



2020 Water Usage Report

The South Platte NRD has completed its fourteenth year of allocations for the Lodgepole Creek Management Area and its twelfth 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.

Compiled By: Travis Glanz, Tyler Sanders, and Ryan Reisdorff
3/18/2021

Table of Contents

Summary Report for Lodgepole Creek Management Area.....	3
Pine Bluffs to Oliver Reservoir Subarea.....	4
Oliver Reservoir to Buffalo Bend Subarea	5
Buffalo Bend to Sidney Subarea.....	6
Sidney to Colorado Subarea	7
South Platte Valley Subarea	8
Summary Report for Tablelands	9
Kimball County Tablelands	10
Cheyenne County Tablelands	11
Deuel County Tablelands.....	12
Districtwide Water Usage for 2017, 2018, 2019 and 2020.....	13
Industrial Report.....	14
Municipal Report	16
SPNRD Water Acquisitions and Water Banking Activities through 2020	17
2020 Precipitation Summary	19
Allocation Map for SPNRD for 2019 through 2021.....	20

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

Lodgepole Creek Management Area

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 42" (for 2019 - 2021)

Average Remaining Allocation: 35.63"

	2019	2020	Total
Weighted Avg. Inches Pumped*	7.00	13.04	20.04
High	51.15	35.73	
Median	5.95	12.43	
Total Acre-Feet Pumped	22,991.01	41,433.53	64,424.54
Total Acres-Inches Pumped	275,892.07	497,202.42	773,094.49
Total Acres-Inches Pumped ÷ By Total Acres	6.89	12.39	19.28
Total Number of Inactive Certified Irrigated Acres***	1,538.8	1,172.9	
Total Number of Active Certified Irrigated Acres	40,041.1	40,166.9	
Total Number of Certified Irrigated Acres	41,580.0	41,339.8	

Range of Inches Used:

Scale	2019	2020
0 - 4	35%	17%
4.01 - 8	30%	11%
8.01 - 12	27%	21%
12.01 - 16	7%	23%
16.01 - 20	1%	19%
20+	1%	9%

Scale	2019 - 2020
0 - 8	21%
8.01 - 16	21%
16.01 - 24	31%
24.01 - 32	21%
32.01 - 40	5%
40+	1%

Crop Water Usage:**

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	6.5	12.2%	14.9	13.6%
Beans	6.4	4.6%	12.4	8.1%
Corn	8.6	46.7%	13.9	46.4%
Fallow	0.0	0.7%	0.0	1.0%
Hay	5.2	9.0%	8.0	11.2%
Pasture	7.0	4.9%	11.1	5.0%
Small Grains	2.6	16.3%	4.4	8.5%
Sugar Beets	11.2	4.6%	18.1	5.2%
Sunflowers	3.6	0.9%	14.0	0.9%
All Crops	6.9	100%	12.4	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**

Subarea: Pine Bluffs to Oliver Reservoir

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 42" (for 2019 - 2021)

Average Remaining Allocation: 29.58"

	2019	2020	Total
Weighted Avg. Inches Pumped*	8.66	14.49	23.15
High	14.79	23.69	
Median	8.43	15.91	
Total Acre-Feet Pumped	2,757.95	4,505.46	7,263.41
Total Acres-Inches Pumped	33,095.28	54,065.48	87,160.76
Total Acres-Inches Pumped ÷ By Total Acres	8.53	14.35	22.88
Total Number of Inactive Certified Irrigated Acres***	0.0	0.0	
Total Number of Active Certified Irrigated Acres	3,878.4	3,768.8	
Total Number of Certified Irrigated Acres	3,878.4	3,768.8	

Range of Inches Used:

Scale	2019	2020
0 - 4	16%	13%
4.01 - 8	26%	3%
8.01 - 12	39%	10%
12.01 - 16	19%	23%
16.01 - 20	0%	37%
20+	0%	13%

Scale	2019 - 2020
0 - 8	10%
8.01 - 16	13%
16.01 - 24	27%
24.01 - 32	33%
32.01 - 40	17%
40+	0%

Crop Water Usage:**

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	7.7	15.5%	16.7	12.9%
Beans	0.0	0.0%	13.5	1.4%
Corn	9.2	38.5%	15.7	31.9%
Hay	7.8	2.3%	10.6	16.7%
Pasture	9.8	26.5%	14.0	25.8%
Small Grains	5.2	16.0%	4.9	4.6%
Sugar Beets	13.3	1.3%	20.7	6.6%
All Crops	8.5	100%	14.3	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.

