



2018 Water Usage Report

The South Platte NRD has completed its twelfth year of allocations for the Lodgepole Creek Management Area and its tenth year of allocations for the District's tableland regions and the South Platte Valley subarea. This report details Industrial Water Usage and Municipal Water Usage.

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South Platte Natural Resources District Water Usage Report

Lodgepole Creek Management Area

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 42" (for 2016 - 2018)

Average Remaining Allocation: 26.57"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	9.81	10.81	8.49	29.11
High	27.77	31.86	26.11	
Median	9.16	10.37	7.84	
Total Acre-Feet Pumped	31,062.99	34,224.51	28,703.60	93,991.10
Total Acres-Inches Pumped	372,755.93	410,694.14	344,443.18	1,127,893.25
Total Acres-Inches Pumped ÷ By Total Acres	9.49	10.28	8.57	28.34
Total Number of Inactive Certified Irrigated Acres***	2,297.2	1,619.2	1,384.6	
Total Number of Active Certified Irrigated Acres	39,282.7	39,960.7	40,195.3	
Total Number of Certified Irrigated Acres	41,579.9	41,579.9	41,579.9	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	25%	21%	26%	0 - 12	22%
4.01 - 8	19%	16%	24%	12.01 - 24	19%
8.01 - 12	28%	25%	30%	24.01 - 36	31%
12.01 - 16	19%	25%	16%	36.01 - 48	22%
16.01 - 20	7%	9%	3%	48.01 - 60	5%
20+	2%	3%	1%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	10.5	10.8%	12.7	11.5%	9.0	12.0%
Beans	9.5	3.8%	10.4	8.9%	7.9	5.6%
Corn	11.7	45.5%	11.9	44.5%	9.8	47.9%
Fallow	0.0	0.8%	0.0	0.9%	0.0	0.3%
Hay	6.0	6.2%	8.0	6.7%	6.7	8.2%
Other Crop	5.2	0.2%	4.4	0.3%	4.5	0.2%
Pasture	7.1	5.3%	9.6	5.0%	8.7	5.4%
Potatoes	12.2	0.4%	15.3	0.2%	0.0	0.0%
Small Grains	4.3	18.4%	4.3	14.7%	3.1	13.2%
Sugar Beets	15.3	4.4%	13.1	6.3%	14.4	6.1%
Sunflowers	4.1	1.1%	7.2	0.6%	4.5	0.6%
All Crops	9.3	100%	10.2	100%	8.6	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Subarea: Pine Bluffs to Oliver Reservoir

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 42" (for 2016 - 2018)

Average Remaining Allocation: 20"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	11.17	13.15	10.47	34.80
High	19.32	22.44	18.32	
Median	10.51	13.00	10.24	
Total Acre-Feet Pumped	3,364.29	4,064.46	3,474.14	10,902.89
Total Acres-Inches Pumped	40,371.54	48,773.49	41,689.69	130,834.72
Total Acres-Inches Pumped ÷ By Total Acres	10.41	12.58	10.75	33.73
Total Number of Inactive Certified Irrigated Acres***	0.0	0.0	0.0	
Total Number of Active Certified Irrigated Acres	3,878.4	3,878.4	3,878.4	
Total Number of Certified Irrigated Acres	3,878.4	3,878.4	3,878.4	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	13%	10%	13%	0 - 12	10%
4.01 - 8	13%	16%	16%	12.01 - 24	13%
8.01 - 12	39%	13%	42%	24.01 - 36	35%
12.01 - 16	26%	39%	23%	36.01 - 48	29%
16.01 - 20	10%	13%	6%	48.01 - 60	13%
20+	0%	10%	0%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	11.5	20.9%	12.8	21.0%	10.9	14.0%
Beans	10.0	3.6%	13.6	4.6%	10.3	8.0%
Corn	10.3	20.2%	13.4	25.3%	11.2	32.8%
Hay	12.4	9.2%	9.5	8.6%	10.3	5.8%
Other	0.0	0.0%	0.0	0.0%	5.3	1.6%
Pasture	9.0	26.3%	13.1	29.2%	11.1	28.1%
Potatoes	12.2	3.7%	15.3	2.1%	0.0	0.0%
Small Grains	8.7	11.0%	7.2	5.3%	8.3	7.4%
Sugar Beets	13.7	3.4%	13.5	3.9%	13.0	2.3%
Sunflowers	10.9	1.7%	0.0	0.0%	0.0	0.0%
All Crops	10.4	100%	12.6	100%	10.7	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Subarea: Oliver Reservoir to Buffalo Bend

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 42" (for 2016 - 2018)

