

South Platte River Task Force Meeting

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South Adams County Water and Sanitation District

July 16, 2007



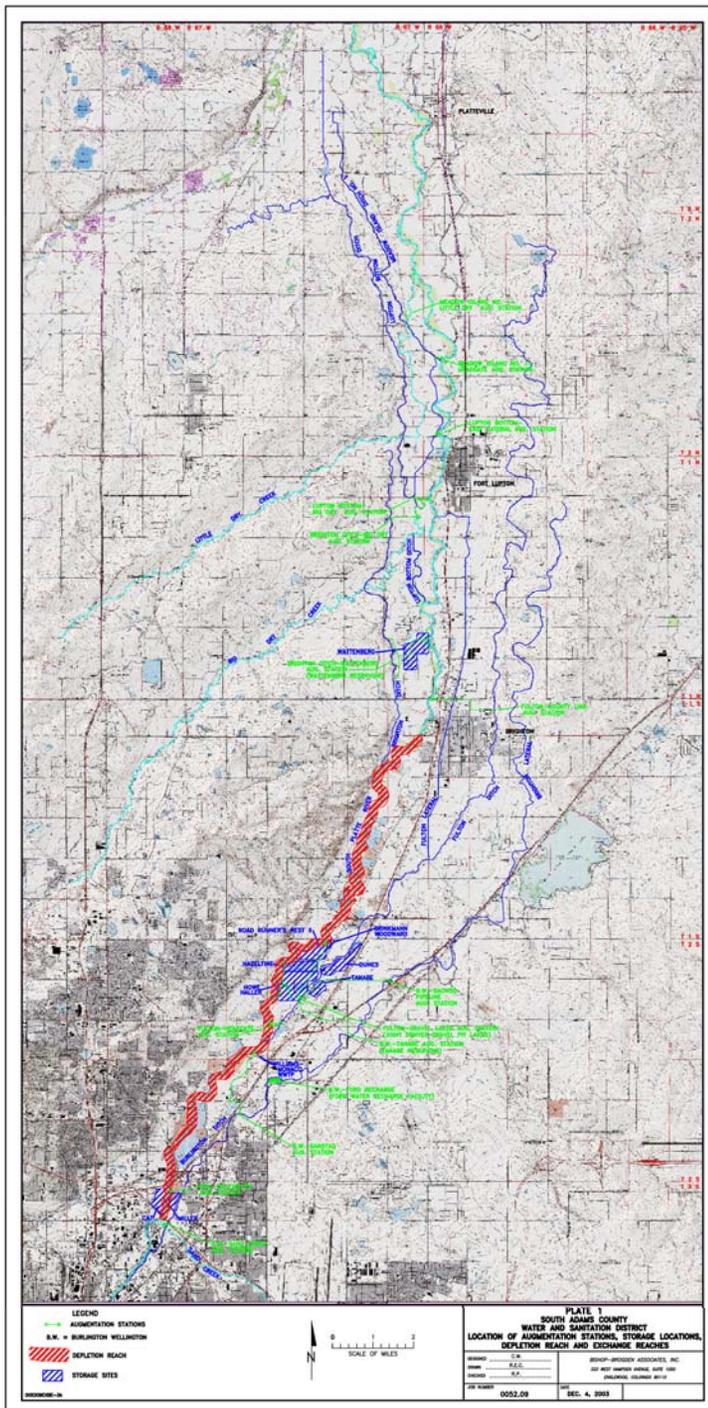
South Platte River

South Adams County Water and Sanitation District

- SACWSD in District 2, upstream of the wells
- Alluvial well supply – for Commerce City
- Developed recharge in the 1980's
- Started acquiring senior water rights in the 1970's
- Fully augments under W-8440 decree and new pending decree

SACWSD Water Structures and Facilities Map

- Municipal Wells
- Recharge Ponds
- Direct Flow Aug Water
 - Burlington Ditch
 - Fulton Ditch
 - Brighton Ditch
 - Lupton Meadows Ditch
- Storage



