,771	312,907	319,165
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	93,861	2,011,652	136,738	139,473	142,262	145,107	148,009	150,970	153,989	157,069	160,210	163,414	166,683	170,016	173,417	176,885	180,423	184,031	187,712	191,466
	<b>1,795,955</b>	<b>35,558,745</b>	<b>2,616,368</b>	<b>2,668,694</b>	<b>2,722,068</b>	<b>2,776,510</b>	<b>2,832,040</b>	<b>2,888,681</b>	<b>2,946,454</b>	<b>3,005,384</b>	<b>3,065,491</b>	<b>3,126,801</b>	<b>3,189,338</b>	<b>3,253,124</b>	<b>3,318,187</b>	<b>3,384,550</b>	<b>3,452,242</b>	<b>3,521,286</b>	<b>3,591,713</b>	<b>3,663,546</b>
<b>Baseline Operating Costs</b>																				
Baseline	2,725,000	70,903,516	3,969,810	4,049,207	4,130,191	4,212,795	4,297,050	4,382,992	4,470,651	4,560,064	4,651,266	4,744,291	4,839,177	4,935,960	5,034,680	5,135,373	5,238,081	5,342,842	5,449,699	5,558,693
Duteau WTP	1,876,655	48,829,884	2,733,932	2,788,611	2,844,383	2,901,270	2,959,296	3,018,482	3,078,851	3,140,428	3,203,237	3,267,302	3,332,648	3,399,301	3,467,287	3,536,633	3,607,365	3,679,512	3,753,103	3,828,165
Mission Hill WTP	959,639	24,969,460	1,398,013	1,425,973	1,454,493	1,483,582	1,513,254	1,543,519	1,574,389	1,605,877	1,637,995	1,670,755	1,704,170	1,738,253	1,773,018	1,808,479	1,844,648	1,881,541	1,919,172	1,957,555
Distribution	5,538,706	144,115,129	8,068,849	8,230,226	8,394,830	8,562,727	8,733,981	8,908,661	9,086,834	9,268,571	9,453,942	9,643,021	9,835,882	10,032,599	10,233,251	10,437,916	10,646,675	10,859,608	11,076,800	11,298,336
	<b>11,100,000</b>	<b>288,817,989</b>	<b>16,170,604</b>	<b>16,494,017</b>	<b>16,823,897</b>	<b>17,160,374</b>	<b>17,503,581</b>	<b>17,853,654</b>	<b>18,210,725</b>	<b>18,574,940</b>	<b>18,946,440</b>	<b>19,325,369</b>	<b>19,711,877</b>	<b>20,106,113</b>	<b>20,508,236</b>	<b>20,918,401</b>	<b>21,336,769</b>	<b>21,763,503</b>	<b>22,198,774</b>	<b>22,642,749</b>
<b>Sustaining Capital Expenditure</b>																				
Baseline	1,900,000	49,437,314	2,767,941	2,823,300	2,879,766	2,937,361	2,996,109	3,056,031	3,117,151	3,179,494	3,243,084	3,307,946	3,374,105	3,441,587	3,510,419	3,580,627	3,652,240	3,725,284	3,799,790	3,875,786
<b>Debt Servicing</b>																				
Baseline	2,700,000	31,561,885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duteau WTP	-	32,445,780	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	3,322,842	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	23,390,060	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	-	-	-	-	-	-
Other	-	7,346,786	752,400	752,400	752,400	752,400	752,400	752,400	752,400	-	-	-	-	-	-	-	-	-	-	-
Debt Servicing Costs	2,700,000	87,397,725	6,380,080	6,380,080	6,380,080	6,380,080	6,380,080	6,380,080	6,380,080	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	-	-	-	-	-	-
<b>New Debt</b>																				
Duteau WTP	-	31,142,743	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	7,051,735	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	60,645,184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>																				
Contributions	1,100,000	19,746,456	-	1,634,542	1,667,233	1,700,578	1,734,589	1,769,281	1,804,667	-	-	-	-	-	-	-	-	-	-	-
Withdrawals	-	11,026,194	-	-	-	-	-	-	5,906,182	-	-	-	-	-	-	-	-	-	-	-
	1,100,000	30,772,651	-	1,634,542	1,667,233	1,700,578	1,734,589	1,769,281	7,710,849	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>																				
	-	-	10,912,973	12,547,515	14,214,748	15,915,326	17,649,915	19,419,196	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>496,658,229</b>	<b>27,934,993</b>	<b>30,000,633</b>	<b>30,473,044</b>	<b>30,954,903</b>	<b>31,446,399</b>	<b>31,947,727</b>	<b>32,459,077</b>	<b>27,817,056</b>	<b>28,312,253</b>	<b>28,817,354</b>	<b>29,332,558</b>	<b>29,858,062</b>	<b>27,336,842</b>	<b>27,883,578</b>	<b>28,441,251</b>	<b>29,010,073</b>	<b>29,590,277</b>	<b>30,182,081</b>
<b>Cumulative Funding Requirements</b>																				
			477,393,097	507,393,729	537,866,773	568,821,676	600,268,074	632,215,801	664,674,877	692,491,933	720,804,187	749,621,541	778,954,099	808,812,161	836,149,003	864,032,581	892,473,832	921,483,905	951,074,182	981,256,263
<b>Year to Year % Increase</b>																				
			-12.11%	7.39%	1.57%	1.58%	1.59%	1.59%	1.60%	-14.30%	1.78%	1.78%	1.79%	1.79%	-8.44%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Index based on Average SFD Wa</b>																				
	1.00		1.66	1.79	1.81	1.84	1.87	1.90	1.93	1.66	1.69	1.72	1.75	1.78	1.63	1.66	1.69	1.73	1.76	1.80



	2012	NPV	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
<b>MWP Capital Expenditures</b>																
Duteau WTP Filtration	36,000,000	31,142,743	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	10,500,000	9,083,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>89,110,000</b>	<b>71,671,378</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																
Duteau WTP Filtration	701,301	15,030,445	1,459,187	1,488,370	1,518,138	1,548,500	1,579,470	1,611,060	1,643,281	1,676,147	1,709,670	1,743,863	1,778,740	1,814,315	1,850,601	1,887,613
Mission Hill WTP Filtration	844,331	14,745,203	1,756,787	1,791,923	1,827,761	1,864,316	1,901,603	1,939,635	1,978,427	2,017,996	2,058,356	2,099,523	2,141,513	2,184,344	2,228,031	2,272,591
Okanagan Lake Pump Station	156,462	3,771,445	325,548	332,059	338,700	345,474	352,384	359,431	366,620	373,952	381,432	389,060	396,841	404,778	412,874	421,131
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	93,861	2,011,652	195,295	199,201	203,185	207,249	211,394	215,622	219,934	224,333	228,819	233,396	238,064	242,825	247,682	252,635