Average Remaining Allocation: 23.94"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	10.45	11.11	9.34	30.90
High	24.55	19.79	20.45	
Median	10.14	11.18	8.99	
Total Acre-Feet Pumped	12,823.46	13,704.59	12,217.19	38,745.24
Total Acres-Inches Pumped	153,881.54	164,455.13	146,606.30	464,942.97
Total Acres-Inches Pumped ÷ By Total Acres	10.46	11.14	9.85	31.45
Total Number of Inactive Certified Irrigated Acres***	608.2	545.1	432.5	
Total Number of Active Certified Irrigated Acres	14,704.7	14,767.9	14,880.4	
Total Number of Certified Irrigated Acres	15,312.9	15,313.0	15,312.9	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	24%	20%	23%	0 - 12	22%
4.01 - 8	13%	9%	18%	12.01 - 24	11%
8.01 - 12	34%	32%	34%	24.01 - 36	35%
12.01 - 16	18%	29%	20%	36.01 - 48	27%
16.01 - 20	10%	9%	4%	48.01 - 60	5%
20+	2%	0%	1%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	9.9	8.9%	12.4	10.4%	10.1	12.7%
Beans	9.6	5.1%	10.7	13.2%	7.6	6.9%
Corn	12.3	48.6%	12.5	43.5%	11.0	46.3%
Fallow	0.0	0.3%	0.0	0.3%	0.0	0.0%
Hay	6.1	3.4%	7.2	4.3%	4.1	2.0%
Other Crop	5.2	0.6%	6.0	0.6%	4.4	0.6%
Pasture	3.6	3.1%	4.2	2.3%	5.4	2.8%
Small Grains	4.5	14.9%	4.7	9.1%	3.2	12.1%
Sugar Beets	15.4	11.0%	13.7	14.4%	14.5	15.9%
Sunflowers	7.7	0.8%	7.1	0.8%	0.1	0.6%
All Crops	10.4	100%	11.1	100%	9.9	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Subarea: Buffalo Bend to Sidney

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 42" (for 2016 - 2018)

Average Remaining Allocation: 28.49"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	6.33	8.21	7.80	22.34
High	20.37	25.13	16.53	
Median	5.50	7.25	7.27	
Total Acre-Feet Pumped	4,840.75	6,333.72	6,238.10	17,412.57
Total Acres-Inches Pumped	58,088.97	76,004.67	74,857.22	208,950.86
Total Acres-Inches Pumped ÷ By Total Acres	6.47	7.98	7.91	22.36
Total Number of Inactive Certified Irrigated Acres***	810.7	195.8	326.3	
Total Number of Active Certified Irrigated Acres	8,974.2	9,589.1	9,458.6	
Total Number of Certified Irrigated Acres	9,784.9	9,784.9	9,784.9	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	41%	23%	23%	0 - 12	28%
4.01 - 8	36%	32%	33%	12.01 - 24	35%
8.01 - 12	12%	22%	26%	24.01 - 36	24%
12.01 - 16	10%	16%	16%	36.01 - 48	10%
16.01 - 20	0%	6%	1%	48.01 - 60	3%
20+	1%	1%	0%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	12.7	8.9%	15.1	9.6%	9.9	10.0%
Beans	5.6	3.3%	10.3	9.5%	8.1	5.1%
Corn	8.1	34.2%	8.6	38.2%	9.6	48.2%
Fallow	0.0	2.9%	0.0	0.7%	0.0	0.4%
Hay	7.0	3.5%	7.8	8.1%	8.8	12.9%
Pasture	6.7	3.6%	8.7	2.7%	7.4	2.3%
Small Grains	3.5	33.9%	4.0	27.5%	2.5	19.6%
Sugar Beets	0.0	0.0%	7.8	2.6%	0.0	0.0%
Sunflowers	1.2	2.9%	7.3	1.1%	7.0	1.6%
All Crops	6.0	100%	8.0	100%	7.9	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Subarea: Sidney to Colorado

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 48" (for 2016 - 2018)

Average Remaining Allocation: 30.02"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	10.38	11.14	7.16	28.68
High	27.77	31.86	26.11	
Median	10.03	10.39	6.29	
Total Acre-Feet Pumped	10,034.49	10,121.74	6,774.16	26,930.39
Total Acres-Inches Pumped	120,413.84	121,460.84	81,289.96	323,164.65
Total Acres-Inches Pumped ÷ By Total Acres	10.27	10.36	6.79	27.42
Total Number of Inactive Certified Irrigated Acres***	878.3	878.3	625.8	
Total Number of Active Certified Irrigated Acres	11,725.4	11,725.4	11,977.8	
Total Number of Certified Irrigated Acres	12,603.7	12,603.7	12,603.7	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	21%	24%	35%	0 - 12	22%
4.01 - 8	17%	15%	28%	12.01 - 24	21%
8.01 - 12	27%	22%	25%	24.01 - 36	30%
12.01 - 16	23%	22%	10%	36.01 - 48	21%
16.01 - 20	8%	11%	2%	48.01 - 60	5%
20+	3%	6%	1%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	9.1	11.6%	11.5	11.2%	6.4	12.0%
Beans	12.6	2.7%	8.1	4.5%	6.7	3.6%
Corn	12.9	59.4%	12.7	57.0%	8.4	54.6%
Fallow	0.0	0.0%	0.0	2.2%	0.0	0.6%
Hay	3.9	10.9%	8.1	7.8%	5.1	13.1%
Other Crop	0.0	0.0%	0.0	0.3%	8.8	0.0%
Pasture	6.7	2.3%	1.9	2.2%	6.7	3.6%
Small Grains	4.7	12.6%	4.1	14.5%	2.5	12.3%
All Crops	10.2	100%	10.1	100%	6.8	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

