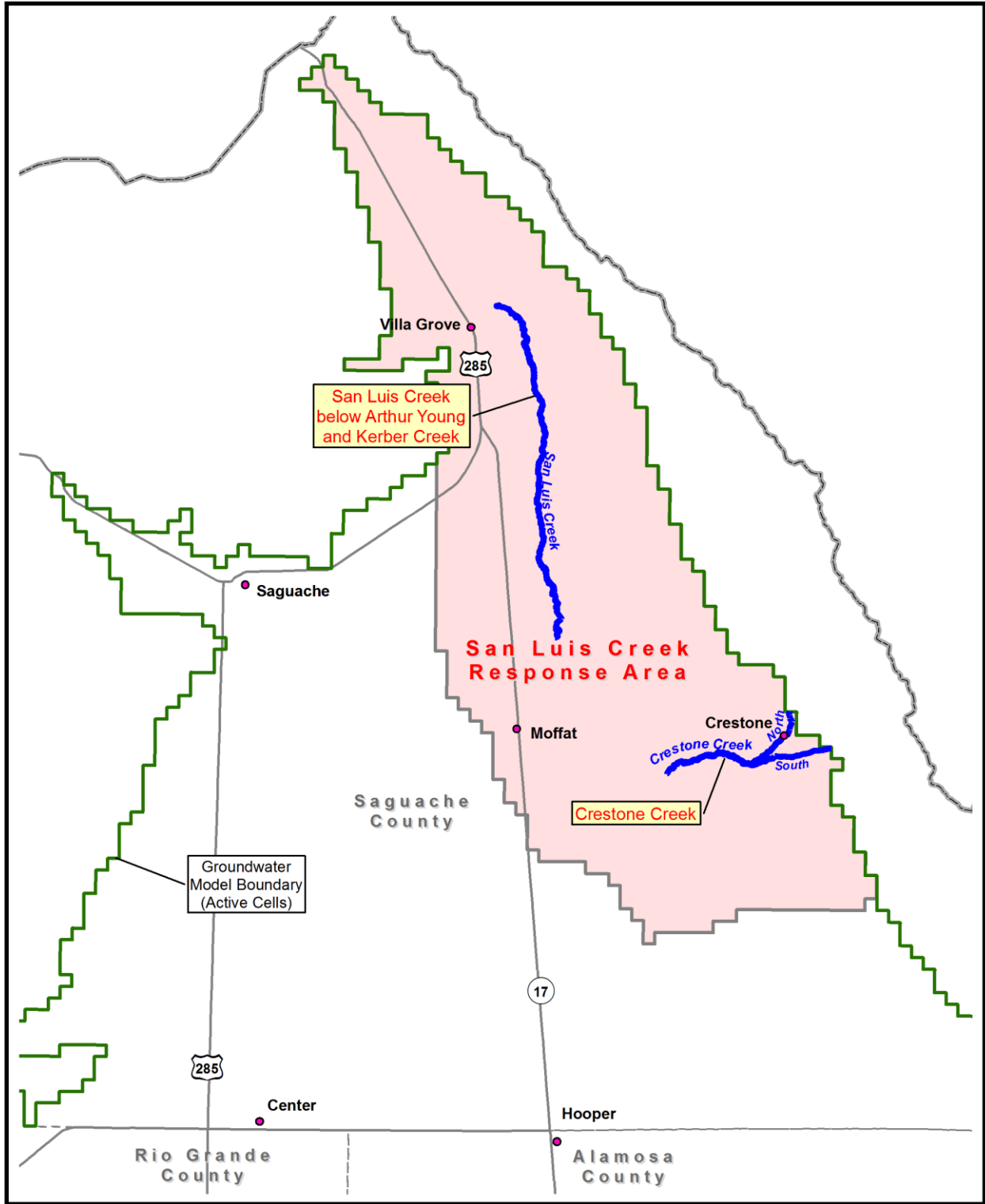


RESPONSE AREA SUMMARY PACKAGE

SAN LUIS CREEK RESPONSE AREA

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Figure 1	<i>San Luis Creek Response Area, Stream Reaches with Response Functions</i> - This figure shows the stream reaches for which Response Functions were calibrated. For the San Luis Creek Response Area there are two stream reaches with Response Functions: <ol style="list-style-type: none">1. San Luis Creek below the Arthur Young Ditch and Kerber Creek2. Crestone Creek
Table 1a	<i>Estimated Historical and Current Year Net Stream Depletions from Groundwater Withdrawals in the San Luis Creek Response Area (acre-feet)</i> - This table provides a summary of the San Luis Creek Response Area's groundwater withdrawal impacts to streams using Response Functions calibrated to the RGDSS Groundwater Model for the time frame of 2001 through 2015. For illustrative purposes, groundwater withdrawal was discontinued after 2015 and the Response Functions were applied to estimate post plan depletions. Net Groundwater Consumptive Use is defined as the groundwater consumed by the operations of one or more wells and represents the difference between groundwater withdrawals less any return flow to the hydrogeologic system.
Table 1b	<i>Estimated Post Plan Net Stream Depletions from Groundwater Withdrawals in the San Luis Creek Response Area (acre-feet)</i>
Figure 2	<i>2001-2015 Estimated Net Stream Depletions and Post 2015 Projected Net Stream Depletions from Groundwater Withdrawals in the San Luis Creek Response Area</i> - The stacked graph shows the combination of Table 1a (historical and current year depletions) and Table 1b (post-plan depletions) .
Table 2	<i>Monthly Net Stream Depletions for 2015 Plan Year in the San Luis Response Area (acre-feet)</i> - This table provides the monthly distribution of Net Stream Depletions for the 2015 Plan Year.




 **COLORADO** Division of Water Resources
Department of Natural Resources

Figure 1. San Luis Creek Response Area Stream Reaches with Response Functions

Table 1a: Estimated Historical and Current Year Net Stream Depletions from Groundwater Withdrawals in the San Luis Creek Response Area (acre-feet)						
Year	Saguache Creek near Saguache (Apr-Sep)	Net Groundwater Consumptive Use (Jan-Dec)	Net Stream Depletions (May – April)			