South Platte Natural Resources District Water Usage Report

Subarea: Oliver Reservoir to Buffalo Bend

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 42" (for 2019 - 2021)

Average Remaining Allocation: 31.35"

	2019	2020	Total
Weighted Avg. Inches Pumped*	7.87	13.93	21.82
High	51.15	33.17	
Median	7.75	13.03	
Total Acre-Feet Pumped	10,251.83	16,998.16	27,249.99
Total Acres-Inches Pumped	123,021.91	203,977.97	326,999.88
Total Acres-Inches Pumped ÷ By Total Acres	8.27	13.58	21.77
Total Number of Inactive Certified Irrigated Acres***	432.5	291.8	
Total Number of Active Certified Irrigated Acres	14,880.5	15,021.2	
Total Number of Certified Irrigated Acres	15,313.0	15,313.0	

Range of Inches Used:

Scale	2019	2020
0 - 4	25%	11%
4.01 - 8	27%	6%
8.01 - 12	39%	26%
12.01 - 16	6%	28%
16.01 - 20	2%	21%
20+	1%	8%

Scale	2019 - 2020
0 - 8	15%
8.01 - 16	13%
16.01 - 24	36%
24.01 - 32	31%
32.01 - 40	4%
40+	1%

Crop Water Usage**:

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	6.8	13.3%	15.9	18.5%
Beans	7.3	5.9%	12.2	12.8%
Corn	9.7	49.1%	14.3	41.1%
Fallow	0.0	0.7%	0.0	0.2%
Hay	5.3	5.8%	6.5	9.0%
Pasture	4.0	1.7%	7.7	1.7%
Small Grains	3.2	10.9%	8.4	4.2%
Sugar Beets	11.2	11.9%	17.5	10.6%
Sunflowers	9.1	0.8%	15.1	1.8%
All Crops	8.2	100%	13.6	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: Buffalo Bend to Sidney

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 42" (for 2019 - 2021)

Average Remaining Allocation: 39.15"

	2019	2020	Total
Weighted Avg. Inches Pumped*	5.03	8.19	13.22
High	12.06	19.73	
Median	4.36	7.08	
Total Acre-Feet Pumped	3,869.56	6,435.72	10,305.27
Total Acres-Inches Pumped	46,434.67	77,228.58	123,663.25
Total Acres-Inches Pumped ÷ By Total Acres	4.99	8.30	13.29
Total Number of Inactive Certified Irrigated Acres***	480.5	350.0	
Total Number of Active Certified Irrigated Acres	9,304.4	9,304.4	
Total Number of Certified Irrigated Acres	9,784.9	9,654.4	

Range of Inches Used:

Scale	2019	2020
0 - 4	41%	22%
4.01 - 8	44%	35%
8.01 - 12	13%	24%
12.01 - 16	1%	13%
16.01 - 20	0%	6%
20+	0%	0%

Scale	2019 - 2020
0 - 8	29%
8.01 - 16	43%
16.01 - 24	23%
24.01 - 32	6%
32.01 - 40	0%
40+	0%

Crop Water Usage:**

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	4.8	9.6%	10.5	8.4%
Beans	6.3	6.3%	7.9	5.3%
Corn	6.9	34.8%	9.7	43.7%
Fallow	0.0	0.3%	0.0	0.0%
Hay	5.6	17.9%	9.0	13.8%
Pasture	3.5	2.8%	6.0	2.8%
Small Grains	2.3	25.7%	3.3	22.2%
Sugar Beets	0.0	0.0%	18.9	2.6%
Sunflowers	0.8	2.5%	11.2	1.2%
All Crops	5.0	100%	8.3	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.

South Platte Natural Resources District Water Usage Report

Subarea: Sidney to Colorado

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 48" (for 2019 - 2021)

Average Remaining Allocation: 39.78"

	2019	2020	Total
Weighted Avg. Inches Pumped*	6.32	14.19	20.51
High	29.41	35.73	
Median	4.46	13.36	
Total Acre-Feet Pumped	6,111.68	13,494.20	19,605.88
Total Acres-Inches Pumped	73,340.12	161,930.39	235,270.51
Total Acres-Inches Pumped ÷ By Total Acres	6.12	13.47	19.59
Total Number of Inactive Certified Irrigated Acres***	625.8	531.1	
Total Number of Active Certified Irrigated Acres	11,977.9	12,072.5	
Total Number of Certified Irrigated Acres	12,603.7	12,603.6	