South Platte Valley

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 48" (for 2016 - 2018)

Average Remaining Allocation: 24.62"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	12.73	13.74	7.18	33.65
High	45.81	31.68	13.84	
Median	12.99	12.99	6.46	
Total Acre-Feet Pumped	10,981.06	10,811.28	5,633.02	27,425.36
Total Acres-Inches Pumped	131,772.71	129,735.36	67,596.22	329,104.29
Total Acres-Inches Pumped ÷ By Total Acres	13.65	13.43	6.89	33.97
Total Number of Inactive Certified Irrigated Acres***	292.9	292.9	133.0	
Total Number of Active Certified Irrigated Acres	9,656.9	9,656.8	9,816.7	
Total Number of Certified Irrigated Acres	9,949.8	9,949.7	9,949.7	

Range of Inches Used:

Scale	2016	2017	2018
0 - 4	15%	14%	22%
4.01 - 8	4%	4%	47%
8.01 - 12	16%	22%	26%
12.01 - 16	41%	38%	5%
16.01 - 20	17%	9%	0%
20+	7%	13%	0%

Scale	2016 - 2018
0 - 12	16%
12.01 - 24	4%
24.01 - 36	43%
36.01 - 48	28%
48.01 - 60	9%
60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	13.9	4.2%	10.7	4.6%	7.0	4.9%
Beans	11.7	9.5%	11.5	7.5%	6.9	8.0%
Corn	14.3	80.9%	13.9	80.8%	7.2	76.1%
Fallow	0.0	0.1%	0.0	0.0%	0.0	0.3%
Hay	5.7	3.1%	8.1	2.9%	4.7	3.7%
Pasture	2.4	0.3%	0.0	0.3%	20.6	0.7%
Small Grains	1.9	2.1%	0.0	1.2%	0.0	3.3%
Sugar Beets	0.0	0.0%	13.4	2.8%	6.6	3.1%
All Crops	13.5	100%	13.2	100%	6.9	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

SPNRD Tablelands

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 39" (for 2016 - 2018)

Average Remaining Allocation: 24.54"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	8.21	9.52	7.07	24.80
High	18.41	18.35	22.80	
Median	8.05	9.55	6.94	
Total Acre-Feet Pumped	51,528.72	59,585.86	43,890.72	155,005.3
Total Acres-Inches Pumped	618,344.62	715,030.28	526,688.65	1,860,063.55
Total Acres-Inches Pumped ÷ By Total Acres	7.85	9.09	6.67	23.61
Total Number of Inactive Certified Irrigated Acres***	1,763.0	1,763.0	1,529.2	
Total Number of Active Certified Irrigated Acres	78,749.4	78,749.3	78,983.1	
Total Number of Certified Irrigated Acres	80,512.4	80,512.3	80,512.3	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	19%	10%	26%	0 - 12	13%
4.01 - 8	29%	24%	34%	12.01 - 24	37%
8.01 - 12	34%	41%	30%	24.01 - 36	40%
12.01 - 16	16%	21%	9%	36.01 - 48	10%
16.01 - 20	2%	3%	0%	48.01 - 60	0%
20+	0%	0%	0%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	9.4	8.0%	10.9	7.8%	8.8	8.5%
Beans	7.8	10.6%	8.4	17.2%	5.8	11.5%
Corn	10.1	38.7%	10.4	42.7%	8.3	42.8%
Fallow	0.0	0.2%	0.0	0.9%	0.0	0.5%
Hay	7.1	4.2%	9.8	3.5%	6.0	6.2%
Other Crop	4.9	2.0%	5.4	0.8%	3.4	1.4%
Pasture	5.3	2.8%	6.8	2.4%	5.5	3.1%
Small Grains	4.1	26.6%	6.1	17.6%	3.5	22.0%
Sugar Beets	13.6	4.5%	11.2	5.3%	10.8	3.1%
Sunflowers	5.5	2.3%	5.8	1.3%	3.4	0.9%
All Crops	7.8	100%	9.0	100%	6.7	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Kimball County Tablelands

