


**Stonegate Village Metropolitan District  
Inclusion Financial Analysis  
Decision Support and Risk Assessment**

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August 17, 2011



## Agenda

- Introduction
- Summary of Peer Review Findings
- Objectives / Scope of Current Study
- Sources of Information / Methodology
- Findings
- Conclusions
- Recommendations
- Questions

## Introduction

- SAIC
  - Acquired R. W. Beck in 2009
  - 45,000 employees
    - Federal contractor, Water and Energy experts
  - Over 70 years of municipal utility experience
- Scott Burnham
  - Financial / Economic Analysis
  - 13 years experience
  - MBA, Masters of Public Affairs / Science
- Cortney Brand, P.G.
  - Technical and Economic Expertise
  - 16 years experience
  - MBA, Masters of Geology
  - Former Castle Pines North Metro District Board member (2004-2008)

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## Peer Review Findings

- Previously conducted a high-level peer review of StepWise's inclusion financial analysis
- Findings presented at June 15<sup>th</sup> Board meeting
- Concluded that:
  1. Analysis is based on appropriate analytical methods
  2. Reasonable financial assumptions were made
- Review had a limited scope and timeframe

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## Objectives of Current Study

- SVMMD Board desired a “deeper dive”
- More detailed review of inclusion financial analysis assumptions
- Two primary questions:
  1. Was anything overlooked in the inclusion financial analysis?
  2. Are there any other options potentially less expensive than those already evaluated?

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## Scope of Current Study

- Two phases proposed – Board authorized Phase I
- Phase I scope:
  - Challenge assumptions in SVMMD’s Capital Improvement Plan (CIP) – central to “SVMMD Alone” (no PWSD) scenario
  - Perform sensitivity analyses on assumptions in inclusion analysis to test whether outcome changes
  - Identify and evaluate the costs, benefits and risks of other options not previously considered
- Scope did not include preparation of an independent financial model (Phase II)

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## Sources of Information

- Site visit of SVMD facilities (August 5<sup>th</sup>)
- SVMD contractors and consultants
- Water Supply Planning Studies
  - SMWSA 2007 Regional Water Master Plan (CDM)
  - SVMD 2007 Water Resource Fee Study (Red Oak Consulting)
  - SVMD 2008 Water Supply Master Plan (RG Consulting Engineers, Inc.)
  - Parker W&SD Water and Sewer Master Plan (2009)
- Wastewater Studies
  - SVMD 2009 Wastewater Treatment Facility Process Performance Audit (Richard P. Arber Associates, Inc.)
  - SVMD 2009 Wastewater Management Alternatives Evaluation (Arber)
- Other
  - SVMD 2011 Inclusion Financial Analysis (StepWise)
  - Inclusion Analysis Peer Review (SAIC, June 2011)

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## Methodology

- Utilized output from StepWise model to create a financial tool for sensitivity analysis
  - Did not create and independent model
  - Did not alter financing assumptions
- High-level estimate of impacts
  - Provide a generalized magnitude of change
  - Not sufficient for detailed planning purposes
- Reviewed timing and size of potential capital expenditures on projected revenue requirements

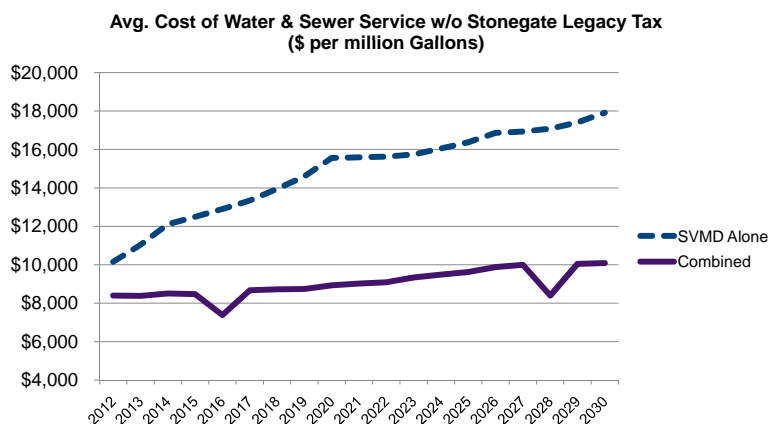
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## Summary of StepWise Model Results

### Revenue Requirements per Million Gallons (\$/MG)



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## Further Review of Inclusion Financial Analysis