Range of Inches Used:

Scale	2019	2020
0 - 4	46%	22%
4.01 - 8	26%	5%
8.01 - 12	18%	16%
12.01 - 16	7%	24%
16.01 - 20	1%	20%
20+	2%	13%

Scale	2019 - 2020
0 - 8	26%
8.01 - 16	19%
16.01 - 24	30%
24.01 - 32	16%
32.01 - 40	6%
40+	2%

Crop Water Usage**:

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	6.4	12.0%	14.9	11.5%
Beans	4.3	3.2%	15.7	6.7%
Corn	8.1	55.2%	15.7	59.5%
Fallow	0.0	1.4%	0.0	3.3%
Hay	4.4	8.1%	7.4	10.2%
Pasture	2.5	2.9%	9.9	4.2%
Small Grains	1.6	17.2%	4.0	4.6%
All Crops	6.1	100%	13.5	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: South Platte Valley

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 48" (for 2019 - 2021)

Average Remaining Allocation: 36.56"

	2019	2020	Total
Weighted Avg. Inches Pumped*	7.22	15.33	22.55
High	18.49	28.28	
Median	6.93	15.96	
Total Acre-Feet Pumped	6,014.64	12,581.97	18,596.61
Total Acres-Inches Pumped	72,175.70	150,983.64	223,159.34
Total Acres-Inches Pumped ÷ By Total Acres	7.35	15.38	22.73
Total Number of Inactive Certified Irrigated Acres***	133.0	133.0	
Total Number of Active Certified Irrigated Acres	9,816.8	9,816.8	
Total Number of Certified Irrigated Acres	9,949.8	9,949.8	

Range of Inches Used:

Scale	2019	2020
0 - 4	22%	16%
4.01 - 8	46%	3%
8.01 - 12	22%	7%
12.01 - 16	7%	25%
16.01 - 20	3%	33%
20+	0%	17%

Scale	2019 - 2020
0 - 8	16%
8.01 - 16	8%
16.01 - 24	30%
24.01 - 32	37%
32.01 - 40	8%
40+	1%

Crop Water Usage**:

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	8.2	4.0%	12.6	3.2%
Beans	5.7	2.7%	15.2	3.7%
Corn	7.7	86.0%	16.4	85.6%
Fallow	0.0	0.5%	0.0	0.0%
Hay	3.6	5.9%	2.0	4.2%
Pasture	0.0	0.1%	14.8	0.7%
Small Grains	0.0	0.5%	0.0	0.0%
Sugar Beets	0.0	0.0%	13.5	1.2%
Sunflowers	16.5	0.3%	0.0	0.0%
All Crops	7.4	100%	15.4	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

SPNRD Tablelands

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 39" (for 2019 - 2021)

Average Remaining Allocation: 32.58"

	2019	2020	Total
Weighted Avg. Inches Pumped*	5.76	11.12	16.88
High	20.39	31.37	
Median	5.46	10.96	
Total Acre-Feet Pumped	35,367.19	68,656.14	104,023.33
Total Acres-Inches Pumped	424,406.32	823,873.68	1,248,280
Total Acres-Inches Pumped ÷ By Total Acres	5.37	10.46	15.84
Total Number of Inactive Certified Irrigated Acres***	1,529.2	1,785.2	
Total Number of Active Certified Irrigated Acres	78,983.2	78,743.2	
Total Number of Certified Irrigated Acres	80,512.4	80,528.3	

Range of Inches Used:

Scale	2019	2020
0 - 4	35%	8%
4.01 - 8	44%	16%
8.01 - 12	18%	34%
12.01 - 16	3%	29%
16.01 - 20	0%	10%
20+	0%	3%

Scale	2019 - 2020
0 - 8	11%
8.01 - 16	38%
16.01 - 24	37%
24.01 - 32	11%
32.01 - 40	2%
40+	0%

Crop Water Usage**:

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	7.0	8.7%	13.1	8.6%
Beans	4.8	11.7%	10.2	14.5%
Corn	6.7	45.5%	11.8	44.1%
Fallow	0.0	0.9%	0.0	0.9%
Hay	4.8	5.2%	9.4	6.7%
Other Crop	2.0	1.1%	2.4	0.6%
Pasture	4.7	2.2%	10.7	2.1%
Small Grains	2.2	19.6%	6.4	16.0%
Sugar Beets	8.8	3.9%	14.8	3.5%
Sunflowers	2.1	1.0%	7.2	2.4%
All Crops	5.4	100%	10.5	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: 2019 - 2020