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 39" (for 2016 - 2018)

Average Remaining Allocation: 23.32"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	8.13	9.80	8.00	25.93
High	18.12	17.52	22.80	
Median	7.87	9.65	8.13	
Total Acre-Feet Pumped	16,645.09	19,075.77	15,856.71	51,577.57
Total Acres-Inches Pumped	199,741.12	228,909.28	190,280.56	618,930.96
Total Acres-Inches Pumped ÷ By Total Acres	7.86	9.00	7.43	24.29
Total Number of Inactive Certified Irrigated Acres***	276.3	276.3	77.9	
Total Number of Active Certified Irrigated Acres	25,423.8	25,423.8	25,622.2	
Total Number of Certified Irrigated Acres	25,700.1	25,700.1	25,700.1	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	19%	12%	23%	0 - 12	13%
4.01 - 8	31%	23%	26%	12.01 - 24	35%
8.01 - 12	33%	35%	39%	24.01 - 36	37%
12.01 - 16	14%	26%	11%	36.01 - 48	14%
16.01 - 20	3%	5%	1%	48.01 - 60	1%
20+	0%	0%	1%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	10.0	15.5%	10.9	15.4%	9.7	16.8%
Beans	9.1	5.3%	8.8	10.1%	6.5	6.1%
Corn	9.1	28.4%	10.4	31.3%	8.9	33.6%
Fallow	0.0	0.5%	0.0	1.9%	0.0	1.0%
Hay	5.7	6.9%	10.0	6.0%	6.8	9.4%
Other Crop	7.2	1.3%	3.9	0.5%	0.0	0.0%
Pasture	5.0	7.6%	6.4	6.6%	5.1	7.5%
Small Grains	4.9	21.8%	6.4	17.8%	3.8	19.1%
Sugar Beets	13.7	7.0%	10.3	6.8%	12.3	5.0%
Sunflowers	5.3	5.7%	5.0	3.1%	3.0	1.4%
All Crops	7.8	100%	8.9	100%	7.4	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Cheyenne County Tablelands

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 39" (for 2016 - 2018)

Average Remaining Allocation: 26.02"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	7.72	9.03	6.55	23.30
High	18.41	18.35	15.77	
Median	7.52	9.33	6.40	
Total Acre-Feet Pumped	27,045.21	32,168.79	22,759.83	81,973.83
Total Acres-Inches Pumped	324,542.48	386,025.12	273,117.95	983,685.55
Total Acres-Inches Pumped ÷ By Total Acres	7.39	8.79	6.22	22.40
Total Number of Inactive Certified Irrigated Acres***	993.0	993.0	993.0	
Total Number of Active Certified Irrigated Acres	43,896.3	43,896.3	43,896.3	
Total Number of Certified Irrigated Acres	44,889.3	44,889.3	44,889.3	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	22%	11%	29%	0 - 12	13%
4.01 - 8	31%	26%	37%	12.01 - 24	41%
8.01 - 12	33%	44%	27%	24.01 - 36	40%
12.01 - 16	13%	18%	7%	36.01 - 48	6%
16.01 - 20	1%	1%	0%	48.01 - 60	0%
20+	0%	0%	0%	60+	0%

Crop Water Usage**:

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	8.0	2.9%	10.8	3.4%	7.4	3.9%
Beans	7.7	15.5%	8.3	23.4%	5.7	16.8%
Corn	10.0	39.5%	10.2	43.0%	8.1	43.1%
Fallow	0.0	0.0%	0.0	0.6%	0.0	0.3%
Hay	7.8	2.6%	9.2	2.1%	6.8	3.2%
Other Crop	4.3	2.8%	5.7	1.2%	3.4	2.4%
Pasture	6.4	0.5%	9.8	0.5%	5.5	0.7%
Small Grains	3.8	32.1%	5.7	19.7%	3.3	26.9%
Sugar Beets	12.3	3.3%	11.6	5.0%	11.8	1.8%
Sunflowers	6.8	0.7%	8.7	0.4%	3.8	0.8%
All Crops	7.4	100%	8.8	100%	6.2	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

**South Platte Natural Resources District
Water Usage Report**

Deuel County Tablelands

Analysis Period: 2016 - 2018

Permitted 3-Year Allocation: 39" (for 2016 - 2018)

Average Remaining Allocation: 19.93"

	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	10.54	11.12	6.91	28.57
High	17.04	16.68	14.46	
Median	10.87	10.73	6.72	
Total Acre-Feet Pumped	7,838.42	8,341.32	5,274.18	21,453.92
Total Acres-Inches Pumped	94,061.02	100,095.89	63,290.15	257,447.06
Total Acres-Inches Pumped ÷ By Total Acres	9.98	10.62	6.69	27.29
Total Number of Inactive Certified Irrigated Acres***	493.7	493.7	458.3	
Total Number of Active Certified Irrigated Acres	9,429.2	9,429.2	9,464.6	
Total Number of Certified Irrigated Acres	9,922.9	9,922.9	9,922.9	