### Stonegate CIP Review (2010-2030)

- **Water System Capital Costs: \$40M**
  - WISE costs have been revised upward since April 2011
  - Additional WISE capital costs after 2020 not captured
  - Current WISE capital plan is a “bridge” to circa 2020
  - Additional supplies, in addition to WISE, are potentially needed after 2030
- **Wastewater System Capital Costs: \$36M**
  - \$10M for WWTP upgrades is low without increased operations and renewals/replacements expenditures

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## Findings of Sensitivity Analysis

- Sensitivity analysis of inclusion financial analysis assumptions did not yield a different outcome
  - Most plausible variations increase **SVMD Alone** revenue requirements
  - To close the revenue requirement gap with **Combined Utility**, SVMD must eliminate capital spending and issue no new debt (unrealistic)
- Analysis reveals benefit of economies of scale:
  - A \$1M increase in capital expenditures would require ~\$1,500/MG of new revenue for **SVMD Alone** vs. ~\$250/MG under **Combined Utility**

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## Alternatives Considered

Alternative <sup>1</sup>	Description
1	No Action (no PWSD inclusion, no WISE)
2	PWSD Inclusion (Combined Utility) <sup>2</sup>
3	Participate in WISE (SVMD Alone) <sup>2</sup>
4	Other Renewable Water Supply Option
5	WISE with Firming Supply
6	Other Inclusion or Service Agreement

<sup>1</sup>Each alternative includes \$0.5M for Compark force main and waterline realignment

<sup>2</sup>Evaluated in StepWise inclusion financial analysis

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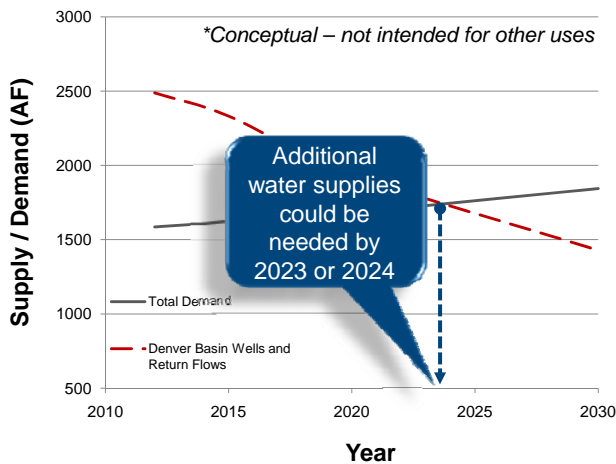
### Alternative 1 – No Action

- “Kick the Can Down the Road”
  - No WISE participation or other renewable water supply
  - No PWSD inclusion

Benefits	Risks	Costs
Avoid upfront costs for WISE	W/WW facilities need improvements for utility to be a going concern	>\$15M in necessary system improvements
Avoid WISE water delivery charges	Stringent WW discharge compliance requirements	Opportunity costs of not participating in WISE
Maintain autonomy	Declining groundwater supplies and increasing pumping costs	
	Costs of renewable water will likely increase in future and need still exists	

### Alternative 1 – No Action

#### Supply/Demand Forecast – No Action



#### Forecast Assumes:

- Utilize Rueter-Hess Reservoir storage
- Develop alluvial well system to deliver WW return flows to RHR
- Supply gap will be met with new Denver Basin wells
- Reduced well capacity decline and demand trends

### Alternative 2 – PWSD Inclusion (Combined Utility)

- No WISE participation (as SVMD)

Benefits	Risks	Costs
Avoid near-term capital costs of facility improvements	No longer in control of own destiny	\$0.5M warranty (first year)
Avoid upfront costs for WISE and on-going delivery charges	Revenue requirements (and utility rates) might be higher than projected	Decommission WWTP
Avoid risks associated with WW operations		
Take advantage of economies of scale from consolidation		

### Alternative 3 – Participate in WISE

- No PWSD inclusion

Benefits	Risks	Costs*
Leveraging existing renewable water supply and infrastructure	WISE deliveries are interruptible (not firm)	Near-term capital costs
Regional solution – costs spread amongst numerous entities	Not certain SVMD will receive enough water to meet its long-term needs	Annual water delivery charges
Take water deliveries as early as 2013	W/WW facilities need improvements for utility to be a going concern	Additional future capital costs for water treatment
	Stringent WW discharge compliance requirements	