	<b>1,795,955</b>	<b>35,558,745</b>	<b>3,736,817</b>	<b>3,811,553</b>	<b>3,887,784</b>	<b>3,965,539</b>	<b>4,044,851</b>	<b>4,125,748</b>	<b>4,208,262</b>	<b>4,292,428</b>	<b>4,378,277</b>	<b>4,465,842</b>	<b>4,555,158</b>	<b>4,646,262</b>	<b>4,739,188</b>	<b>4,833,970</b>
<b>Baseline Operating Costs</b>																
Baseline	2,725,000	70,903,516	5,669,867	5,783,264	5,898,929	6,016,908	6,137,246	6,259,991	6,385,191	6,512,895	6,643,153	6,776,016	6,911,536	7,049,767	7,190,762	7,334,577
Duteau WTP	1,876,655	48,829,884	3,904,728	3,982,823	4,062,479	4,143,729	4,226,603	4,311,135	4,397,358	4,485,305	4,575,011	4,666,512	4,759,842	4,855,039	4,952,139	5,051,182
Mission Hill WTP	959,639	24,969,460	1,996,707	2,036,641	2,077,374	2,118,921	2,161,299	2,204,525	2,248,616	2,293,588	2,339,460	2,386,249	2,433,974	2,482,654	2,532,307	2,582,953
Distribution	5,538,706	144,115,129	11,524,303	11,754,789	11,989,885	12,229,683	12,474,276	12,723,762	12,978,237	13,237,802	13,502,558	13,772,609	14,048,061	14,329,022	14,615,603	14,907,915
	<b>11,100,000</b>	<b>288,817,989</b>	<b>23,095,605</b>	<b>23,557,517</b>	<b>24,028,667</b>	<b>24,509,241</b>	<b>24,999,424</b>	<b>25,499,413</b>	<b>26,009,402</b>	<b>26,529,590</b>	<b>27,060,182</b>	<b>27,601,386</b>	<b>28,153,413</b>	<b>28,716,482</b>	<b>29,290,811</b>	<b>29,876,627</b>
<b>Sustaining Capital Expenditure</b>																
Baseline	1,900,000	49,437,314	3,953,302	4,032,368	4,113,015	4,195,275	4,279,181	4,364,764	4,452,060	4,541,101	4,631,923	4,724,561	4,819,053	4,915,434	5,013,742	5,114,017
<b>Debt Servicing</b>																
Baseline	2,700,000	31,561,885	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duteau WTP	-	32,445,780	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	23,390,060	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	7,346,786	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Servicing Costs	2,700,000	87,397,725	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>New Debt</b>																
Duteau WTP	-	31,142,743	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	7,051,735	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	60,645,184	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>																
Contributions	1,100,000	19,746,456	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Withdrawals	-	11,026,194	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1,100,000	30,772,651	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>	-	-	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681	15,317,681
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>496,658,229</b>	<b>30,785,724</b>	<b>31,401,438</b>	<b>32,029,466</b>	<b>32,670,055</b>	<b>33,323,456</b>	<b>33,989,925</b>	<b>34,669,724</b>	<b>35,363,119</b>	<b>36,070,382</b>	<b>36,791,789</b>	<b>37,527,624</b>	<b>38,278,178</b>	<b>39,043,741</b>	<b>39,824,614</b>
<b>Cumulative Funding Requirements</b>			1,012,041,987	1,043,443,425	1,075,472,891	1,108,142,946	1,141,466,402	1,175,456,327	1,210,126,051	1,245,489,170	1,281,559,552	1,318,351,341	1,355,878,965	1,394,157,143	1,433,200,884	1,473,025,498
<b>Year to Year % Increase</b>			2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Index based on Average SFD Wa</b>	1.00		1.83	1.87	1.91	1.94	1.98	2.02	2.06	2.10	2.15	2.19	2.23	2.28	2.32	2.37

**Greater Vernon Advisory Committee  
Special Meeting - June 13, 2013  
Agenda Item - B.1**

**Appendix B Option 2 - Duteau / Mission Hill WTP With Incremental Separation**

	2012	NPV	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>MWP Capital Expenditures</b>																	
Duteau WTP Filtration	26,500,000	22,924,519	-	-	-	-	29,258,141	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	36,569,833	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	2,705,040	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	7,813,754	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	9,800,000	17,381,441	3,939,000	3,978,390	4,018,174	4,058,356	4,098,939	-	-	-	-	-	-	-	-	-	-
Lavington Separation	19,500,000	8,735,288	1,979,600	1,999,396	2,019,390	2,039,584	2,059,980	-	-	-	-	-	-	-	-	-	-
Irrigation Transmission Main	9,800,000	8,477,747	-	-	-	-	10,819,992	-	-	-	-	-	-	-	-	-	-
	<b>108,210,000</b>	<b>88,964,330</b>	<b>5,918,600</b>	<b>8,682,826</b>	<b>6,037,564</b>	<b>6,097,939</b>	<b>46,237,052</b>	-	-	-	-	<b>44,383,587</b>	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																	
Duteau WTP Filtration	118,379	2,537,126	-	-	-	-	-	133,314	135,980	138,700	141,474	144,303	147,189	150,133	153,136	156,199	159,323
Mission Hill WTP Filtration	844,331	14,745,203	-	-	-	-	-	-	-	-	-	-	1,049,819	1,070,816	1,092,232	1,114,077	1,136,358
Okanagan Lake Pump Station	156,462	3,771,445	-	-	166,039	169,360	172,747	176,202	179,726	183,320	186,987	190,726	194,541	198,432	202,400	206,448	210,577
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	87,604	1,877,549	-	-	-	-	-	98,656	100,629	102,642	104,695	106,789	108,925	111,103	113,325	115,592	117,903
Separation O&M	207,274	4,804,812	-	44,005	88,010	132,016	176,021	233,424	238,093	242,855	247,712	252,666	257,719	262,874	268,131	273,494	278,964
	<b>1,414,050</b>	<b>27,736,135</b>	-	<b>44,005</b>	<b>254,049</b>	<b>301,376</b>	<b>348,768</b>	<b>641,596</b>	<b>654,428</b>	<b>667,517</b>	<b>680,868</b>	<b>694,484</b>	<b>1,758,193</b>	<b>1,793,358</b>	<b>1,829,224</b>	<b>1,865,810</b>	<b>1,903,125</b>