Range of Inches Used:

Scale	2016	2017	2018	Scale	2016 - 2018
0 - 4	7%	2%	23%	0 - 12	7%
4.01 - 8	14%	16%	39%	12.01 - 24	20%
8.01 - 12	39%	41%	23%	24.01 - 36	53%
12.01 - 16	34%	30%	16%	36.01 - 48	18%
16.01 - 20	7%	11%	0%	48.01 - 60	2%
20+	0%	0%	0%	60+	0%

Crop Water Usage:**

Crop	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	8.9	11.4%	11.2	7.5%	6.3	7.5%
Beans	5.4	2.1%	9.1	7.6%	2.7	1.6%
Corn	11.5	62.5%	10.8	71.8%	7.8	66.2%
Hay	11.3	4.6%	11.0	3.1%	3.4	11.4%
Pasture	10.5	0.5%	0.0	0.0%	8.9	2.5%
Small Grains	4.0	14.5%	8.8	7.5%	4.1	7.2%
Sugar Beets	18.5	3.3%	14.2	2.4%	2.8	3.6%
All Crops	10.1	100%	10.6	100%	6.7	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

South Platte Natural Resources District Water Usage Report

Districtwide Water Usage

Analysis Period: 2015 - 2018

	2015	2016	2017	2018	Total
Weighted Avg. Inches Pumped*	8.07	9.28	10.44	7.68	35.47
High	43.76	45.81	31.86	26.11	
Median	7.47	8.90	10.19	7.20	
Total Acre-Feet Pumped	78,420.20	93,572.77	104,621.65	78,227.34	354,841.96
Total Acres-Inches Pumped	941,042.37	1,122,873.27	1,255,459.78	938,728.05	4,258,103.47
Total Acres-Inches Pumped ÷ By Total Acres	7.36	8.79	9.78	7.28	33.21
Total Number of Inactive Certified Irrigated Acres***	4,585.2	4,353.0	3675.1	3,046.8	
Total Number of Active Certified Irrigated Acres	127,906.3	127,689.0	128,366.9	128,995.2	
Total Number of Certified Irrigated Acres	132,491.5	132,042	132,042	132,042	

Range of Inches Used:

Scale	2015	2016	2017	2018
0 - 4	29%	21%	14%	26%
4.01 - 8	26%	23%	19%	31%
8.01 - 12	27%	30%	33%	30%
12.01 - 16	13%	19%	25%	12%
16.01 - 20	3%	6%	7%	1%
20+	1%	2%	2%	0%

Crop Water Usage**:

Crop	2015 Avg. In.	2015 Percent of Acres	2016 Avg. In.	2016 Percent of Acres	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres
Alfalfa	7.6	8.7%	10.1	8.8%	11.8	8.7%	8.8	9.3%
Beans	7.1	9.1%	8.4	8.5%	8.9	14.1%	6.2	9.4%
Corn	10.6	37.7%	11.2	44.4%	11.3	46.4%	8.6	46.9%
Fallow	0.0	0.7%	0.0	0.4%	0	0.8%	0.0	0.4%
Hay	4.6	4.2%	6.5	4.8%	8.9	4.5%	6.2	6.6%
Other	5.7	0.3%	4.9	1.3%	5.0	0.6%	3.5	0.9%
Pasture	5.4	3.8%	6.3	3.3%	8.2	3.1%	7.2	3.6%
Potatoes	9.4	0.0%	12.2	0.1%	15.3	0.1%	0.0	0.0%
Small Grains	3.5	27.9%	4.2	22.5%	5.6	15.3%	3.3	17.8%
Sugar Beets	11.6	4.4%	13.9	4.3%	12.0	5.5%	12.3	4.0%
Sunflowers	5.0	3.0%	5.6	1.6%	6.0	1.0%	3.7	0.7%
All Crops	7.4	100%	8.8	100%	9.8	100%	7.3	100%

* Calculated by removing the high use tract and the tracts that did not use any water, then calculated the usage of all tracts individually and averaged those numbers.

** Crop Water Usage is based off of the number of acres per crop, which are based on field observations taken at the time flow meters are read. Crop Water Usage could be subject to change as more accurate crop-acre information becomes available.

***Inactive Certified Irrigated Acres are acres enrolled in Temporary Deferment or incentive programs that offer incentives to discontinue irrigation use on a temporary basis.

