



---

**SUBJECT:** 2012 Greater Vernon Water Master Water Plan  
Technical Memorandum 9  
GVW Financial Plan

---

Summary Date: January 2016

## TM10 PURPOSE:

Water utilities should have a financial plan to evaluate the current state of a utilities financial status and predict future costs in order to develop a plan to ensure funds are available. The objective of TM10 is to provide a long range forecast of the shortlisted options for the GVW water system and compile a financial plan to complete the works.

## METHODS:

Of the nine (9) long term options for the GVW water system outlined in TM9, the MWP TAC and GVAC recommended that a financial review and comparison be completed for **Option 1: Maintain the Current System**, **Option 2: Partial System Separation, Two Treatment Facilities** and **Option 3: Complete System Separation, Two Treatment Facilities**. To complete the review and comparison of Options 1, 2 and 3, the following was completed:

- Calculate the total life cycle costs for Options 1, 2 and 3 including O&M, debt servicing, annual infrastructure renewal and new capital investment using a 2% inflation rate, 5% discount rate and 5% borrowing rate,
- Prepare a long range cash flow forecast for Options 1, 2 and 3,
- Determine the approximate impact on water rates that will be required in order to support the MWP for Options 1, 2 and 3, and
- Identify financial variables and issues that could impact the financial plan.

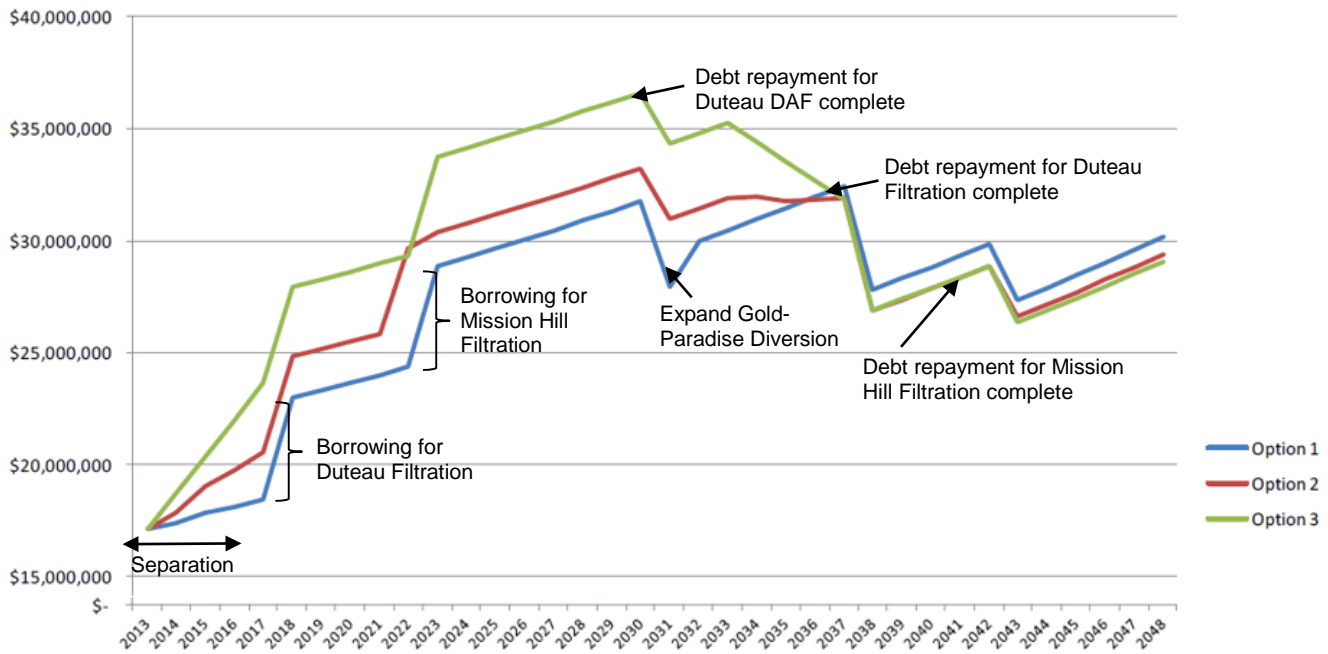
## RESULTS:

Summary graphs from TM10 are provided on the following page. These graphs provide a year to year comparison of Options 1, 2 & 3 of the revenue requirements (Figure 2.4) and impacts on rates (Figure 3.1).