Permitted 3-Year Allocation: 39" (for 2019 - 2021)

Average Remaining Allocation: 32.17"

	2019	2020	Total
Weighted Avg. Inches Pumped*	5.94	11.35	17.29
High	16.04	25.37	
Median	5.65	11.62	
Total Acre-Feet Pumped	11,894.23	21,909.86	33,804.09
Total Acres-Inches Pumped	142,730.73	262,918.32	405,649.05
Total Acres-Inches Pumped ÷ By Total Acres	5.57	10.36	15.93
Total Number of Inactive Certified Irrigated Acres***	77.9	333.9	
Total Number of Active Certified Irrigated Acres	25,622.3	25,366.2	
Total Number of Certified Irrigated Acres	25,700.2	25,700.1	

Range of Inches Used:

Scale	2019	2020
0 - 4	28%	11%
4.01 - 8	49%	15%
8.01 - 12	21%	28%
12.01 - 16	1%	35%
16.01 - 20	1%	6%
20+	0%	5%

Scale	2019 - 2020
0 - 8	14%
8.01 - 16	29%
16.01 - 24	46%
24.01 - 32	11%
32.01 - 40	0%
40+	1%

Crop Water Usage**:

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	6.7	15.7%	12.3	14.4%
Beans	5.2	8.6%	11.8	6.3%
Corn	7.4	32.0%	11.9	34.3%
Fallow	0.0	1.7%	0.0	2.8%
Hay	5.6	8.1%	9.1	12.0%
Other Crop	3.5	0.5%	1.3	1.5%
Pasture	4.4	6.0%	10.1	5.3%
Small Grains	2.5	19.8%	8.1	15.6%
Sugar Beets	8.9	4.8%	13.1	5.4%
Sunflowers	2.0	2.8%	6.3	2.4%
All Crops	5.6	100%	10.4	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: 2019 - 2020

Permitted 3-Year Allocation: 39" (for 2019 - 2021)

Average Remaining Allocation: 33.28"

	2019	2020	Total
Weighted Avg. Inches Pumped*	5.36	10.57	15.93
High	20.39	31.37	
Median	5.19	10.23	
Total Acre-Feet Pumped	18,254.56	37,001.25	55,255.81
Total Acres-Inches Pumped	219,054.72	444,014.96	663,069.68
Total Acres-Inches Pumped ÷ By Total Acres	4.99	10.11	15.1
Total Number of Inactive Certified Irrigated Acres***	993.0	993.0	
Total Number of Active Certified Irrigated Acres	43,896.3	43,912.4	
Total Number of Certified Irrigated Acres	44,889.3	44,905.4	

Range of Inches Used:

Scale	2019	2020
0 - 4	40%	8%
4.01 - 8	43%	18%
8.01 - 12	16%	38%
12.01 - 16	1%	24%
16.01 - 20	0%	10%
20+	0%	2%

Scale	2019 - 2020
0 - 8	11%
8.01 - 16	44%
16.01 - 24	33%
24.01 - 32	10%
32.01 - 40	2%
40+	0%

Crop Water Usage:**

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	8.2	4.6%	14.8	5.5%
Beans	4.7	15.6%	9.9	22.3%
Corn	6.1	46.5%	11.6	42.2%
Hay	3.8	3.4%	9.0	3.5%
Other Crop	1.2	1.7%	5.7	0.3%
Pasture	7.0	0.5%	13.0	0.6%
Small Grains	2.0	23.3%	5.6	19.7%
Sugar Beets	8.8	4.3%	16.6	2.6%
Sunflowers	4.0	0.2%	7.5	2.7%
All Crops	5.0	100%	10.1	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**

Deuel County Tablelands

Analysis Period: 2019 - 2020

Permitted 3-Year Allocation: 39" (for 2019 - 2021)

Average Remaining Allocation: 29.9"

	2019	2020	Total
Weighted Avg. Inches Pumped*	7.07	13.05	20.11
High	13.99	19.98	
Median	6.68	13.31	
Total Acre-Feet Pumped	5,218.06	9,745.03	14,963.09
Total Acres-Inches Pumped	62,620.88	116,940.40	179,561.28
Total Acres-Inches Pumped ÷ By Total Acres	6.62	12.36	18.98
Total Number of Inactive Certified Irrigated Acres***	458.3	458.3	
Total Number of Active Certified Irrigated Acres	9,464.6	9,464.6	
Total Number of Certified Irrigated Acres	9,922.9	9,922.9	

