

APPENDIX P
Alternative Evaluation Matrix



Alternatives Evaluation Matrix

Alternatives Evaluation		Alternatives							
		Option 1		Option 2		Option 3		Option 4	
		AR	WR	AR	WR	AR	WR	AR	WR
Categories and Criteria	Relative Weight								
Regulatory Compliance - Water Quality	20%								
- Meets VA Drinking Water Standards	10	5	50	5	50	4	40	3	30
- Long Term Compliance	10	5	50	5	50	4	40	1	10
Property Owner Impact	16%								
-Affects Property Value	8	5	40	4	32	2	16	3	24
-Homeowner responsibilities / increased burdens / Safety	8	3	24	3	24	1	8	5	40
Operational Requirements	16%								
- Sustainability (waste gen/resources/conserves energy)	8	5	40	0	0	0	0	5	40
- Reliability	8	5	40	4	32	4	32	2	16
Technical Feasibility	14%								
- Time for Implementation	8	4	32	0	0	3	24	5	40
- Constructability	6	3	18	2	12	2	12	5	30
Present Worth	20%								
- Capital costs	10	2	20	0	0	3	30	5	50
- O & M costs	10	5	50	1	10	0	0	5	50
Permitting / Administrative Burdens	14%								
- Permitting	8	3	24	0	0	1	8	3	24
- Level of effort	6	4	24	0	0	1	6	2	12
Total weighted alternative rating	100		412		210		216		366

Rank

1

4

3

2

Relative weight - relative importance of criteria as compared to other criteria; scale 0 - 10; no importance rated 0, most important rated 10

AR - Alternative rating. Rates the alternatives according to their anticipated performance with respect to the various criteria; scale 0 to 5; least favorable rated 0, most favorable rated 5.

AR Scale

0	Exceptionally Unfavorable
1	Very Unfavorable
2	Somewhat Unfavorable
3	Somewhat Favorable
4	Very Favorable
5	Exceptionally Favorable

WR - Weighted rating. Relative weight for each criteria multiplied by alternative rating.

Total weighted alternative rating -Sum of weighted ratings for each alternative

Option	Description
1	Provide City Water via a Water Main Extension.
2	Install a Community Groundwater Supply, Treatment, Storage and Distribution System.
3	Install POE Treatment Systems on Existing Private Wells
4	Install New Private Wells