Appendix 2
Augmentation Plan Exchange Matrix
Exchange To Points and Requested Exchange Rates (cfs)

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Exchange Source: Golden Eagle 43 Discharge																								
Golden Eagle 43 Discharge			32[1]														3.0[2]							
Confluence of South Fork with Purgatoire	3.2[3]	3.2[4]		3.2[5]	3.2[6]									3.0[7]	1.0[8]	1.0[9]								
Confluence of Sarcillo Canyon with Purgatoire																		1.0[10]	1.0[11]	1.0[12]				
Confluence of Burro Canyon with Purgatoire								3.2[13]													1.0[14]			
Confluence of Reilly Canyon with Purgatoire									3.2[15]													1.0[16]	1.0[17]	1.0[18]
Confluence of Long Creek with Purgatoire										3.2[19]														
Confluence of Raton Creek with Purgatoire												3.2[20]	3.2[21]											
Exchange Source: Jaguar 183A Discharge																								

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Jaguar 183A Discharge																					1.0[22]			
Confluence of Burro Canyon with Purgatoire	7.7[23]	7.7[24]	7.7[25]	7.7[26]	7.7[27]	7.7[28]		7.7[29]						3.0[30]	1.0[31]	1.0[32]	3.0[33]	1.0[34]	1.0[35]	1.0[36]	1.0[37]			
Confluence of Reilly Canyon with Purgatoire									7.7[38]													1.0[30]	1.0[40]	1.0[41]
Confluence of Long Creek with Purgatoire										7.7[42]														
Confluence of Raton Creek with Purgatoire												7.7[43]	7.7[44]											
Exchange Sourge: Ginetta 220A Discharge																								
Ginetta 220A Discharge																					1.0[45]			
Confluence of Burro Canyon with Purgatoire	7.7[46]	7.7[47]	7.7[48]	7.7[49]	7.7[50]	7.7[51]		7.7[52]						3.0[53]	1.0[54]	1.0[55]	3.0[56]	1.0[57]	1.0[58]	1.0[59]	1.0[60]			
Confluence of Reilly Canyon with Purgatoire									7.7[61]													1.0[62]	1.0[63]	1.0[64]
Confluence of Long Creek with Purgatoire										7.7[65]														
Confluence of Raton Creek with Purgatoire												7.7[66]	7.7[67]											

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Exchange Source: Joyce 057A Discharge																								
Joyce 057A Discharge																						1.0[68]	1.0[69]	
Confluence of Reilly Canyon with Purgatoire	7.7[70]	7.7[71]	7.7[72]	7.7[73]	7.7[74]	7.7[75]	7.7[76]	7.7[77]			7.7[78]			3.0[79]	1.0[80]	1.0[81]	3.0[82]	1.0[83]	1.0[84]	1.0[85]	1.0[86]			
Confluence of Long Creek with Purgatoire										7.7[87]														
Confluence of Raton Creek with Purgatoire												7.7[88]	7.7[89]											
Exchange Source: Golden Eagle Mine																								
Golden Eagle Mine Discharge	0.4[90]	0.4[91]		0.4[92]										0.4[93]										
Confluence of Purgatoire with Lopez Canyon															1.0[94]									
Confluence of Purgatoire with Unnamed Trib																1.0[95]								
Confluence of South Fork with Purgatoire			0.4[96]														0.4[97]							
Confluence of Sarcillo Canyon with Purgatoire																		0.4[98]	0.4[99]	0.4[100]				
Confluence of Burro								0.4[101]													0.4[102]			

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Canyon with Purgatoire																								
Confluence of Reilly Canyon with Purgatoire									0.3[103]													0.3[104]	0.3[105]	0.3[106]
Confluence of Long Creek with Purgatoire										0.3[107]														
Confluence of Raton Creek with Purgatoire												0.3[108]	0.3[109]											
Exchange Source: Mid Fork 1 Pond																								
Mid Fork 1 Pond	3.0[110]	3.0[111]		3.0[112]																				
Confluence of South Fork with Purgatoire			3.0[113]																					
Confluence of Burro Canyon with Purgatoire								3.0[114]																
Confluence of Reilly Canyon with Purgatoire									2.9[115]															
Confluence of Long Creek with Purgatoire										2.9[116]														
Confluence of Raton Creek with Purgatoire												2.9[117]	2.9[118]											
Exchange Source: Lopez Canyon Pond																								
Lopez Canyon Pond	1.0[119]	1.0[120]		1.0[121]	1.0[122]																			

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Confluence of South Fork with Purgatoire			1.0[123]																					
Confluence of Burro Canyon with Purgatoire								1.0[124]																
Confluence of Reilly Canyon with Purgatoire									0.9[125]															
Confluence of Long Creek with Purgatoire										0.9[126]														
Confluence of Raton Creek with Purgatoire												0.9[127]	0.9[128]											
Exchange Source: Stage Coach Pond																								
Stage Coach Pond	1.0[129]	1.0[130]		1.0[131]	1.0[126]	-132.0																		
Confluence of South Fork with Purgatoire			1.0[133]																					
Confluence of Burro Canyon with Purgatoire								1.0[134]																
Confluence of Reilly Canyon with Purgatoire									1.0[135]															
Confluence of Long Creek with Purgatoire										1.0[136]														
Confluence of Raton Creek with Purgatoire												0.9[137]	0.9[138]											