			San Luis Creek below Arthur Young and Kerber Creek	Crestone Creek	Total	
(1)	(2)	(3)	(4)	(5)	(6)	
2001	39,690	10,491	1,020	179	1,199	
2002	7,687	12,028	890	83	973	
2003	16,142	8,095	885	300	1,185	
2004	25,585	7,524	854	312	1,166	
2005	29,294	7,833	1,098	198	1,296	
2006	21,283	7,754	871	18	889	
2007	39,634	7,776	989	210	1,199	
2008	31,611	8,579	1,020	231	1,251	
2009	30,123	7,618	987	232	1,219	
2010	27,043	8,500	1,002	193	1,195	
2011	20,714	10,522	798	-9	789	
2012	15,263	10,347	804	35	839	
2013	19,641	9,367	797	225	1,022	
2014	35,933	10,588	1,021	237	1,258	
2015	35,933	10,588	979	280	1,259	
Average	26,372	9,174	934	182	1,116	

Table 1b: Estimated Post Plan Net Stream Depletions from Groundwater Withdrawals in the San Luis Creek Response Area (acre-feet)					
Year	Saguache Creek near Saguache (Apr-Sep)	Net Groundwater Consumptive Use (Jan-Dec)	Net Stream Depletions (May – April)		
			San Luis Creek below Arthur Young and Kerber Creek	Crestone Creek	Total
(1)	(2)	(3)	(4)	(5)	(6)
2016		0	891	341	1,232
2017		0	798	307	1,105
2018		0	708	272	980
2019		0	616	239	855
2020		0	506	201	707
2021		0	389	157	546
2022		0	279	115	394
2023		0	165	74	239
2024		0	46	30	76
2025		0	0	0	0
2026		0	0	0	0
2027		0	0	0	0
2028		0	0	0	0
2029		0	0	0	0
2030		0	0	0	0
2031		0	0	0	0
2032		0	0	0	0
2033		0	0	0	0
2034		0	0	0	0
2035		0	0	0	0
Post Plan Depletion		0	4,398	1,736	6,134

Notes for Tables 1a and 1b columns:

1. Year
2. Saguache Creek near Saguache Gage streamflow in acre-feet for the period of April through September. The 2015 streamflow data was estimated to be the same as in 2014.
3. Net Groundwater Consumptive Use (NetGWCU) for January through December.
 - a. NetGWCU values for 2001 through 2010 were taken from the RGDSS Groundwater Model output.
 - b. NetGWCU values for 2011 through 2014 were calculated using well meter data and irrigated acreage information.
 - c. NetGWCU data for 2015 was estimated to be the same as in 2014.
4. Net Stream Depletions in San Luis Creek below the Arthur Young Ditch and Kerber Creek for the plan year (May through April) in acre-feet.
5. Net Stream Depletions in Crestone Creek for the plan year (May through April) in acre-feet.
6. Total Net Stream Depletions columns (4+5) in acre-feet.