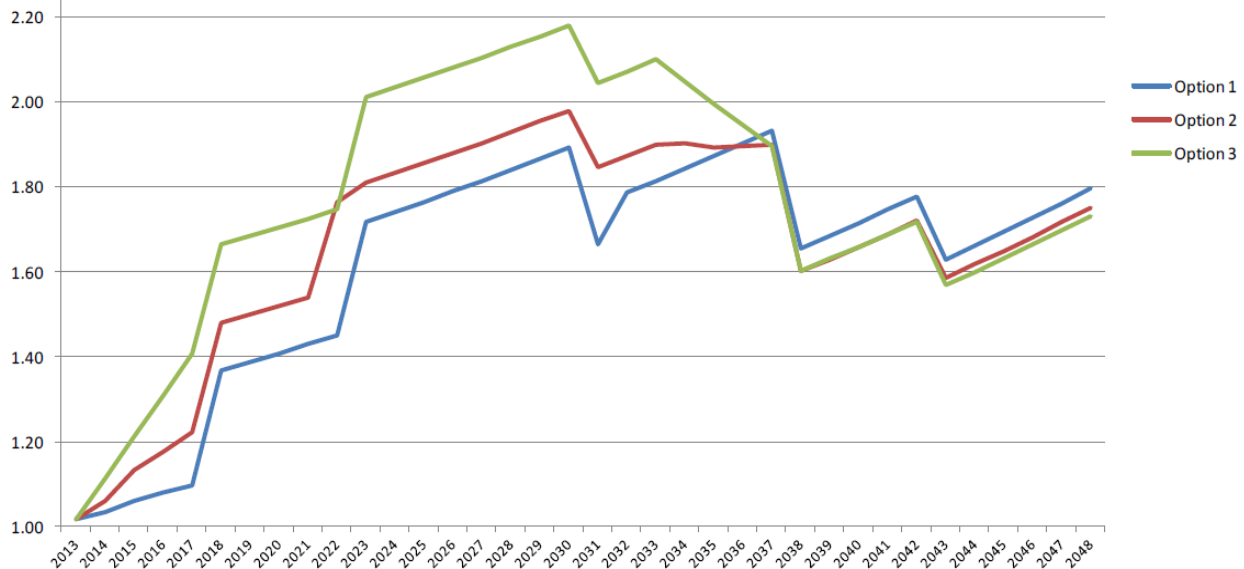
The following notes and observations were made for Figure 2.4 – Option Spending Profile:

- The physical difference to the options is that Option 1 has no further system separation, Option 2 has partial separation and Option 3 fully separates the domestic and irrigation distribution system from 2013 through to 2017. The increase in costs from 2013 to 2017 are a result of the different levels of separation for each option,
- Once all of the debt is repaid in 2043, Option 1's annual O&M expense is higher than the other options due to the requirements for a larger water treatment plant, and
- It will be necessary to raise the water rates for GVW customers to fund any of the 3 Options.

**Figure 2.4 from TM10: Option Spending Profiles**



**Figure 3.1 from TM10: Index of Water Rates in Options 1, 2 & 3 from 2012 Base**



The following notes and observations were made for Figure 3.1 – Index of Water Rates in Options 1, 2 & 3 from using 2012 water rates as a base:

- Reserves should be used to smooth water rates to minimize year to year rates fluctuations,
- Water rates under each option will rise at different rates during the first few years of the program. Option 1’s rate will increase from inflation, Option 2 and 3 rate increases are from major investments to separate the domestic and agricultural distribution systems,
- Once separation projects are complete, the line for each option will move roughly parallel,
- Option 3 breaks through the 2.0 Index (indicating a double of 2012 costs). Options 1 and 2 do not break the 2.0 index level,
- Although a decrease in revenue is shown in 2036, it is not realistic to expect rates to drop, and
- See Appendix “A” of TM10 for a detailed annual revenue requirement forecast for each of the Options 1, 2, and 3.