<b>Baseline Operating Costs</b>																	
Baseline	2,725,000	70,903,516	2,779,500	2,835,090	2,891,792	2,949,628	3,008,620	3,068,793	3,130,168	3,192,772	3,256,627	3,321,760	3,388,195	3,455,959	3,525,078	3,595,580	3,667,491
Duteau WTP	1,876,655	48,829,884	1,914,188	1,952,472	1,991,521	2,031,352	2,071,979	2,113,418	2,155,687	2,198,800	2,242,776	2,287,632	2,333,385	2,380,052	2,427,653	2,476,206	2,525,731
Mission Hill WTP	959,639	24,969,460	978,832	998,408	1,018,377	1,038,744	1,059,519	1,080,709	1,102,324	1,124,370	1,146,857	1,169,795	1,193,190	1,217,054	1,241,395	1,266,223	1,291,548
Distribution	5,538,706	144,115,129	5,649,480	5,762,470	5,877,719	5,995,273	6,115,179	6,237,483	6,362,232	6,489,477	6,619,266	6,751,652	6,886,685	7,024,418	7,164,907	7,308,205	7,454,369
	<b>11,100,000</b>	<b>288,817,989</b>	<b>11,322,000</b>	<b>11,548,440</b>	<b>11,779,409</b>	<b>12,014,997</b>	<b>12,255,297</b>	<b>12,500,403</b>	<b>12,750,411</b>	<b>13,005,419</b>	<b>13,265,526</b>	<b>13,530,839</b>	<b>13,801,455</b>	<b>14,077,483</b>	<b>14,359,033</b>	<b>14,646,214</b>	<b>14,939,139</b>
<b>Sustaining Capital Expenditure</b>																	
Baseline	1,900,000	49,437,314	1,938,000	1,976,760	2,016,295	2,056,621	2,097,754	2,139,709	2,182,503	2,226,153	2,270,676	2,316,089	2,362,411	2,409,659	2,457,853	2,507,010	2,557,150
<b>Debt Servicing</b>																	
Baseline	2,700,000	31,561,885	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000
Duteau WTP	-	23,883,699	-	-	-	-	-	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981
Mission Hill WTP	-	21,195,485	-	-	-	-	-	-	-	-	-	-	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392
Separation Projects	-	33,551,163	-	418,000	1,086,800	1,504,800	1,922,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800
Debt Servicing Costs	2,700,000	110,192,232	2,700,000	3,118,000	3,786,800	4,204,800	4,622,800	8,322,781	8,322,781	8,322,781	8,322,781	8,322,781	11,093,173	11,093,173	11,093,173	11,093,173	11,093,173
<b>New Debt</b>																	
Duteau WTP	-	22,924,519	-	-	-	-	29,258,141	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	20,344,265	-	-	-	-	-	-	-	-	-	33,138,664	-	-	-	-	-
Separation Projects	-	32,203,733	5,000,000	8,000,000	5,000,000	5,000,000	15,000,000	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	75,472,518	5,000,000	8,000,000	5,000,000	5,000,000	44,258,141	-	-	-	-	33,138,664	-	-	-	-	-
<b>Reserve Fund Operations</b>																	
Contributions	1,100,000	20,380,617	1,122,000	1,144,440	1,167,329	1,190,675	1,214,489	1,238,779	1,263,554	1,288,825	1,314,602	1,340,894	1,367,712	1,395,066	1,422,967	1,451,427	1,480,455
Withdrawals	-	11,385,372	918,600	682,826	1,037,564	1,097,939	1,978,911	-	-	-	-	7,813,754	-	-	-	-	-
	1,100,000	31,765,989	2,040,600	1,827,266	2,204,893	2,288,614	3,193,400	1,238,779	1,263,554	1,288,825	1,314,602	9,154,648	1,367,712	1,395,066	1,422,967	1,451,427	1,480,455
<b>MWP Reserve Fund Balance</b>	-	-	203,400	665,014	794,779	887,515	123,093	1,361,872	2,625,426	3,914,251	5,228,853	(1,244,007)	123,705	1,518,771	2,941,738	4,393,165	5,873,620
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>514,370,727</b>	<b>17,082,000</b>	<b>17,831,645</b>	<b>19,003,882</b>	<b>19,768,469</b>	<b>20,539,108</b>	<b>24,843,268</b>	<b>25,173,677</b>	<b>25,510,695</b>	<b>25,854,453</b>	<b>29,636,256</b>	<b>30,382,944</b>	<b>30,768,739</b>	<b>31,162,250</b>	<b>31,563,634</b>	<b>31,973,042</b>

	2012	NPV	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
<b>MWP Capital Expenditures</b>																	
Duteau WTP Filtration	26,500,000	22,924,519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	5,906,182	-	-	-	-	-
Domestic System Improvements	9,800,000	17,381,441	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lavington Separation	19,500,000	8,735,288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrigation Transmission Main	9,800,000	8,477,747	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>108,210,000</b>	<b>88,964,330</b>	-	-	-	-	-	-	-	-	-	<b>5,906,182</b>	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																	
Duteau WTP Filtration	118,379	2,537,126	162,509	165,759	169,074	172,456	175,905	179,423	183,012	186,672	190,405	194,213	198,098	202,060	206,101	210,223	214,427
Mission Hill WTP Filtration	844,331	14,745,203	1,159,086	1,182,267	1,205,913	1,230,031	1,254,631	1,279,724	1,305,319	1,331,425	1,358,053	1,385,214	1,412,919	1,441,177	1,470,001	1,499,401	1,529,389
Okanagan Lake Pump Station	156,462	3,771,445	214,789	219,085	223,466	227,936	232,494	237,144	241,887	246,725	251,659	256,692	261,826	267,063	272,404	277,852	283,409
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	87,604	1,877,549	120,262	122,667	125,120	127,622	130,175	132,778	135,434	138,143	140,906	143,724	146,598	149,530	152,521	155,571	158,683
Separation O&M	207,274	4,804,812	284,543	290,234	296,038	301,959	307,998	314,158	320,441	326,850	333,387	340,055	346,856	353,793	360,869	368,086	375,448
	<b>1,414,050</b>	<b>27,736,135</b>	<b>1,941,189</b>	<b>1,980,012</b>	<b>2,019,611</b>	<b>2,060,004</b>	<b>2,101,203</b>	<b>2,143,227</b>	<b>2,186,093</b>	<b>2,229,815</b>	<b>2,274,410</b>	<b>2,319,898</b>	<b>2,366,297</b>	<b>2,413,623</b>	<b>2,461,896</b>	<b>2,511,133</b>	<b>2,561,356</b>
<b>Baseline Operating Costs</b>																	
Baseline	2,725,000	70,903,516	3,740,841	3,815,658	3,891,971	3,969,810	4,049,207	4,130,191	4,212,795	4,297,050	4,382,992	4,470,651	4,560,064	4,651,266	4,744,291	4,839,177	4,935,960