Range of Inches Used:

Scale	2019	2020
0 - 4	25%	2%
4.01 - 8	34%	9%
8.01 - 12	25%	25%
12.01 - 16	16%	41%
16.01 - 20	0%	23%
20+	0%	0%

Scale	2019 - 2020
0 - 8	4%
8.01 - 16	33%
16.01 - 24	31%
24.01 - 32	24%
32.01 - 40	7%
40+	0%

Crop Water Usage:**

Crop	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	5.8	9.2%	11.3	7.1%
Beans	3.9	1.7%	10.0	0.5%
Corn	7.3	77.3%	12.4	79.6%
Fallow	0.0	2.9%	0.0	0.0%
Hay	4.5	5.4%	11.7	7.6%
Small Grains	3.6	3.6%	14.1	1.4%
Sugar Beets	0.0	0.0%	15.2	2.8%
Sunflowers	0.0	0.0%	7.8	1.0%
All Crops	6.5	100%	12.4	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

Districtwide Water Usage Analysis Period: 2017 - 2020

	2017	2018	2019	2020	Total
Weighted Avg. Inches Pumped*	10.44	7.68	6.66	12.29	37.07
High	31.86	26.11	51.15	35.73	
Median	10.19	7.20	6.11	11.87	
Total Acre-Feet Pumped	104,621.65	78,227.34	64,372.84	122,671.64	369,893.47
Total Acres-Inches Pumped	1,255,459.78	938,728.05	772,474.11	1,472,059.74	4,438,721.68
Total Acres-Inches Pumped ÷ By Total Acres	9.78	7.28	6.00	11.44	34.50
Total Number of Inactive Certified Irrigated Acres***	3,675.1	3,046.8	3,201.0	3,091.1	
Total Number of Active Certified Irrigated Acres	128,366.9	128,995.2	128,841.0	128,727.6	
Total Number of Certified Irrigated Acres	132,042	132,042	132,042	131,818.7	

Range of Inches Used:

Scale	2017	2018	2019	2020
0 - 4	14%	26%	34%	13%
4.01 - 8	19%	31%	40%	13%
8.01 - 12	33%	30%	21%	26%
12.01 - 16	25%	12%	5%	26%
16.01 - 20	7%	1%	1%	16%
20+	2%	0%	0%	6%

Crop Water Usage**:

Crop	2017 Avg. In.	2017 Percent of Acres	2018 Avg. In.	2018 Percent of Acres	2019 Avg. In.	2019 Percent of Acres	2020 Avg. In.	2020 Percent of Acres
Alfalfa	11.8	8.7%	8.8	9.3%	6.8	9.4%	13.9	9.7%
Beans	8.9	14.1%	6.2	9.4%	5.1	8.8%	10.8	11.7%
Corn	11.3	46.4%	8.6	46.9%	7.4	49.0%	13.1	48.0%
Fallow	0.0	0.8%	0.0	0.4%	0.0	0.8%	0.0	0.9%
Hay	8.9	4.5%	6.2	6.6%	4.9	6.4%	8.5	7.9%
Other	5.0	0.6%	3.5	0.9%	2.0	0.7%	2.4	0.4%
Pasture	8.2	3.1%	7.2	3.6%	5.9	2.9%	11.0	2.9%
Potatoes	15.3	0.1%	0.0	0.0%	0.0	0.0%	0.0	0.0%
Small Grains	5.6	15.3%	3.3	17.8%	2.3	17.3%	6.0	12.5%
Sugar Beets	12.0	5.5%	12.3	4.0%	9.7	3.8%	16.1	3.9%
Sunflowers	6.0	1.0%	3.7	0.7%	2.9	0.9%	8.3	1.7%
All Crops	9.8	100%	7.3	100%	6.0	100%	11.4	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 NRD - Industrial Accounting Report 2020