2018 SPNRD Active Industries with Baselines

Well Reg. #	Legal	Use	Baseline Gallons	Baseline Year	2018 Gallons*
G-157945 G-157946 G-031351	Sec. 5 T13N R50W Sec. 5 T13N R50W Sec. 5 T13N R50W	Livestock	299,315,624	2005-2006	91,258,877
G-091299	Sec. 30 T16N R55W	Sand & gravel mine	22,154,542	2001-2002	0
G-013034	Sec. 19 T15N R55W	Oil fields	88,605	2004-2005	0
G-051806 G-058832**	Sec. 32 T14N R55W Sec. 6 T13N R55W	Oil fields, roads, wind turbines	2,203,750	2003-2004	513,759
G-117269	Sec. 5 T14N R52W	Water well drilling	655,763	2002-2003	114,048
G-059572 G-119599	Sec. 15 T13N R51W Sec. 11 T14N R51W	Oil fields	2,333,334	2005-2006	900
G-041367***	Sec. 23 T15N R56W	Sand & gravel mine	5,650,134	2005-2006	Broken
G-058331 G-064838	Sec. 34 T15N R55W	Golf Course	189,569,845	2001-2002	77,571,109
A-003167A	Sec. 29 T15N R55W	Oil fields	6,348,605	2013	517,500
G-059901	Sec. 3 T13N R49W	Sand & gravel mine	41,925,776	2014	250,363
G-116176	Sec. 32 T14N R49W	Ponds & landscape/turf	55,000,000	2014	0
G-131190 G-083186	Sec. 14 T13N R45W	Livestock	26,952,200	2013-2014	15,489,700
G-123698	Sec. 4 T12N R45W	Livestock	3,940,100	2012-2013	700,900
G-077801	Sec. 29 T14N R55W	Hazardous Waste Incinerator	35,227,000	2009-2010	37,402,000
G-003169	Sec. 22 T13N R45W	Coop	884,822	2012-2013	1,161,362
G-002327	Sec. 2 T12N R42W	Aerial Spraying	581,102	2010-2011	709,500
G-164175	Sec. 18 T12N R43W	Golf Course	9,437,798	2014	8,865,800
G-054015	Sec. 6 T15N R57W	Oil Fields	1,613,291		918,439
G-101853	Sec. 23 T16N R50W	Coop	968,600		646,200

* 2018 Gallons are calculated from the industrial water year of August 1, 2017 through July 31, 2018.

** These wells are in the fully appropriated area of the District and are over their five year baseline; the SPNRD has worked through the Platte Basin Coalition to secure an offset by retiring irrigated acres.

*** Well G-041367 received a variance to establish a partial baseline because pumping did not occur during all five baseline years. If the baseline amount of 5,650,134 gallons is exceeded, all offsets will be automatically deducted from certified irrigated tract #15N56W230005. See 2/5 variance request in the 2010 report.

SPNRD Non-Baseline Industrial Certifications 2018

Well Reg. #	Legal	Industrial Use	Offset Provided By
G-021823	Sec. 12 T16N R57W	Oil Fields	To Be Determined (TBD)
G-022051	Sec. 24 T13N R56W	Oil Fields	TBD
G-014546	Sec. 34 T14N R53W	Oil Fields	TBD
G-022281	Sec. 11 T14N R53W	Oil Fields	TBD
G-134511	Sec. 22 T17N R52W	Oil Fields	TBD
A-002770	Sec. 28 T15N R54W	Oil Fields	TBD
G-022347	Sec. 23 T13N R57W	Oil Fields	TBD
G-022048	Sec. 34 T17N R51W	Oil Fields	TBD
G-023351	Sec. 27 T14N R50W	Oil Fields	TBD
A-004712	Sec. 11 T14N R59W	Oil Fields	irrigation allocation on tract 14N59W110001
G-022050 G-022049	Sec. 19 T14N R55W Sec. 19 T14N R55W	Oil Fields	TBD
A-004408	Sec. 28 T15N R55W	Sand & Gravel Mine	irrigation allocation on tract 15N55W280004
G-054269	Sec. 12 T13N R56W	TBD	irrigation allocation on tract 13N56W120001
G-019421 G-019973 G-019423	Sec. 21 T14N R55W Sec. 21 T14N R55W Sec. 21 T14N R55 W	Oil Fields	TBD
G-039899	Sec. 5 T15N R52W	Oil Fields	TBD
G-021179 G-021621	Sec. 23 T17N R52W Sec. 23 T17N R52W	Oil Fields	TBD
G-146042	Sec. 13 T15N R56W	Sand & Gravel Mine	irrigation allocation on tract 15N56W230005
G-030434 G-026066	Sec. 2 T12N R55W Sec. 2 T12N R55W	Oil Fields	TBD
G-041796	Sec. 13 T14N R51W	Sand & Gravel Mine	Irrigation allocation on tract 14N51W130001
G-003090	Sec. 5 T14N R52W	Interstate Construction	Irrigation allocation on tract 14N52W050002
G-094357B	Sec. 15 T12N R49W	Wind turbines & Roads	Irrigation allocation on tract 12N49W150001
G-108153	Sec. 11 T14N R58W	Interstate Construction	Irrigation allocation on tract 14N58W110001
G-109142	Sec. 24 T15N R57W	Sand & Gravel Mine	Irrigation allocation on tract 15N57W240001
G-067208	Sec. 7 T15N R54W	TBD	Irrigation allocation on tract 15N54W070001
G-048485	Sec. 33 T15N R53W	Sand & Gravel Mine	Irrigation allocation on tract 15N53W330001