SACWSD

Currently Decreed Alluvial Wells

| SACWSD Well ID | Permit Number | Legal Description 6th P.M., Adams County, Colorado | Originally Decreed Capacity (gpm) | Previous Decree | Appropriation Date |
|---------------------------|---------------|---|-----------------------------------|-------------------------|-------------------------|
| 2 | 8878-F | SE1/4, NE1/4, S32-T2S-R67W 525 ft W, 500 ft S of NE corner of SE1/4, NE1/4 of S32 | 997 | W-5152 | 3/25/1958 |
| 3 | 5174-F | SE1/4, NE1/4, S32-T2S-R67W 600 ft W, 500 ft S of NE corner of SE1/4, NE1/4 of S32 | 2,092 | W-5152 | 3/27/1964 |
| 5 | 10699-F-R | SE1/4, NE1/4, S32-T2S-R67W 75 ft W, 800 ft S of NE corner of SE1/4, NE1/4 of S32 | 3,493 | W-5152 | 3/10/1966 |
| 7 | 110 | SE1/4, SW1/4, S17-T2S-R67W 300 ft W, 400 ft N of SE corner of SE1/4 of SW1/4, S17 | 251 | W-5152 | 11/29/1957 |
| 14 | 3090-F | SE1/4, SE1/4, S5-T3S-R67W 260 ft W, 100 ft N of SE corner of S5 | 988 | W-5152 | 4/30/1961 |
| 15 | n/a | SW1/4, SW1/4, S29-T2S-R67W 25 ft W, 50 ft N of SE corner of SW1/4, SW1/4 of S29 | 310 | W-5152 | 3/31/1966 |
| 16 | n/a | NW1/4, NE1/4, S5-T3S-R67W 340 ft E, 70 ft N of SW corner of NW1/4, NE1/4 of S5 | 799 | W-5152 | 6/30/1955 |
| 17 | 22065-F | SE1/4, NE1/4, S32-T2S-R67W 75 ft W, 692 ft S of NE corner of SE1/4, NE1/4 of S32 | 3,493 | W-8440-76, W-8517-77 | 3/10/1966 |
| 18 | 23043-F | SW1/4, NW1/4, S28-T2S-R67W 300 ft E, 2,550 ft S of the NW corner of S28 | 1,971 | W-8440-76, W-8517-77 | 3/25/1958, 3/27/1964 |
| 21 | 034451-F | NE1/4, SW1/4, S21-T2S-R67W 2,300 ft from W, 1,800 ft from S section lines | 2,000 | W-8440-76D | 12/29/1983 |
| 47 | 034452-F | SE1/4, SE1/4, S20-T2S-R67W 50 ft from E, 70 ft from S section lines | 1,500 | W-8440-76D | 11/26/1983 |
| 79 | 053235-F | NE1/4, NE1/4, S8-T3S-R67W 200 ft from a point 400 ft from E, 750 ft from N section lines | 2,000 | 97CW353 | 6/11/1997 |
| 80 | 58906-F | SE1/4, SW1/4, S29-T2S-R67W 916 ft from S, 1,640 ft from E section lines | 2,000 | 00CW102 | 5/30/1996 |
| Existing Wellfield Total: | | | 21,643 | | |

Notes:

- n/a - Permits not issued for these wells.
- Well No. 7 not used in municipal water supply system.
- The 00CW102 decree includes pumping limit of 1,600 acre-feet per year for Well No. 80. Pumping limits not decreed for other alluvial wells.
- The W-8440-76D decree limits the withdrawal from Well Nos. 21 and 47 to not exceed 400 ac-ft/yr each and 68 ac-ft/mo each; that the aggregate volume not exceed the lesser of 800 ac-ft/yr or the net Ford Facility recharge credit for the prior calendar year (or 1/12 the net annual credit per month); and associated restrictive conditions. The District proposes removal of these restrictive conditions in Case No. 01CW258 due to the District's current ownership of potentially affected wells and the existence of a rising water table in the vicinity of Well Nos. 21 and 47 from operation of the Ford Facility and the existence of lined gravel pits.
- Well No. 17 is an alternate point of diversion for Well No. 5, with no independent water right. Use of the well as an alternate point is based on the Well No. 5 priority. Maximum allowable withdrawal is 3,493 gpm, as decreed in W-8517-77.
- Well No. 18 is an alternate point of diversion for Well Nos. 2 and 3, with no independent water right. Use of the well as an alternate point is based on the respective priority of Well No. 2 or Well No. 3. Maximum allowable total withdrawal for both Well Nos. 2 and 3 is 3,089 gpm; and 1,971 gpm for Well No. 18, as decreed in W-9472-78. The total withdrawal from Well Nos. 2, 3 and 18 is limited to 3,200 ac-ft/yr by Well No. 18 Permit No. 23043-F.