Table 1: Industries with Approved Baselines

Name	Status	Baseline (gallons)	Pumped 2019 (gallons)	Pumped 2020 (gallons)	Carryforward for 2020 (gallons)
Chappell Feedlot	baseline	26,952,200	13,213,600	12,303,600	14,648,600
Clean Harbors*	baseline	35,227,000	35,271,000	37,760,000	-253,300
Croell Redi-Mix	baseline	41,925,776	173,516	416,004	41,509,772
Dinklage Feedyards	baseline	299,315,624	95,564,890	107,497,245	191,818,379
Faessler Farms	baseline	55,000,000	0	0	55,000,000
Frenchman Valley Coop**	baseline	884,822	2,523,801	1,061,570	-176,748
Gregory, Jerry	baseline	88,605	0	0	88,605
Johnson, Everett	baseline	22,154,542	0	0	22,154,542
Four Winds Golf Course	baseline	189,569,845	64,983,250	105,466,833	84,103,012
M & S Drilling	baseline	655,763	141,202	190,080	465,683
Madden, Terry*****	baseline	1,613,291	315,886	2,394,845	-781,554
McClung Aerial Spraying***	baseline	581,102	611,500	614,500	-33,398
McMillen, Marilyn	baseline	2,333,334	0	0	2,333,334
Mueller/Snyder/Pine Bluffs Gravel****	baseline/offset	5,650,134	8,871,414	28,408,597	0
Panhandle Coop Association	baseline	968,600	472,700	408,900	559,700
Ray Ranch	baseline	3,940,100	419,400	362,600	3,577,500
Sedgwick County Golf Association	baseline	9,437,798	5,478,200	7,788,600	1,649,198
Yung	baseline	2,203,750	1,577,664	2,077,303	126,447
Z & S Construction	baseline	6,348,605	450,600	173,500	6,175,105

* Clean Harbors has exceeded their baseline six years in a row. The NRD will need to offset the overage for the 2017-2021 industrial period in 2022. With limited irrigation in the Clean Harbors area, finding an offset will be challenging.

** Frenchman Valley Coop exceeded their baseline the last three years. The NRD will have to offset the overage from the 2017-2021 industrial period in 2022.

*** McClung Aerial Spraying exceeded their baseline for four years in a row. Two years ago, the NRD used McClung's unused irrigation allocation as the offset and that offset should be enough to cover the overage for this year as well.

**** Mueller has exceeded his baseline this year but has an ongoing agreement to offset any overages by using his irrigation allocation.

*****Terry Madden exceeded his baseline this year. However, for the 2017-2021 industrial period he is still below the 5-year allotment because he had carryforward the previous three years.

Table 2: Industries Using Irrigation Allocations as Offsets

Name	Status	Baseline (gallons)	Pumped 2017 (gallons)	Pumped 2018 (gallons)
Bruns/Apex Sand & Gravel	offset	NA	31,479,149	0
Bruns/Koss Construction	offset	NA	22,643,800	0
Halligan/Paul Reed Construction	offset	NA	0	4,153,000
Kuehn/Apex Sand & Gravel	offset	NA	41,755,145	0
Marquardt Farms	offset	NA	76,500	23,800
Nebraska Department of Roads	offset	NA	0	0
Nienhueser Farms	offset	NA	273,661	1,318,612
Nitzel/Apex Sand & Gravel	offset	NA	19,266,700	0
Shoemaker/Apex Sand & Gravel	offset	NA	0	31,291,706
Slama	offset	NA	0	0
Varra	offset	NA	3,150	0
Williamson/Apex Sand & Gravel	offset	NA	13,712,500	22,583,900

Table 3: Summary of all Industrial Uses

	Baseline Gallons	Pumped 2019 Gallons	Pumped 2020 Gallons
The 19 Industries with Approved Baselines	704,850,891	230,068,623	306,924,177
The 12 Industries Using Irrigation Allocations as Offsets	0	43,294,600	23,030,877
Total Pumped by all 30 Active Industries		273,363,223	329,955,054

Total pumped by industries in 2020: 329,955,052 gallons (45,789,340 gallons offset by irrigation allocations)
 12,151 acre inches
 1,013 acre feet

This is the equivalent of: approximately 7 pivots (125 acres each) pumping 14 inches per acre