Duteau WTP	1,876,655	48,829,884	2,576,245	2,627,770	2,680,325	2,733,932	2,788,611	2,844,383	2,901,270	2,959,296	3,018,482	3,078,851	3,140,428	3,203,237	3,267,302	3,332,648	3,399,301
Mission Hill WTP	959,639	24,969,460	1,317,379	1,343,726	1,370,601	1,398,013	1,425,973	1,454,493	1,483,582	1,513,254	1,543,519	1,574,389	1,605,877	1,637,995	1,670,755	1,704,170	1,738,253
Distribution	5,538,706	144,115,129	7,603,456	7,755,526	7,910,636	8,068,849	8,230,226	8,394,830	8,562,727	8,733,981	8,908,661	9,086,834	9,268,571	9,453,942	9,643,021	9,835,882	10,032,599
	<b>11,100,000</b>	<b>288,817,989</b>	<b>15,237,921</b>	<b>15,542,680</b>	<b>15,853,533</b>	<b>16,170,604</b>	<b>16,494,017</b>	<b>16,823,897</b>	<b>17,160,374</b>	<b>17,503,581</b>	<b>17,853,654</b>	<b>18,210,725</b>	<b>18,574,940</b>	<b>18,946,440</b>	<b>19,325,369</b>	<b>19,711,877</b>	<b>20,106,113</b>
<b>Sustaining Capital Expenditure</b>																	
Baseline	1,900,000	49,437,314	2,608,293	2,660,459	2,713,668	2,767,941	2,823,300	2,879,766	2,937,361	2,996,109	3,056,031	3,117,151	3,179,494	3,243,084	3,307,946	3,374,105	3,441,587
<b>Debt Servicing</b>																	
Baseline	2,700,000	31,561,885	2,700,000	2,700,000	2,700,000	-	-	-	-	-	-	-	-	-	-	-	-
Duteau WTP	-	23,883,699	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	2,445,981	-	-	-	-
Mission Hill WTP	-	21,195,485	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392
Separation Projects	-	33,551,163	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	3,176,800	2,758,800	2,090,000	1,672,000	1,254,000	-	-	-	-	-
Debt Servicing Costs	2,700,000	110,192,232	11,093,173	11,093,173	11,093,173	8,393,173	8,393,173	8,393,173	7,975,173	7,306,373	6,888,373	6,470,373	2,770,392	2,770,392	2,770,392	2,770,392	2,770,392
<b>New Debt</b>																	
Duteau WTP	-	22,924,519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	20,344,265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Separation Projects	-	32,203,733	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	75,472,518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>																	
Contributions	1,100,000	20,380,617	1,510,064	1,540,266	1,571,071	1,602,492	1,634,542	1,667,233	1,700,578	1,734,589	1,769,281	1,804,667	-	-	-	-	-
Withdrawals	-	11,385,372	-	-	-	-	-	-	-	-	-	5,906,182	-	-	-	-	-
	1,100,000	31,765,989	1,510,064	1,540,266	1,571,071	1,602,492	1,634,542	1,667,233	1,700,578	1,734,589	1,769,281	7,710,849	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>																	
	-	-	7,383,684	8,923,950	10,495,021	12,097,513	13,732,055	15,399,288	17,099,866	18,834,455	20,603,736	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>514,370,727</b>	<b>32,390,640</b>	<b>32,816,590</b>	<b>33,251,056</b>	<b>30,994,214</b>	<b>31,446,235</b>	<b>31,907,296</b>	<b>31,959,579</b>	<b>31,770,467</b>	<b>31,841,749</b>	<b>31,922,814</b>	<b>26,891,123</b>	<b>27,373,539</b>	<b>27,865,603</b>	<b>28,367,507</b>	<b>28,879,448</b>

	2012	NPV	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055
<b>MWP Capital Expenditures</b>															
Duteau WTP Filtration	26,500,000	22,924,519	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	9,800,000	17,381,441	-	-	-	-	-	-	-	-	-	-	-	-	-
Lavington Separation	19,500,000	8,735,288	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrigation Transmission Main	9,800,000	8,477,747	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>108,210,000</b>	<b>88,964,330</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>															
Duteau WTP Filtration	118,379	2,537,126	218,716	223,090	227,552	232,103	236,745	241,480	246,309	251,236	256,260	261,386	266,613	271,946	277,384
Mission Hill WTP Filtration	844,331	14,745,203	1,559,977	1,591,176	1,623,000	1,655,460	1,688,569	1,722,340	1,756,787	1,791,923	1,827,761	1,864,316	1,901,603	1,939,635	1,978,427
Okanagan Lake Pump Station	156,462	3,771,445	289,077	294,859	300,756	306,771	312,907	319,165	325,548	332,059	338,700	345,474	352,384	359,431	366,620
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	87,604	1,877,549	161,856	165,093	168,395	171,763	175,198	178,702	182,276	185,922	189,640	193,433	197,302	201,248	205,273
Separation O&M	207,274	4,804,812	382,957	390,616	398,429	406,397	414,525	422,816	431,272	439,897	448,695	457,669	466,823	476,159	485,682
	<b>1,414,050</b>	<b>27,736,135</b>	<b>2,612,583</b>	<b>2,664,834</b>	<b>2,718,132</b>	<b>2,772,494</b>	<b>2,827,944</b>	<b>2,884,503</b>	<b>2,942,192</b>	<b>3,001,037</b>	<b>3,061,056</b>	<b>3,122,278</b>	<b>3,184,725</b>	<b>3,248,419</b>	<b>3,313,386</b>
<b>Baseline Operating Costs</b>															
Baseline	2,725,000	70,903,516	5,034,680	5,135,373	5,238,081	5,342,842	5,449,699	5,558,693	5,669,867	5,783,264	5,898,929	6,016,908	6,137,246	6,259,991	6,385,191
Duteau WTP	1,876,655	48,829,884	3,467,287	3,536,633	3,607,365	3,679,512	3,753,103	3,828,165	3,904,728	3,982,823	4,062,479	4,143,729	4,226,603	4,311,135	4,397,358
Mission Hill WTP	959,639	24,969,460	1,773,018	1,808,479	1,844,648	1,881,541	1,919,172	1,957,555	1,996,707	2,036,641	2,077,374	2,118,921	2,161,299	2,204,525	2,248,616
Distribution	5,538,706	144,115,129	10,233,251	10,437,916	10,646,675	10,859,608	11,076,800	11,298,336	11,524,303	11,754,789	11,989,885	12,229,683	12,474,276	12,723,762	12,978,237
	<b>11,100,000</b>	<b>288,817,989</b>	<b>20,508,236</b>	<b>20,918,401</b>	<b>21,336,769</b>	<b>21,763,503</b>	<b>22,198,774</b>	<b>22,642,749</b>	<b>23,095,605</b>	<b>23,557,517</b>	<b>24,028,667</b>	<b>24,509,241</b>	<b>24,999,424</b>	<b>25,499,413</b>	<b>26,009,402</b>
