

Decision Matrix for the Future of Charlottesville Water Resources

	RWSA Plan - Schnabel		RWSA Plan - Black&Veatch		13 feet RMR + Dredging (Norris Plan)		HDR dredging + Maintenance Dredge		Continuous Dredging (Small Bites)	
	Cost	Cost+interest*	Cost	Cost+interest*	Cost	Cost+interest*	Cost	Cost+interest*	Cost	Cost+interest*
Components										
New RMR dam	\$ 35,571,000.00	\$ 70,000,000.00								
Expand existing RMR dam 45 feet			\$ 21,800,000.00	\$ 54,000,000.00						
Mitigation for stream and wetland loss	\$ 3,400,000.00	\$ 7,500,000.00	\$ 3,400,000.00	\$ 7,500,000.00						
I-64 Hazardous risk management	\$ 1,800,000.00	\$ 3,500,000.00	\$ 1,800,000.00	\$ 3,500,000.00						
Expand existing RMR dam 13 feet					\$ 12,000,000.00	\$ 23,328,000.00				
Repair existing RMR spillway							\$ 7,400,000.00	\$ 14,386,000.00	\$ 7,400,000.00	\$ 14,386,000.00
New SFRR-RMR pipeline	\$ 62,952,500.00	\$ 122,379,000.00	\$ 62,952,500.00	\$ 122,379,000.00	\$ 62,952,500.00	\$ 122,379,000.00				
Operating costs for new pipeline	unknown		unknown		unknown					
Replace-repair SHR pipeline							\$ 12,900,000.00	\$ 24,000,000.00	\$ 12,900,000.00	\$ 24,000,000.00
Rehabilitate O-Hill WTP	\$ 16,800,000.00	\$ 32,659,000.00	\$ 16,800,000.00	\$ 32,659,000.00	\$ 16,800,000.00	\$ 32,659,000.00	\$ 16,800,000.00	\$ 32,659,000.00	\$ 16,800,000.00	\$ 32,659,000.00
Expand SF WTP and O-Hill WTP	\$ 13,500,000.00	\$ 26,244,000.00	\$ 13,500,000.00	\$ 26,244,000.00						
Replace RMR-Ohill WTP pipeline	\$ 8,600,000.00	\$ 16,718,000.00	\$ 8,600,000.00	\$ 16,718,000.00	\$ 8,600,000.00	\$ 16,718.00	\$ 8,600,000.00	\$ 16,718,000.00	\$ 8,600,000.00	\$ 16,718,000.00
One-time dredging (HDR 2-phase)							\$ 35,595,959.00	\$ 72,000,000.00		
Maintenance dredging *					\$ 15,000,000.00	\$ 15,000,000.00	\$ 22,000,000.00	\$ 22,000,000.00	\$ 22,000,000.00	\$ 22,000,000.00
COST SHARE	unknown		unknown		unknown		unknown		unknown	
TOTAL	\$ 142,623,500.00	\$ 279,000,000.00	\$ 128,852,500.00	\$ 263,000,000.00	\$ 115,352,500.00	\$ 193,382,718.00	\$ 103,295,959.00	\$ 181,763,000.00	\$ 67,700,000.00	\$ 109,763,000.00
Storage										
Total water storage 2055 - piped	2,300 MG	SFRR+RMR	2,300 MG	SFRR+RMR	2,484 MG	SFRR+RMR+SHR	2,000 MG	SFRR+RMR+SHR	2,000 MG	SFRR+RMR+SHR
Additional flow thru storage	1,113 MG	SHR+BC+CGL+LA	1,113 MG	SHR+BC+CGL+LA	750 MG	BC+CGL+LA	750 MG	BC+CGL+LA	750 MG	BC+CGL+LA
	\$ 3,413.00		\$ 3,413.00		3,234 MG		2,750 MG			2,750 MG
Total available for drought 2055	3,413 MG		3,413 MG	3,413 MG	3,234 MG		2,727 MG		2,727 MG	
Environmental cost										
Streams lost	14,435 feet		14,435 feet		none		none		none	
Wetlands lost	3.5 acres		3.5 acres		none		none		none	
Trees Lost	\$ 60,000.00		\$ 60,000.00		TBD		none		none	
Water Storage lost	600-1,000 MG		600-1,000 MG		none		none		none	
Natural resources lost	SFRR / RMNA		SFRR / RMNA		none		none		none	
I-64 Hazardous risk	impacted		impacted		not impacted		not impacted		not impacted	
Resiliency	1 reservoir		1 reservoir		3 reservoirs		3 reservoirs		3 reservoirs	
Drought recovery	25 MG/day RMR		RMR/25 MG/day		SFRR/rapid		SFRR/rapid		SFRR/rapid	

Most \$\$ figures used were the same as in the matrix provided by Charlottesville Tomorrow. Some figures were disaggregated further. Continuous Dredging figures were estimated from a recent visit from Ellicott Dredging representatives

ABBREVIATIONS

RWSA = Rivanna Water & Sewer Authority	* paid in cash / no bonds
SF = South Fork	Terms of cost + interest according to RWSA
SFRR = South Fork Rivanna Reservoir	10% cash
RMR = Ragged Mountain Reservoir	5.25% interest for 30 years
SHR = Sugar Hollow Reservoir	no early payment schedule
BCR = Beaver Creek Reservoir	
CGL = Chris Greene Lake	
LA = Lake Albemarle	
WTP = Water Treatment Plant	

NOTES

prepared by:
Citizens for a Sustainable Water Plan September 20, 2010

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Probably reliable data

Studies needed

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