SACWSD

Alluvial Wells Pending in Case No. 2001CW258

| SACWSD Well ID | Legal Description 6th P.M., Adams County, Colorado | Proposed Capacity (gpm) | Proposed Pumping Volume (af) | SACWSD Well ID | Legal Description 6th P.M., Adams County, Colorado | Proposed Capacity (gpm) | Proposed Pumping Volume (af) |
|---|--|-------------------------|------------------------------|-----------------------------------|--|-------------------------|------------------------------|
| Northwest Wellfield: | | | | Southwest Wellfield: | | | |
| 83 | NE1/4, SW1/4, S2-T2S-R67W 2,600 ft from S, 1,500 ft from W section lines | 1,500 | 1,800 | 88 | NE1/4, NW1/4, S29-T2S-R67W 1,320 ft from N, 10 ft from E section lines | 2,000 | 2,000 |
| 86 | SW1/4, SW1/4, S2-T2S-R67W 1,300 ft from S, 450 ft from W section lines | 1,500 | 1,800 | 101 | SE1/4, NW1/4, S15-T2S-R67W 1,580 ft from N, 2,600 ft from W section lines | 1,500 | 1,800 |
| 87 | SE1/4, NW1/4, S10-T2S-R67W 1,700 ft from N, 1,500 ft from W section lines | 300 | 360 | 102 | SW1/4, SW1/4, S15-T2S-R67W 700 ft from S, 425 ft from W section lines | 850 | 1,020 |
| 92 | NW1/4, SE1/4, S2-T2S-R67W 1,890 ft from S, 1,420 ft from E section lines | 600 | 720 | 103 | NW1/4, NE1/4, S16-T2S-R67W 670 ft from N, 2,650 ft from W section lines | 2,500 | 3,000 |
| 93 | SE1/4, NW1/4, S2-T2S-R67W 1,450 ft from N, 1,875 ft from W section lines | 1,500 | 1,800 | 104 | SW1/4, SW1/4, S16-T2S-R67W 1,000 ft from S, 850 ft from W section lines | 500 | 600 |
| 94 | NW1/4, SW1/4, S2-T2S-R67W 2,250 ft from S, 950 ft from W section lines | 1,500 | 1,800 | 105 | SE1/4, NW1/4, S21-T2S-R67W 2,450 ft from N, 2,350 ft from W section lines | 2,500 | 3,000 |
| 95 | NW1/4, NW1/4, S2-T2S-R67W 50 ft from N, 225 ft from W section lines | 750 | 900 | 106 | NE1/4, NW1/4, S21-T2S-R67W 435 ft from N, 1,750 ft from W section lines | 1,000 | 1,200 |
| 96 | SE1/4, SE1/4, S3-T2S-R67W 1,150 ft from S, 500 ft from E section lines | 1,500 | 1,800 | 107 | NW1/4, NW1/4, S21-T2S-R67W 305 ft from N, 1,000 ft from W section lines | 2,500 | 3,000 |
| 97 | NE1/4, SW1/4, S11-T2S-R67W 2,130 ft from S, 2,465 ft from W section lines | 750 | 900 | 108 | NW1/4, SW1/4, S21-T2S-R67W 2,215 ft from S, 175 ft from W section lines | 1,500 | 1,800 |
| 98 | NE1/4, NW1/4, S11-T2S-R67W 900 ft from N, 1,500 ft from W section lines | 700 | 840 | 109 | NE1/4, NE1/4, S20-T2S-R67W 800 ft from N, 575 ft from E section lines | 250 | 300 |
| 99 | SE1/4, SW1/4, S10-T2S-R67W 600 ft from S, 2,270 ft from W section lines | 1,800 | 2,160 | 110 | NE1/4, SW1/4, S16-T2S-R67W 2,200 ft from S, 1,750 ft from W section lines | 600 | 720 |
| 100 | NE1/4, SE1/4, S9-T2S-R67W 1,450 ft from S, 1,245 ft from E section lines | 3,000 | 3,600 | 111 | SW1/4, NE1/4, S20-T2S-R67W 1,950 ft from N, 2,100 ft from E section lines | 300 | 360 |
| Northwest Wellfield Total: | | 15,400 | 18,480 | 112 | SW1/4, SE1/4, S20-T2S-R67W 1,100 ft from S, 2,050 ft from E section lines | 250 | 300 |
| Northeast Wellfield: | | | | Southwest Wellfield Total: | | | |
| 31 | NW1/4, SW1/4, S5-T2S-R66W 2,660 ft from S, 1,080 ft from W section lines | 350 | 420 | | | 16,250 | 19,100 |
| 35 | NE1/4, SW1/4, S33-T1S-R66W 2,600 ft from S, 1,950 ft from W section lines | 750 | 900 | | | | |
| 81 | SE1/4, SW1/4, S32-T1S-R66W 495 ft from S, 2,460 ft from W section lines | 350 | 420 | | | | |
| 82 | SW1/4, SW1/4, S33-T1S-R66W 900 ft from S, 50 ft from W section lines | 800 | 960 | | | | |
| 84 | NE1/4, NW1/4, S5-T2S-R66W 750 ft from N, 2,490 ft from W section lines | 250 | 300 | | | | |
| 85 | NW1/4, SW1/4, S33-T1S-R66W 2,600 ft from S, 1,300 ft from W section lines | 1,500 | 1,800 | | | | |
| 89 | NE1/4, NE1/4, S32-T1S-R66W 700 ft from N, 50 ft from E section lines | 1,000 | 1,200 | | | | |
| 90 | SE1/4, NE1/4, S32-T1S-R66W 2,250 ft from N, 50 ft from E section lines | 700 | 840 | | | | |
| 91 | NW1/4, SE1/4, S33-T1S-R66W 2,600 ft from S, 1,780 ft from E section lines | 750 | 900 | | | | |
| Northeast Wellfield Total: | | 6,450 | 7,740 | | | | |
| Irrigation-Only Wellfield System Total | | | | | | 38,100 | 45,320 |