<b>Sustaining Capital Expenditure</b>															
Baseline	1,900,000	49,437,314	3,510,419	3,580,627	3,652,240	3,725,284	3,799,790	3,875,786	3,953,302	4,032,368	4,113,015	4,195,275	4,279,181	4,364,764	4,452,060
<b>Debt Servicing</b>															
Baseline	2,700,000	31,561,885	-	-	-	-	-	-	-	-	-	-	-	-	-
Duteau WTP	-	23,883,699	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	21,195,485	-	-	-	-	-	-	-	-	-	-	-	-	-
Separation Projects	-	33,551,163	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Servicing Costs	2,700,000	110,192,232	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>New Debt</b>															
Duteau WTP	-	22,924,519	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	20,344,265	-	-	-	-	-	-	-	-	-	-	-	-	-
Separation Projects	-	32,203,733	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	75,472,518	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>															
Contributions	1,100,000	20,380,617	-	-	-	-	-	-	-	-	-	-	-	-	-
Withdrawals	-	11,385,372	-	-	-	-	-	-	-	-	-	-	-	-	-
	1,100,000	31,765,989	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>															
	-	-	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>514,370,727</b>	<b>26,631,238</b>	<b>27,163,862</b>	<b>27,707,141</b>	<b>28,261,281</b>	<b>28,826,508</b>	<b>29,403,038</b>	<b>29,991,099</b>	<b>30,590,922</b>	<b>31,202,738</b>	<b>31,826,794</b>	<b>32,463,330</b>	<b>33,112,596</b>	<b>33,774,848</b>

	2012	NPV	2056	2057	2058	2059	2060	2061	2062
<b>MWP Capital Expenditures</b>									
Duteau WTP Filtration	26,500,000	22,924,519	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-
Okanagan Lake Pump Station	2,600,000	2,453,551	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-
Domestic System Improvements	9,800,000	17,381,441	-	-	-	-	-	-	-
Lavington Separation	19,500,000	8,735,288	-	-	-	-	-	-	-
Irrigation Transmission Main	9,800,000	8,477,747	-	-	-	-	-	-	-
	<b>108,210,000</b>	<b>88,964,330</b>	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>									
Duteau WTP Filtration	118,379	2,537,126	282,932	288,591	294,363	300,250	306,255	312,380	318,627
Mission Hill WTP Filtration	844,331	14,745,203	2,017,996	2,058,356	2,099,523	2,141,513	2,184,344	2,228,031	2,272,591
Okanagan Lake Pump Station	156,462	3,771,445	373,952	381,432	389,060	396,841	404,778	412,874	421,131
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-
Domestic System Improvements	87,604	1,877,549	209,378	213,566	217,837	222,194	226,638	231,170	235,794
Separation O&M	207,274	4,804,812	495,396	505,304	515,410	525,718	536,232	546,957	557,896
	<b>1,414,050</b>	<b>27,736,135</b>	<b>3,379,654</b>	<b>3,447,249</b>	<b>3,516,193</b>	<b>3,586,516</b>	<b>3,658,247</b>	<b>3,731,412</b>	<b>3,806,039</b>
<b>Baseline Operating Costs</b>									
Baseline	2,725,000	70,903,516	6,512,895	6,643,153	6,776,016	6,911,536	7,049,767	7,190,762	7,334,577
Duteau WTP	1,876,655	48,829,884	4,485,305	4,575,011	4,666,512	4,759,842	4,855,039	4,952,139	5,051,182
Mission Hill WTP	959,639	24,969,460	2,293,588	2,339,460	2,386,249	2,433,974	2,482,654	2,532,307	2,582,953
Distribution	5,538,706	144,115,129	13,237,802	13,502,558	13,772,609	14,048,061	14,329,022	14,615,603	14,907,915
	<b>11,100,000</b>	<b>288,817,989</b>	<b>26,529,590</b>	<b>27,060,182</b>	<b>27,601,386</b>	<b>28,153,413</b>	<b>28,716,482</b>	<b>29,290,811</b>	<b>29,876,627</b>
<b>Sustaining Capital Expenditure</b>									
Baseline	1,900,000	49,437,314	4,541,101	4,631,923	4,724,561	4,819,053	4,915,434	5,013,742	5,114,017
<b>Debt Servicing</b>									
Baseline	2,700,000	31,561,885	-	-	-	-	-	-	-
Duteau WTP	-	23,883,699	-	-	-	-	-	-	-
Mission Hill WTP	-	21,195,485	-	-	-	-	-	-	-
Separation Projects	-	33,551,163	-	-	-	-	-	-	-
Debt Servicing Costs	2,700,000	110,192,232	-	-	-	-	-	-	-
<b>New Debt</b>									
Duteau WTP	-	22,924,519	-	-	-	-	-	-	-
Mission Hill WTP	-	20,344,265	-	-	-	-	-	-	-
Separation Projects	-	32,203,733	-	-	-	-	-	-	-
Debt Additions	-	75,472,518	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>									
Contributions	1,100,000	20,380,617	-	-	-	-	-	-	-
Withdrawals	-	11,385,372	-	-	-	-	-	-	-
	1,100,000	31,765,989	-	-	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>									
	-	-	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221	16,502,221
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>514,370,727</b>	<b>34,450,345</b>	<b>35,139,354</b>	<b>35,842,140</b>	<b>36,558,982</b>	<b>37,290,163</b>	<b>38,035,965</b>	<b>38,796,683</b>

**Greater Vernon Advisory Committee  
Special Meeting - June 13, 2013  
Agenda Item - B.1**

**Appendix C Option 3 - Duteau / Mission Hill WTP With Complete Separation**

	2012	NPV	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>MWP Capital Expenditures</b>																					
Duteau WTP Filtration	18,000,000	15,571,371	-	-	-	-	19,873,454	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	36,569,833	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	7,813,754	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	7,300,000	6,315,056	-	-	-	-	8,059,790	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Separation	63,800,000	56,868,508	12,887,600	13,016,476	13,146,641	13,278,107	13,410,888	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrigation Transmission Main	17,100,000	15,242,186	3,454,200	3,488,742	3,523,629	3,558,866	3,594,454	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>146,210,000</b>	<b>122,988,906</b>	<b>16,341,800</b>	<b>16,505,218</b>	<b>16,670,270</b>	<b>16,836,973</b>	<b>44,938,587</b>	-	-	-	-	<b>44,383,587</b>	-	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																					