South Platte NRD - Municipal Accounting Report 2020

Municipality	DNR Transfer Permit (gallons)	Baseline (gallons)	Baseline Per Capita Use* (gallons/person/day)	2019 Usage (gallons)	2019 Per Capita Use** (gallons/person/day)	2019 Carryforward (gallons)	2020 Usage (gallons)	2020 Per Capita Use** (gallons/person/day)	2020 Carryforward (gallons)
Bushnell	NA	13,092,375	221	6,026,540	133	7,065,835	7,470,325	165	5,622,050
Kimball	NA	243,050,000	260	62,883,000	69	180,167,000	126,756,000	139	116,294,000
Dix	NA	72,023,100	739	16,133,700	173	55,889,400	27,741,400	298	44,281,700
Potter	NA	135,421,817	951	66,179,468	538	69,242,349	88,284,385	718	47,137,432
Dalton	NA	70,382,300	580	17,657,500	154	52,724,800	27,197,500	237	43,184,800
Gurley	NA	46,085,050	554	20,792,489	266	25,292,561	23,751,200	304	22,333,850
Sidney	1,300,000,000	633,042,003	276	298,963,000	121	334,079,003	444,007,000	180	189,035,003
Lodgepole	NA	53,443,494	421	21,796,000	188	31,647,494	35,664,000	307	17,779,494
Chappell	NA	116,968,414	326	106,045,100	313	10,923,314	150,341,600***	443	-33,125,733
Big Springs	164,574,899	154,986,748	1,016	45,523,000	312	109,463,748	59,722,000	409	95,264,748
Total		1,538,495,301		661,999,797			990,935,410		
Average			534		227			320	

*based of 2000 census data

** based off of 2010 census data

*** Chappell has exceeded their baseline, but this number does not reflect the transfer of irrigated acres to offset municipal use. In 2016, a transfer of irrigated acres to municipal use was completed which gives them a credit of 13,863,312 gallons each year.

~ Municipal usage spiked quite a bit higher this year mainly because of the dry conditions

~ 2019 Municipal usage was the equivalent of: approximately 14 pivots (125 acres each) pumping 14 inches per acre

~ 2020 Municipal usage is the equivalent of: approximately 21 pivots (125 acres each) pumping 14 inches per acre

**SPNRD Water Acquisitions and Water Banking Activities Through 2020
Retired Acres and Other Stream Flow Accretion Activities**

Landowner	Decertified Acres	Township	Range	Section	Date Retired	County	Subarea	Appropriation
Terrell Wiekhorst	43.1	14	52	5	9/6/2007	Cheyenne	ORBB	OA
Cliff Farms Inc.	50	14	52	3	9/17/2007	Cheyenne	ORBB	OA
Robert & Connie Runge	75.2	13	51	10	9/27/2007	Cheyenne	SIDCO	OA
Marleen E. Evans Et al	237.8	13	50	4	10/22/2007	Cheyenne	SIDCO	OA
Marleen E. Evans Et al	23.8	14	50	33	10/22/2007	Cheyenne	BBSID	OA
Fornstrom Farms LLC	109.9	14	59	12	11/1/2007	Kimball	PBOR	OA
Dale Dedic	29.8	14	52	4	12/4/2007	Cheyenne	ORBB	OA
Elizabeth Burbach	18.3	15	55	20	12/5/2007	Kimball	ORBB	OA
Peetz Land & Cattle Co	22.9	14	49	35	3/14/2008	Cheyenne	SIDCO	OA
B5 Farms LLC	10.1	12	45	13	4/9/2008	Deuel	SIDCO	OA
Paul & Frances Fornander	13.3	13	45	22	7/1/2008	Deuel	SIDCO	OA
Harvey Jung	8.7	14	53	2	7/10/2008	Cheyenne	ORBB	OA
Robert Kurz	271.5	13	50	4	10/23/2008	Cheyenne	SIDCO	OA
Venture Development Group Inc.	66	14	49	32	7/14/2009	Cheyenne	BBSID	OA
Alan Adamson	62.6	15	57	31	9/22/2009	Kimball	PBOR	OA
Sharon A, James C. & Donna Johnson	5.6	15	53	34	7/1/2010	Kimball	ORBB	OA
Raymond Kuehn	83.2	14	51	12	7/1/2010	Cheyenne	BBSID	OA
Raymond Kuehn	42.3	14	51	13	7/1/2010	Cheyenne	BBSID	OA
Scott & Susan Lockwood	43.9	15	57	36	9/1/2010	Kimball	PBOR	OA
Don & Janelle Frerichs	59.6	14	48	27	9/22/2011	Cheyenne	SIDCO	OA
Barton Terman	99	14	52	34	12/28/2011	Cheyenne	BBSID	OA