SPNRD Municipal Baselines and 2018 Usage

Municipality	DNR Transfer Permit Gallons	Baseline Gallons	Baseline Year	Baseline Per Capita Use* gallons/ person/ day	2018 Gallons**	2018 Per Capita Use*** gallons/ person/day
Big Springs	164,574,899	154,986,748	2002-2003	1,016	44,376,000	304
Bushnell	N/A	13,092,375	2001-2002	221	6,718,757	148
Chappell	N/A	116,968,411	2001-2002	326	117,063,700	345
Dalton	N/A	70,382,300	2001-2002	580	20,720,200	180
Dix	N/A	72,023,100	2001-2002	739	23,492,650	252
Gurley	N/A	46,085,050	2001-2002	554	22,174,680	284
Kimball	N/A	243,050,000	2001-2002	260	99,012,000	109
Lodgepole	N/A	53,443,494	2001-2002	421	25,103,000	216
Potter	N/A	135,421,817	2001-2002	951	70,441,299	573
Sidney	1,300,000,000	633,042,003	2001-2002	276	477,159,000	194

* Based on 2000 census population numbers

** Based on August 1, 2016 through July 31, 2017 water year

*** Based on the 2010 census population numbers

SPNRD Water Acquisitions and Water Banking Activities Through 2018

Landowner	Decertified Acres	Stream Depletion (%)	Acre Feet Accrued	Township	Range	Section	Date Retired	County	Subarea	Appropriation
Terrell Wiekhorst	43.1	18	4.6	14	52	5	9/6/2007	Cheyenne	ORBB	OA
Cliff Farms Inc.	50	32	12.2	14	52	3	9/17/2007	Cheyenne	ORBB	OA
Robert & Connie Runge	75.2	7	2.7	13	51	10	9/27/2007	Cheyenne	SIDCO	OA
Marleen E. Evans Et al	237.8	57	118.9	13	50	4	10/22/2007	Cheyenne	SIDCO	OA
Marleen E. Evans Et al	23.8	71	26.7	14	50	33	10/22/2007	Cheyenne	BBSID	OA
Fornstrom Farms LLC	109.9	23	14.1	14	59	12	11/1/2007	Kimball	PBOR	OA
Dale Dedic	29.8	25	6.2	14	52	4	12/4/2007	Cheyenne	ORBB	OA
Elizabeth Burback	18.3	25	3.8	15	55	20	12/5/2007	Kimball	ORBB	OA
Peetz Land & Cattle Co	22.9	31	4.7	14	49	35	3/14/2008	Cheyenne	SIDCO	OA
B5 Farms LLC	10.1	78	4.9	12	45	13	4/9/2008	Deuel	SIDCO	OA
Paul & Frances Fornander	13.3	72	14.5	13	45	22	7/1/2008	Deuel	SIDCO	OA
Harvey Jung	8.7	7	1	14	53	2	7/10/2008	Cheyenne	ORBB	OA
Robert Kurz	271.5	57	88.3	13	50	4	10/23/2008	Cheyenne	SIDCO	OA
Venture Development Group Inc.	66	66	32.4	14	49	32	7/14/2009	Cheyenne	BBSID	OA
Alan Adamson	62.6	70	63	15	57	31	9/22/2009	Kimball	PBOR	OA
Sharon A, James C. & Donna Johnson	5.6	10	0.44	15	53	34	7/1/2010	Kimball	ORBB	OA
Raymond Kuehn	83.2	73.5	49.2	14	51	12	7/1/2010	Cheyenne	BBSID	OA
Raymond Kuehn	42.3	68	23.1	14	51	13	7/1/2010	Cheyenne	BBSID	OA
Scott & Susan Lockwood	43.9	92.5	32	15	57	36	9/1/2010	Kimball	PBOR	OA
Don & Janelle Frerichs	59.6	75	30.8	14	48	27	9/22/2011	Cheyenne	SIDCO	OA
Barton Terman	99	10	14.5	14	52	34	12/28/2011	Cheyenne	BBSID	OA
The Ranch at Sidney LLC	35.1	74	28.5	14	49	33	4/8/2014	Cheyenne	SIDCO	OA

