

Draft 12/02/08

		JBW Review						
C-Ville Water Moderate Case Scenario - Safe Yield Estimated at 17.3 mgd	C-Ville Water Estimate	Possible Source for CVW Estimate	Cited Amount	Adjust for Inflation (2008 \$)	(If not included in line item) 20% for Engineering, Permitting and Construction Management.	(If not included in line item) 25% for Contingences	Estimated 2008 Value	Notes:
Repair Ragged Mountain (RMR) Dam Spillway at existing height	\$4,000,000	GF April 6, 2005 Memo RE: Ragged Mt Dam	\$ 5,250,000	\$ 5,821,850			\$ 5,821,850	Also appears in in 2005 GF Estimate sheet for Alt. 1, <i>No Action</i> , Rehab Dam, \$3,500,000. Adj for Inflation, E/P/CM and Contingency equals \$5.82-million
Restoration Dredging of SFRR	\$30,000,000	Assume \$15/cy from CVW Worst Case scenario	\$ 30,000,000	\$ 30,000,000			\$ 30,000,000	2001 VHB study, page 13, adjusted for inflation, dredging cost estimate \$15 to \$30/cy
Build SFRR sediment traps; and	\$21,000,000	VHB 2001 Study, page 9	\$ 464,000	\$ 514,540		\$ 128,635	\$ 643,175	VHB, page 9: "Assumes construction of 2 forebays....estimated cost to design and construct the forebays is \$232,000."
periodically dredge them for 50 years		\$15/CY assumption	\$ 45,000,000	\$ 45,000,000		\$ 11,250,000	\$ 56,250,000	
Install Flow valves on Beaver Creek	\$1,500,000	VHB 2001 Study, page 22	\$ 500,000	\$ 611,440	\$ 122,288	\$ 183,432	\$ 917,160	
Install Flow valves on Lake Albemarle		Assume same as above	\$ 500,000	\$ 611,440	\$ 122,288	\$ 183,432	\$ 917,160	
Install Flow valves on Chris Greene		VHB 2001 Study, page 18	\$ 500,000	\$ 611,440	\$ 122,288	\$ 183,432	\$ 917,160	
Access currently-unused deep water storage at SFRR	\$1,000,000	n/a	\$ 1,000,000	\$ 1,000,000			\$ 1,000,000	
Replace RMR to Observatory Water Treatment Plant pipeline, with 18"	\$4,000,000	Permit Support Doc, June 2006, Page 56, Table 13 (Does not specify length)	\$ 7,700,000	\$ 8,539,000	\$ 1,707,800	\$ 2,561,700	\$ 12,808,500	
Renovate Observatory Water Treatment Plant at 4 mgd	\$6,000,000	Permit Support Doc, June 2006, Page 56, Table 13 (Does not specify capacity increase)	\$ 14,200,000	\$ 15,254,650	\$ 3,050,930	\$ 4,576,395	\$ 22,881,975	
Upgrade SFRR Water Treatment Plant to 16 mgd	\$9,000,000	GF 2005 cost estimate sheets, WTP Upgrades at \$1,500,000 / mgd	\$ 9,000,000	\$ 9,980,000	\$ 1,996,000	\$ 2,994,000	\$ 14,970,000	
Replace Sugar Hollow to RMR pipeline with 18"	\$16,200,000	Permit Support Doc, June 2006, Page 41, Table 12 (18" pipe)	\$ 12,870,000	\$ 14,271,860	\$ 2,854,372	\$ 4,281,558	\$ 21,407,790	
Environmental Mitigation	\$0			\$ -	\$ -	\$ -	\$ 13,482,782	(GF estimates average roughly 8% for EM)
Subtotal	\$92,700,000							
20% for Engineering, Permitting and Construction Management				No adj. for E/P/CM or Cont.				
25% for Contingences								
C-Ville Water Total	\$92,700,000			\$ 132,216,220		Total with adj.	\$ 182,017,552	