Landowner	Decertified Acres	Township	Range	Section	Date Retired	County	Subarea	Appropriation
The Ranch at Sidney LLC	35.1	14	49	33	4/8/2014	Cheyenne	SIDCO	OA
City of Chappell	37.5	13	45	23	1/1/2015	Deuel	SIDCO	OA
City of Sidney	87.4	14	49	33	5/12/2015	Cheyenne	SIDCO	OA
Castronics	114.4	15	55	27	12/9/2015	Kimball	ORBB	OA
SRMC	21	14	49	33	4/8/2016	Cheyenne	SIDCO	OA
The Ranch at Sidney LLC	28.2	14	49	32	5/11/2016	Cheyenne	BBSID	OA
JR Norberg Farms	302.8	14	56	19	12/14/2016	Cheyenne	FA-K	Tablelands
Bill Halligan	11.37	15	57	32	10/1/2019	Kimball	ORBB	OA
Freeburg	98.2	14	57	1	10/1/2019	Kimball	ORBB	OA
Harvest Moon Acres	130.5	14	50	7	1/14/2020	Cheyenne	BBSID	OA

Total Number of Acres Decertified = 2,243.07
Lodgepole Creek Valley Acres Decertified = 1,940.27
Fully Appropriated Acres Decertified = 302.8

2020 Precipitation Summary (March 1 through October 31)

Growing Season Monthly Averages for 2020

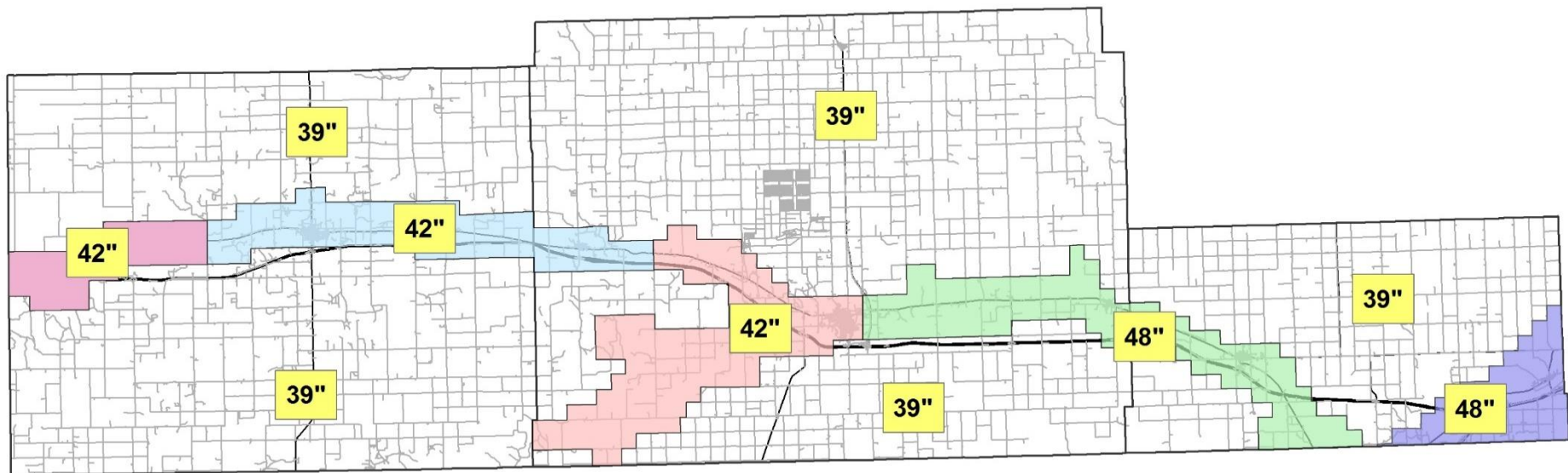
	March	April	May	June	July	August	September	October
Kimball	1.41	.7	2.18	1.35	2.91	.6	.85	.37
Cheyenne	2.15	.91	3.16	1.7	1.48	.69	.61	.64
Deuel	1.79	.82	3.74	1.42	1.29	.57	.83	.4

Comparison of 2017, 2018, 2019, and 2020 to Historical Averages







County	2017 Precip Avg.	2018 Precip Avg.	2019 Precip Avg.	2020 Precip Avg.	Historical Avg.
Kimball	16.99	17.20	20.32	11.17	16.22
Cheyenne	17.50	22.04	24.13	12.28	17.68
Deuel	17.53	23.52	25.02	12.70	17.79

South Platte Natural Resources District

Allocation Subareas & Allocations (Acre-inches) for the
2019 through 2021 Allocation Period



Legend

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