\*Proposed WISE Agreement costs are currently confidential

### Alternative 4 – Other Renewable Water Supply Option

- No WISE or PWSD inclusion, pursue an alternative renewable water supply source
- Other renewable water supply options
  1. Lower South Platte ag rights
    - Buy water rights, use existing and new infrastructure
    - Possibly utilize United W&SD / ACWWA infrastructure
  2. Designated Groundwater (e.g., Lost Creek, Kiowa-Bijou)
    - Buy water rights, use existing and new infrastructure
  3. Lower Arkansas River ag rights
    - Buy water rights, deliver through new infrastructure
    - Delivery system 200+ miles long, water quality issues
- Recent transactions suggest \$20-30K/AF just for water rights

### Alternative 4 – Other Renewable Water Supply Option

Benefits	Risks	Costs
Maintain autonomy	Water supply is not currently identified or owned	>\$15M in necessary system improvements
Develop and deliver water as-needed	Water court transfer process	Significant capital costs for water rights and infrastructure
	Permitting and delivery system construction risks	Increased O&M costs
	W/WW facilities need improvements for utility to be a going concern	Additional future capital costs for water treatment
	Stringent WW discharge compliance requirements	

### Alternative 5 – WISE with Firming Supply

- Participate in WISE and pursue a supplemental supply to “firm” WISE deliveries







Benefits	Risks	Costs
Water supply is firm and reliable	Firming supply not currently identified or owned	>\$15M in necessary system improvements
Likely won't need additional water supplies	Permitting and delivery system construction risks	Significant capital costs in addition to WISE
Could potentially reduce WISE subscription	Water court transfer process	Annual WISE water delivery charges
	W/WW facilities need improvements for utility to be a going concern	Additional future capital costs for water treatment
	Stringent WW discharge compliance requirements	

### Alternative 6 – Other Inclusion or Service Agreement

- Other prospective service providers considered

Prospective Provider	Providers' Interest	Comment / Condition
Centennial W&SD	Possibly	SVMD needs to bring water, too far away, not in Cherry Cr. basin
Town of Castle Rock	No	Too far away
Castle Pines North MD	No	Currently in dissolution process
City of Castle Pines	Yes	No water assets, no customers
Pinery W&SD	No	Too far away
Arapahoe County WWA	Possibly	Requires capital investments in W/WW infrastructure
SMWSA Mid-Term Plan	---	Replaced by WISE Partnership

## Comparison of Alternatives

Alternatives	Relative Cost	Relative Risk
Alt 1 – No Action (no PWSD or WISE)	\$\$	
Alt 2 – PWSD Inclusion (Combined Utility)	\$	
Alt 3 – Participate in WISE (SVMD Alone)	\$\$\$	
Alt 4 – Other Renewable Supply Option	\$\$\$\$	
Alt 5 – WISE with Firming Supply	\$\$\$\$	
Alt 6 – Other Inclusion or Service Agreement	\$\$	

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## Conclusions

1. The \$10M in SVMD's CIP for WWTP upgrades is low considering all the needed improvements
2. Other improvements not explicitly identified in the CIP are needed at the WWTP, WTP and lift stations
3. Since projections made in 2008:
  - Water-levels in SVMD's wells have declined at a slower rate or have risen somewhat
  - Water use per SFE has declined -20% due to demand management, wet weather and a slow economy
  - As a result, the critical need date for additional water supplies has been moved further into the future

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## Conclusions

4. Sensitivity analysis of assumptions in the inclusion financial analysis did not yield a different outcome
  - Most plausible variations increase **SVMD Alone** revenue requirements
  - To close the revenue requirement gap with **Combined Utility**, SVMD must eliminate capital spending and issue no new debt (unrealistic)
5. Analysis reveals benefit of economies of scale:
  - \$1M increase in capital expenditures would require ~\$1,500/MG of new revenue for **SVMD Alone** vs. ~\$250/MG under **Combined Utility**

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## Conclusions

6. Inclusion into PWSD appears to be the least expensive option for the near-term (15-20 years)
  - However, this does not consider other community values such as autonomy

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## Recommendations

- If SVMD continues to provide W/WW services, then:
  - Conduct a quantitative, risk-based asset management analysis to prioritize capital expenditures
  - Continue to participate in a regional renewable water supply solution
  - Develop a policy surrounding the proportion of SVMD's water resource portfolio that should be non-Denver Basin groundwater (i.e., renewable)
  - Consider a supplemental source of supply to "firm" deliveries through WISE (if SVMD chooses to participate)
  - Update StepWise model (or other) with revised WISE costs and any other new information

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*Questions / Comments?*

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