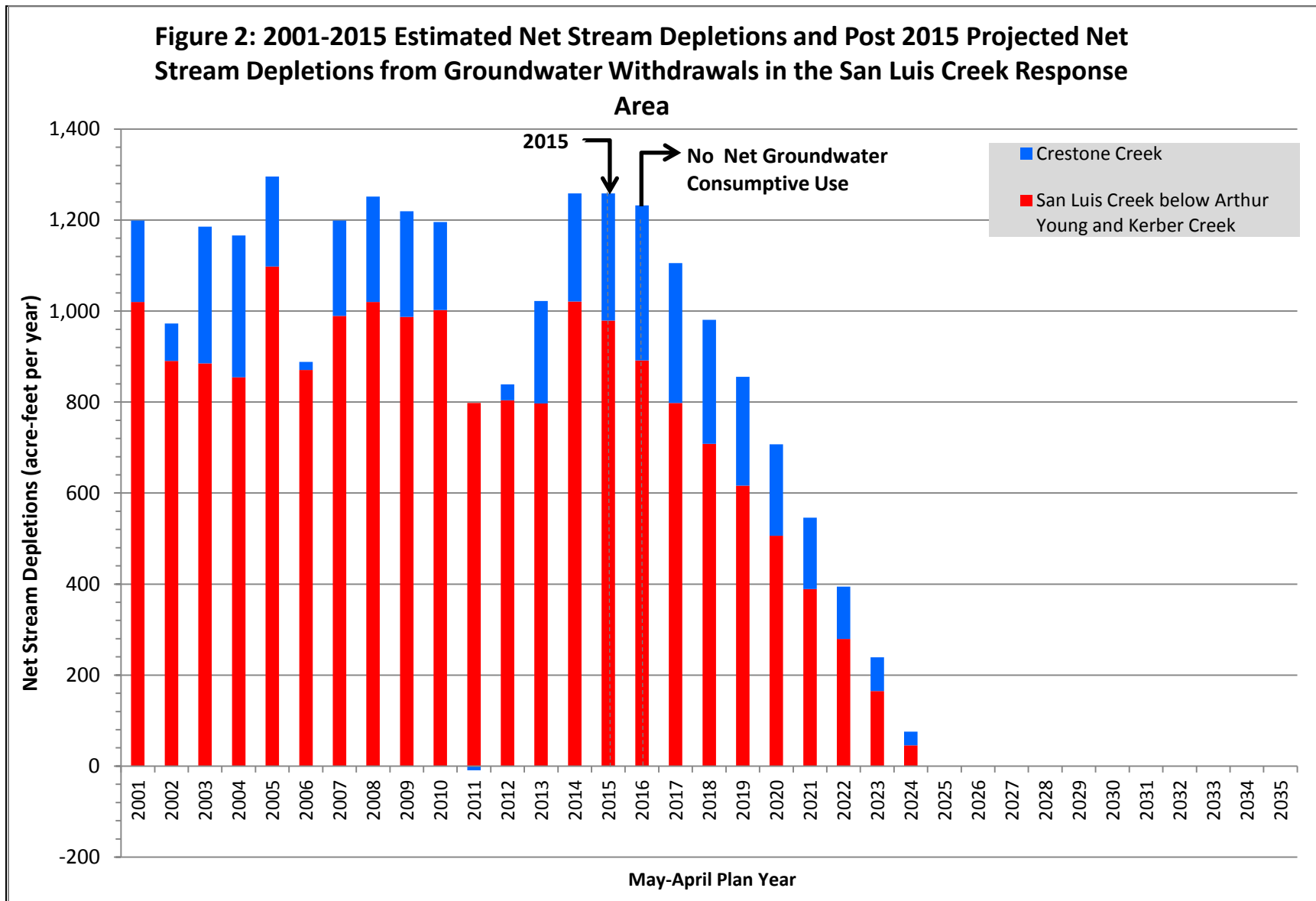


Table 2: Monthly Net Stream Depletions for 2015 Plan Year in the San Luis Creek Response Area (acre-feet)													
	2015								2016				
Stream Reach	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
San Luis Creek below Arthur Young and Kerber Creek	98	58	13	2	2	2	57	164	172	143	144	124	979
Crestone Creek	67	65	16	10	6	5	-11	8	36	37	32	9	280
Total	165	123	29	12	8	7	46	172	208	180	176	133	1,259

Notes for columns:

- 1 Stream reach
- 2-13 Monthly Net Stream Depletions in acre-feet
- 14 Total Plan Year Net Stream Depletions in acre-feet