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Exchange Source: South Fork 1 Pond																								
South Fork 1 Pond			3.0(139)																					
Confluence of South Fork with Purgatoire	3.0(140)	3.0(141)		3.0(142)	3.0(143)																			
Confluence of Burro Canyon with Purgatoire								2.9(144)																
Confluence of Reilly Canyon with Purgatoire									2.9(145)															
Confluence of Long Creek with Purgatoire										2.9(146)														
Confluence of Raton Creek with Purgatoire												2.9(147)	2.9(148)											
Exchange Source: Tamburelli Pond																								
Confluence of Reilly Canyon with Purgatoire	1.0(149)	1.0(150)	1.0(151)	1.0(152)	1.0(153)	1.0(154)	1.0(155)	1.0(156)			1.0(157)													
Confluence of Long Creek with Purgatoire										1.0(158)														
Confluence of Raton Creek with Purgatoire												1.0(159)	1.0(160)											
Exchange Source: Gregg Canyon Pond																								
Confluence of Reilly Canyon with	1.0(161)	1.0(162)	1.0(163)	1.0(164)	1.0(165)	1.0(166)	1.0(167)	1.0(168)			1.0(169)													

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Purgatoire																								
Confluence of Long Creek with Purgatoire										1.0[170]														
Confluence of Raton Creek with Purgatoire												1.0[171]	1.0[172]											
Exchange Source: King Pond																								
Confluence of Reilly Canyon with Purgatoire	1.0[173]	1.0[174]	1.0[175]	1.0[176]	1.0[177]	1.0[178]	1.0[179]	1.0[180]			1.0[181]													
Confluence of Long Creek with Purgatoire										1.0[182]														
Confluence of Raton Creek with Purgatoire												1.0[183]	1.0[184]											
Exchange Source: Burro Canyon Pond																								
Confluence of Burro Canyon with Purgatoire	1.0[185]	1.0[186]	1.0[187]	1.0[188]	1.0[189]	1.0[190]		1.0[191]																
Confluence of Reilly Canyon with Purgatoire									1.0[192]															
Confluence of Long Creek with Purgatoire										1.0[193]														
Confluence of Raton Creek with Purgatoire												1.0[194]	1.0[195]											

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Exchange Source: Warren McDonald Pond																								
Confluence of Sarcillo Canyon with Purgatoire	1.0[196]	1.0[197]	1.0[198]	1.0[199]	1.0[200]	1.0[201]																		
Confluence of Burro Canyon with Purgatoire								1.0[202]																
Confluence of Reilly Canyon with Purgatoire									0.9[203]															
Confluence of Long Creek with Purgatoire										0.9[204]														
Confluence of Raton Creek with Purgatoire												0.9[205]	0.9[206]											
Exchange Source: Margery Pond																								
Confluence of Sarcillo Canyon with Purgatoire	1.0[207]	1.0[208]	1.0[209]	1.0[210]	1.0[211]	1.0[212]																		
Confluence of Burro Canyon with Purgatoire								0.9[213]																
Confluence of Reilly Canyon with Purgatoire									0.9[214]															
Confluence of Long Creek with Purgatoire										0.9[215]														
Confluence of Raton												0.9[216]	0.9[217]											

Exchange From Points	Reach A	Reach B	Reach C	Reach D	Reach E	Reach F	Reach G	Reach H	Reach I	Reach J	Reach K	Reach L	Reach M	Mid Fork 1 Pond	Lopez Canyon Pond	Stage Coach Pond	South Fork 1 Pond	Vermejo-Monaco Pond	Warren McDonald Pond	Margery Pond	Burro Canyon Pond	King Pond	Gregg Canyon Pond	Tamburelli Pond
Creek with Purgatoire																								
Exchange Source: Vermejo-Monaco Pond																								
Confluence of Sarcillo Canyon with Purgatoire	1.0[218]	1.0[219]	1.0[220]	1.0[221]	1.0[222]	1.0[223]																		
Confluence of Burro Canyon with Purgatoire								1.0[224]																
Confluence of Reilly Canyon with Purgatoire									0.9[225]															
Confluence of Long Creek with Purgatoire										0.9[226]														
Confluence of Raton Creek with Purgatoire												0.9[227]	0.9[228]											

Maximum achievable exchange rates are based on and limited by the following assumptions.

1. Each discharge point could receive 100 percent nontributary water.
2. 2. Each discharge point could receive the entire maximum permitted discharge amount.
3. Transit losses are considered in the downstream direction at 0.25 percent per mile. No initial loss is assessed.
4. Exchanges are limited by the exchange-from and exchange-to points. When the exchange-to point does not have a limit (e.g., an Administrative Reach), the exchange rate is based on the exchange-from point.