Duteau WTP Filtration	(581,504)	(12,462,927)	-	-	-	-	-	(654,868)	(667,965)	(681,325)	(694,951)	(708,850)	(723,027)	(737,488)	(752,237)	(767,282)	(782,628)	(798,280)	(814,246)	(830,531)	(847,142)
Mission Hill WTP Filtration	844,331	14,745,203	-	-	-	-	-	-	-	-	-	-	1,049,819	1,070,816	1,092,232	1,114,077	1,136,358	1,159,086	1,182,267	1,205,913	1,230,031
Okanagan Lake Pump Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	65,256	1,398,583	-	-	-	-	-	73,489	74,959	76,458	77,987	79,547	81,138	82,760	84,416	86,104	87,826	89,583	91,374	93,202	95,066
Ag O&M	922,923	19,780,297	-	-	-	-	-	1,039,361	1,060,148	1,081,351	1,102,978	1,125,038	1,147,539	1,170,490	1,193,899	1,217,777	1,242,133	1,266,976	1,292,315	1,318,161	1,344,525
	<b>1,251,006</b>	<b>23,461,157</b>	-	-	-	-	-	<b>457,982</b>	<b>467,142</b>	<b>476,484</b>	<b>486,014</b>	<b>495,735</b>	<b>1,555,469</b>	<b>1,586,578</b>	<b>1,618,310</b>	<b>1,650,676</b>	<b>1,683,689</b>	<b>1,717,365</b>	<b>1,751,710</b>	<b>1,786,745</b>	<b>1,822,480</b>
<b>Baseline Operating Costs</b>																					
Baseline	2,725,000	70,903,516	2,779,500	2,835,090	2,891,792	2,949,628	3,008,620	3,068,793	3,130,168	3,192,772	3,256,627	3,321,760	3,388,195	3,455,959	3,525,078	3,595,580	3,667,491	3,740,841	3,815,658	3,891,971	3,969,810
Duteau WTP	1,876,655	48,829,884	1,914,188	1,952,472	1,991,521	2,031,352	2,071,979	2,113,418	2,155,687	2,198,800	2,242,776	2,287,632	2,333,385	2,380,052	2,427,653	2,476,206	2,525,731	2,576,245	2,627,770	2,680,325	2,733,932
Mission Hill WTP	959,639	24,969,460	978,832	998,408	1,018,377	1,038,744	1,059,519	1,080,709	1,102,324	1,124,370	1,146,857	1,169,795	1,193,190	1,217,054	1,241,395	1,266,223	1,291,548	1,317,379	1,343,726	1,370,601	1,398,013
Distribution	5,538,706	144,115,129	5,649,480	5,762,470	5,877,719	5,995,273	6,115,179	6,237,483	6,362,232	6,489,477	6,619,266	6,751,652	6,886,685	7,024,418	7,164,907	7,308,205	7,454,369	7,603,456	7,755,526	7,910,636	8,068,849
	<b>11,100,000</b>	<b>288,817,989</b>	<b>11,322,000</b>	<b>11,548,440</b>	<b>11,779,409</b>	<b>12,014,997</b>	<b>12,255,297</b>	<b>12,500,403</b>	<b>12,750,411</b>	<b>13,005,419</b>	<b>13,265,526</b>	<b>13,530,839</b>	<b>13,801,455</b>	<b>14,077,483</b>	<b>14,359,033</b>	<b>14,646,214</b>	<b>14,939,139</b>	<b>15,237,921</b>	<b>15,542,680</b>	<b>15,853,533</b>	<b>16,170,604</b>
<b>Sustaining Capital Expenditure</b>																					
Baseline	1,900,000	49,437,314	1,938,000	1,976,760	2,016,295	2,056,621	2,097,754	2,139,709	2,182,503	2,226,153	2,270,676	2,316,089	2,362,411	2,409,659	2,457,853	2,507,010	2,557,150	2,608,293	2,660,459	2,713,668	2,767,941
<b>Debt Servicing</b>																					
Baseline	2,700,000	31,561,885	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000
Duteau WTP	-	16,222,890	-	-	-	-	-	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421
Mission Hill WTP	-	23,390,060	-	-	-	-	-	-	-	-	-	-	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238
Other	-	77,884,173	-	1,337,600	2,675,200	4,012,800	5,350,400	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200	7,273,200
Debt Servicing Costs	2,700,000	149,059,007	2,700,000	4,037,600	5,375,200	6,712,800	8,050,400	11,634,621	11,634,621	11,634,621	11,634,621	11,634,621	14,691,859	14,691,859	14,691,859	14,691,859	14,691,859	14,691,859	14,691,859	14,691,859	11,991,859
<b>New Debt</b>																					
Duteau WTP	-	15,571,371	-	-	-	-	19,873,454	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	22,450,705	-	-	-	-	-	-	-	-	-	36,569,833	-	-	-	-	-	-	-	-	-
Other	-	74,756,310	16,000,000	16,000,000	16,000,000	16,000,000	23,000,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	112,778,386	16,000,000	16,000,000	16,000,000	16,000,000	42,873,454	-	-	-	-	36,569,833	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>																					
Contributions	1,100,000	20,380,617	1,122,000	1,144,440	1,167,329	1,190,675	1,214,489	1,238,779	1,263,554	1,288,825	1,314,602	1,340,894	1,367,712	1,395,066	1,422,967	1,451,427	1,480,455	1,510,064	1,540,266	1,571,071	1,602,492
Withdrawals	-	10,210,520	341,800	505,218	670,270	836,973	2,065,133	-	-	-	-	7,813,754	-	-	-	-	-	-	-	-	-
	1,100,000	30,591,137	1,463,800	1,649,658	1,837,599	2,027,648	3,279,622	1,238,779	1,263,554	1,288,825	1,314,602	9,154,648	1,367,712	1,395,066	1,422,967	1,451,427	1,480,455	1,510,064	1,540,266	1,571,071	1,602,492
<b>MWP Reserve Fund Balance</b>	-	-	780,200	1,419,422	1,916,481	2,270,183	1,419,539	2,658,318	3,921,872	5,210,697	6,525,299	52,439	1,420,151	2,815,217	4,238,184	5,689,611	7,170,066	8,680,130	10,220,396	11,791,467	13,393,959
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>546,856,084</b>	<b>17,082,000</b>	<b>18,707,240</b>	<b>20,338,233</b>	<b>21,975,093</b>	<b>23,617,940</b>	<b>27,971,494</b>	<b>28,298,231</b>	<b>28,631,502</b>	<b>28,971,439</b>	<b>29,318,178</b>	<b>33,778,906</b>	<b>34,160,645</b>	<b>34,550,022</b>	<b>34,947,186</b>	<b>35,352,292</b>	<b>35,765,502</b>	<b>36,186,974</b>	<b>36,616,876</b>	<b>34,355,376</b>
<b>Cumulative Funding Requirements</b>			17,082,000	35,789,240	56,127,473	78,102,566	101,720,506	129,692,000	157,990,231	186,621,732	215,593,171	244,911,349	278,690,255	312,850,899	347,400,921	382,348,107	417,700,399	453,465,901	489,652,874	526,269,750	560,625,126
