

Diamond A Mutual Water Company

Financial Report to Board of Directors

March 31, 2019

- **Reserve Analysis**

Reserve Analysis

- **Methodology**

- Develop a detailed, line-item schedule of all our assets (wells, tanks, etc)
 - We use a similar schedule for our insurance **Statement of Values**
- For each asset, assign the following values:
 - **Date Placed in Service**
 - **Replacement Cost**
 - **Useful Life**

Reserve Analysis

- **Methodology**

- With this data, the following are calculated:
 - **Remaining Life** = Years of Useful Life Remaining
 - » $(\text{Year Installed} + \text{Useful Life}) - \text{Current Year}$
 - **Effective Age** = Useful Life – Remaining Life
 - **Fully Funded Balance** = Reserve Target
 - » $\text{Asset Cost} \times (\text{Effective Age} / \text{Useful Life})$
 - **Annual Deterioration Cost** = Annual Reserve Amount
 - » $\text{Fully Funded Balance} / \text{Useful Life}$

Reserve Analysis

- **Example: Well #1**

- Assumptions

- Installed at the Rec Center in 1974
 - Useful Life of 50 years
 - Replacement Cost of \$31,500

- Calculations

- Remaining Life = 5 Yrs (replace in 2024)
 - Effective Age = 45 Yrs
 - Fully Funded Balance = \$28,350
 - Will need to replace in 5 yrs for \$31,500
 - Annual Deterioration Cost = \$630
 - $\$630/\text{yr} \times 50 \text{ yrs} = \$31,500$

Reserve Analysis

- **Example: Zone 2 Tank**

- Assumptions

- Installed in 2018
 - Useful Life of 50 years
 - Replacement Cost of \$284,443

- Calculations

- Remaining Life = 49 Yrs
 - Effective Age = 1 Yr
 - Fully Funded Balance = \$5,689
 - Minimal \$\$ as won't need to replace for a long time
 - Annual Deterioration Cost = \$5,689

Reserve Analysis

- **Key Take Aways**

- The Distribution System skews the data

- Installed in 1960's and 1970's
- Useful Life of 100 years
- Replacement Cost of \$3.7mm

- Calculations

- Fully Funded Balance = \$1.96mm
- Annual Deterioration Cost = \$80k

- We can assume that our annual Repairs and Maintenance more or less offsets this Annual Deterioration Cost

- **I excluded the Distribution System**

TOTAL RESERVES NEEDED

TOTAL EXCLUDING DISTRIBUTION		\$	472,873	\$	43,614
KEY DRIVERS:					
	Drilled Well Shafts		\$	105,084	
	Booster Pumps		\$	40,000	
	Electrical Panels		\$	58,800	
	Viewcrest Tank		\$	147,000	
	Other Tanks		\$	56,139	
	Misc Smaller Items		\$	65,850	
		TOTAL	\$	472,873	

Reserve Analysis

- **Key Take Aways**

- The Viewcrest Tank has a fully funded balance of \$147k, but will be repaired/replaced in 2019, so it should be excluded

- **Excluding Viewcrest, we still need \$325k in Reserves to be Fully Funded**

- Not all of this would need to be in Cash—some could be financed

Reserve Analysis

- **Key Take Aways**

- The TOTAL number may not be perfectly accurate, but it gives us a good starting place for Board discussion
- The analysis gives us some good insight into which assets will need to be replaced over the next 5-10 years
- **Are the Useful Life Assumptions Accurate?**