City of Chappell	37.5	45.7	36.6	13	45	23	1/1/2015	Deuel	SIDCO	OA
City of Sidney	87.4	53	92.6	14	49	33	5/12/2015	Cheyenne	SIDCO	OA
Castronics	114.4	28.4	8.7	15	55	27	12/9/2015	Kimball	ORBB	OA
SRMC	21	57	9	14	49	33	4/8/2016	Cheyenne	SIDCO	OA
The Ranch at Sidney LLC	28.2	66	15	14	49	32	5/11/2016	Cheyenne	BBSID	OA
JR Norberg Farms	302.8	8	25	14	56	19	12/14/2016	Cheyenne	FA-K	Tablelands

Total Acre Feet Accrued = 763

Total Number of Acres Decertified = 2,003

Average Stream Depletion = 46%

Average \$/AF Accrued (Federal dollars plus SPNRD dollars): \$2,301

Average \$/Acre Retired (Federal dollars plus SPNRD dollars): \$456

2018 Precipitation Summary (March 1 through October 31)

Monthly Averages for 2018

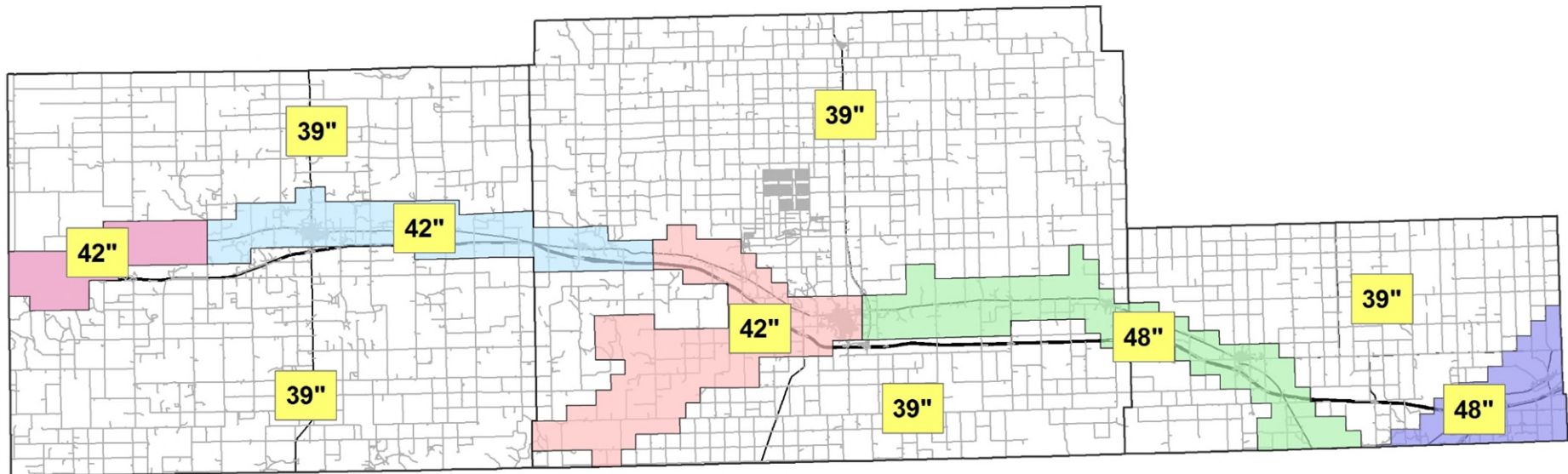
	March	April	May	June	July	August	September	October
Kimball	1.04	1.22	6.24	1.4	2.58	1.39	.67	1.01
Cheyenne	.51	2.67	6.26	3.19	3.09	1.26	1.08	1.31
Deuel	.46	2.29	5.69	3.36	4.61	1.37	1.58	1.51

Comparison of 2015, 2016, 2017, and 2018 to Historical Averages








County	2015 Precip Ave.	2016 Precip Ave.	2017 Precip Ave.	2018 Precip Ave.	Historical Ave.
Kimball	25.09	17.46	16.99	17.20	16.22
Cheyenne	24.71	16.48	17.50	22.04	17.68
Deuel	20.00	17.15	17.53	23.52	17.79

South Platte Natural Resources District

Allocation Subareas & Allocations (Acre-inches) for the
2016 through 2018 Allocation Period



Legend

- | | | |
|--|---|--|
|  A - Wyoming State Line to Oliver Reservoir (RD 27) |  D - Sidney to Colorado State Line |  Start 2016 |
|  B - Oliver Reservoir to Buffalo Bend (RD 87) |  E - South Platte Valley | |
|  C - Buffalo Bend to Sidney (RD 115) |  F - Tablelands | |