<b>Year to Year % Increase</b>			1.68%	9.51%	8.72%	8.05%	7.48%	18.43%	1.17%	1.18%	1.19%	1.20%	15.21%	1.13%	1.14%	1.15%	1.16%	1.17%	1.18%	1.19%	-6.18%
<b>Index based on Average SFD Wa</b>	1.00		1.02	1.11	1.21	1.31	1.41	1.66	1.68	1.70	1.72	1.75	2.01	2.03	2.06	2.08	2.10	2.13	2.15	2.18	2.04



	2012	NPV	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
<b>MWP Capital Expenditures</b>																					
Duteau WTP Filtration	18,000,000	15,571,371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	5,906,182	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	7,300,000	6,315,056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Separation	63,800,000	56,868,508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrigation Transmission Main	17,100,000	15,242,186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>146,210,000</b>	<b>122,988,906</b>	-	-	-	-	-	<b>5,906,182</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>																					
Duteau WTP Filtration	(581,504)	(12,462,927)	(864,084)	(881,366)	(898,993)	(916,973)	(935,313)	(954,019)	(973,099)	(992,561)	(1,012,413)	(1,032,661)	(1,053,314)	(1,074,380)	(1,095,868)	(1,117,785)	(1,140,141)	(1,162,944)	(1,186,203)	(1,209,927)	(1,234,125)
Mission Hill WTP Filtration	844,331	14,745,203	1,254,631	1,279,724	1,305,319	1,331,425	1,358,053	1,385,214	1,412,919	1,441,177	1,470,001	1,499,401	1,529,389	1,559,977	1,591,176	1,623,000	1,655,460	1,688,569	1,722,340	1,756,787	1,791,923
Okanagan Lake Pump Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	65,256	1,398,583	96,967	98,906	100,884	102,902	104,960	107,059	109,201	111,385	113,612	115,885	118,202	120,566	122,978	125,437	127,946	130,505	133,115	135,777	138,493
Ag O&M	922,923	19,780,297	1,371,415	1,398,843	1,426,820	1,455,357	1,484,464	1,514,153	1,544,436	1,575,325	1,606,831	1,638,968	1,671,747	1,705,182	1,739,286	1,774,072	1,809,553	1,845,744	1,882,659	1,920,312	1,958,718
	<b>1,251,006</b>	<b>23,461,157</b>	<b>1,858,929</b>	<b>1,896,107</b>	<b>1,934,030</b>	<b>1,972,711</b>	<b>2,012,164</b>	<b>2,052,407</b>	<b>2,093,457</b>	<b>2,135,326</b>	<b>2,178,031</b>	<b>2,221,593</b>	<b>2,266,024</b>	<b>2,311,345</b>	<b>2,357,572</b>	<b>2,404,724</b>	<b>2,452,818</b>	<b>2,501,874</b>	<b>2,551,911</b>	<b>2,602,949</b>	<b>2,655,009</b>
<b>Baseline Operating Costs</b>																					
Baseline	2,725,000	70,903,516	4,049,207	4,130,191	4,212,795	4,297,050	4,382,992	4,470,651	4,560,064	4,651,266	4,744,291	4,839,177	4,935,960	5,034,680	5,135,373	5,238,081	5,342,842	5,449,699	5,558,693	5,669,867	5,783,264
Duteau WTP	1,876,655	48,829,884	2,788,611	2,844,383	2,901,270	2,959,296	3,018,482	3,078,851	3,140,428	3,203,237	3,267,302	3,332,648	3,399,301	3,467,287	3,536,633	3,607,365	3,679,512	3,753,103	3,828,165	3,904,728	3,982,823
Mission Hill WTP	959,639	24,969,460	1,425,973	1,454,493	1,483,582	1,513,254	1,543,519	1,574,389	1,605,877	1,637,995	1,670,755	1,704,170	1,738,253	1,773,018	1,808,479	1,844,648	1,881,541	1,919,172	1,957,555	1,996,707	2,036,641
Distribution	5,538,706	144,115,129	8,230,226	8,394,830	8,562,727	8,733,981	8,908,661	9,086,834	9,268,571	9,453,942	9,643,021	9,835,882	10,032,599	10,233,251	10,437,916	10,646,675	10,859,608	11,076,800	11,298,336	11,524,303	11,754,789
	<b>11,100,000</b>	<b>288,817,989</b>	<b>16,494,017</b>	<b>16,823,897</b>	<b>17,160,374</b>	<b>17,503,581</b>	<b>17,853,654</b>	<b>18,210,725</b>	<b>18,574,940</b>	<b>18,946,440</b>	<b>19,325,369</b>	<b>19,711,877</b>	<b>20,106,113</b>	<b>20,508,236</b>	<b>20,918,401</b>	<b>21,336,769</b>	<b>21,763,503</b>	<b>22,198,774</b>	<b>22,642,749</b>	<b>23,095,605</b>	<b>23,557,517</b>
<b>Sustaining Capital Expenditure</b>																					
Baseline	1,900,000	49,437,314	2,823,300	2,879,766	2,937,361	2,996,109	3,056,031	3,117,151	3,179,494	3,243,084	3,307,946	3,374,105	3,441,587	3,510,419	3,580,627	3,652,240	3,725,284	3,799,790	3,875,786	3,953,302	4,032,368
<b>Debt Servicing</b>																					
Baseline	2,700,000	31,561,885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duteau WTP	-	16,222,890	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	1,661,421	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	23,390,060	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	-	-	-	-	-	-	-
Other	-	77,884,173	7,273,200	7,273,200	5,935,600	4,598,000	3,260,400	1,922,800	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Servicing Costs	2,700,000	149,059,007	11,991,859	11,991,859	10,654,259	9,316,659	7,979,059	6,641,459	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	3,057,238	-	-	-	-	-	-	-
<b>New Debt</b>																					
Duteau WTP	-	15,571,371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	74,756,310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	112,778,386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>																					
Contributions	1,100,000	20,380,617	1,634,542	1,667,233	1,700,578	1,734,589	1,769,281	1,804,667	-	-	-	-	-	-	-	-	-	-	-	-	-
Withdrawals	-	10,210,520	-	-	-	-	-	5,906,182	-	-	-	-	-	-	-	-	-	-	-	-	-
	1,100,000	30,591,137	1,634,542	1,667,233	1,700,578	1,734,589	1,769,281	7,710,849	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>	-	-	15,028,501	16,695,734	18,396,312	20,130,901	21,900,182	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>546,856,084</b>	<b>34,802,647</b>	<b>35,258,862</b>	<b>34,386,602</b>	<b>33,523,649</b>	<b>32,670,189</b>	<b>31,826,409</b>	<b>26,905,129</b>	<b>27,382,088</b>	<b>27,868,584</b>	<b>28,364,813</b>	<b>28,870,962</b>	<b>26,330,000</b>	<b>26,856,600</b>	<b>27,393,733</b>	<b>27,941,605</b>	<b>28,500,438</b>	<b>29,070,446</b>	<b>29,651,856</b>	<b>30,244,894</b>
<b>Cumulative Funding Requirements</b>			595,427,773	630,686,634	665,073,236	698,596,885	731,267,074	763,093,483	789,998,612	817,380,700	845,249,284	873,614,097	902,485,059	928,815,059	955,671,659	983,065,392	1,011,006,997	1,039,507,435	1,068,577,881	1,098,229,737	1,128,474,631
<b>Year to Year % Increase</b>			1.30%	1.31%	-2.47%	-2.51%	-2.55%	-2.58%	-15.46%	1.77%	1.78%	1.78%	1.78%	-8.80%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Index based on Average SFD Wa</b>	1.00		2.07	2.10	2.05	2.00	1.94	1.89	1.60	1.63	1.66	1.69	1.72	1.57	1.60	1.63	1.66	1.70	1.73	1.76	1.80

	2012	NPV	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062
<b>MWP Capital Expenditures</b>														
Duteau WTP Filtration	18,000,000	15,571,371	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP Filtration	30,000,000	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-
Okanagan Lake Pump Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	6,410,000	4,796,967	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	3,600,000	1,744,112	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	7,300,000	6,315,056	-	-	-	-	-	-	-	-	-	-	-	-
Separation	63,800,000	56,868,508	-	-	-	-	-	-	-	-	-	-	-	-
Irrigation Transmission Main	17,100,000	15,242,186	-	-	-	-	-	-	-	-	-	-	-	-
	<b>146,210,000</b>	<b>122,988,906</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Operating Cost Impacts</b>														
Duteau WTP Filtration	(581,504)	(12,462,927)	(1,258,808)	(1,283,984)	(1,309,664)	(1,335,857)	(1,362,574)	(1,389,825)	(1,417,622)	(1,445,974)	(1,474,894)	(1,504,392)	(1,534,480)	(1,565,169)
Mission Hill WTP Filtration	844,331	14,745,203	1,827,761	1,864,316	1,901,603	1,939,635	1,978,427	2,017,996	2,058,356	2,099,523	2,141,513	2,184,344	2,228,031	2,272,591
Okanagan Lake Pump Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Dam Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold-Paradise Extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic System Improvements	65,256	1,398,583	141,263	144,088	146,970	149,909	152,907	155,965	159,085	162,266	165,512	168,822	172,198	175,642
Ag O&M	922,923	19,780,297	1,997,893	2,037,851	2,078,608	2,120,180	2,162,583	2,205,835	2,249,952	2,294,951	2,340,850	2,387,667	2,435,420	2,484,128
	<b>1,251,006</b>	<b>23,461,157</b>	<b>2,708,109</b>	<b>2,762,271</b>	<b>2,817,517</b>	<b>2,873,867</b>	<b>2,931,343</b>	<b>2,989,971</b>	<b>3,049,771</b>	<b>3,110,766</b>	<b>3,172,981</b>	<b>3,236,441</b>	<b>3,301,169</b>	<b>3,367,192</b>
<b>Baseline Operating Costs</b>														
Baseline	2,725,000	70,903,516	5,898,929	6,016,908	6,137,246	6,259,991	6,385,191	6,512,895	6,643,153	6,776,016	6,911,536	7,049,767	7,190,762	7,334,577
Duteau WTP	1,876,655	48,829,884	4,062,479	4,143,729	4,226,603	4,311,135	4,397,358	4,485,305	4,575,011	4,666,512	4,759,842	4,855,039	4,952,139	5,051,182
Mission Hill WTP	959,639	24,969,460	2,077,374	2,118,921	2,161,299	2,204,525	2,248,616	2,293,588	2,339,460	2,386,249	2,433,974	2,482,654	2,532,307	2,582,953
Distribution	5,538,706	144,115,129	11,989,885	12,229,683	12,474,276	12,723,762	12,978,237	13,237,802	13,502,558	13,772,609	14,048,061	14,329,022	14,615,603	14,907,915
	<b>11,100,000</b>	<b>288,817,989</b>	<b>24,028,667</b>	<b>24,509,241</b>	<b>24,999,424</b>	<b>25,499,413</b>	<b>26,009,402</b>	<b>26,529,590</b>	<b>27,060,182</b>	<b>27,601,386</b>	<b>28,153,413</b>	<b>28,716,482</b>	<b>29,290,811</b>	<b>29,876,627</b>
<b>Sustaining Capital Expenditure</b>														
Baseline	1,900,000	49,437,314	4,113,015	4,195,275	4,279,181	4,364,764	4,452,060	4,541,101	4,631,923	4,724,561	4,819,053	4,915,434	5,013,742	5,114,017
<b>Debt Servicing</b>														
Baseline	2,700,000	31,561,885	-	-	-	-	-	-	-	-	-	-	-	-
Duteau WTP	-	16,222,890	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	23,390,060	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	77,884,173	-	-	-	-	-	-	-	-	-	-	-	-
Debt Servicing Costs	2,700,000	149,059,007	-	-	-	-	-	-	-	-	-	-	-	-
<b>New Debt</b>														
Duteau WTP	-	15,571,371	-	-	-	-	-	-	-	-	-	-	-	-
Mission Hill WTP	-	22,450,705	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	74,756,310	-	-	-	-	-	-	-	-	-	-	-	-
Debt Additions	-	112,778,386	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reserve Fund Operations</b>														
Contributions	1,100,000	20,380,617	-	-	-	-	-	-	-	-	-	-	-	-
Withdrawals	-	10,210,520	-	-	-	-	-	-	-	-	-	-	-	-
	1,100,000	30,591,137	-	-	-	-	-	-	-	-	-	-	-	-
<b>MWP Reserve Fund Balance</b>	-	-	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667	17,798,667
<b>Total Funding Requirements</b>	<b>16,800,000</b>	<b>546,856,084</b>	<b>30,849,791</b>	<b>31,466,787</b>	<b>32,096,122</b>	<b>32,738,044</b>	<b>33,392,805</b>	<b>34,060,662</b>	<b>34,741,876</b>	<b>35,436,713</b>	<b>36,145,447</b>	<b>36,868,357</b>	<b>37,605,722</b>	<b>38,357,836</b>
<b>Cumulative Funding Requirements</b>			1,159,324,422	1,190,791,209	1,222,887,331	1,255,625,375	1,289,018,180	1,323,078,842	1,357,820,718	1,393,257,431	1,429,402,878	1,466,271,235	1,503,876,957	1,542,234,793
<b>Year to Year % Increase</b>			2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
<b>Index based on Average SFD Wz</b>	1.00		1.84	1.87	1.91	1.95	1.99	2.03	2.07	2.11	2.15	2.19	2.24	2.28