Notes:

- All wells will serve as new points of diversion under the District's combined plan for augmentation for all municipal uses, including domestic, commercial, industrial, fire protection, irrigation, recreation, fish and wildlife preservation, and augmentation and replacement of well depletions.
- Well Nos. 35, 83-85, 87 and 88 with 12/12/2001 appropriation date as proposed in 01CW258 application, dated 12/17/2001.
- Well Nos. 82 and 91 with 7/9/2004 appropriation date as proposed in second amended 01CW258 application, dated 7/29/2004.
- All remaining wells with 12/11/2001 appropriation date as proposed in first amended 01CW258 application, dated 12/30/2002.



SACWSD

Summary of Existing Water Rights Used for Augmentation

| Water Right | Appropriation Date | Adjudication Date | Source | Original Decree | Total Shares | Total SACWSD Shares | Total Amount | SACWSD Prorata Amount |
|---|--------------------|-------------------|--------------------|-----------------|--------------|---------------------|-----------------------|-----------------------|
| Duggan Right | 4/1/1864 | 4/28/1883 | South Platte River | 6009 | | | 3.133 out of 27.4 cfs | 3.133 cfs |
| Burlington Ditch, Reservoir & Land Co. | | | | | 1848.327 | 103.045 | | |
| Duggan Right | 4/1/1864 | 4/28/1883 | South Platte River | 6009 | | | 16.28 out of 27.4 cfs | 0.91 cfs |
| Burlington Ditch | 11/20/1885 | 7/8/1893 | South Platte River | 11200 | | | 200 cfs | 11.16 cfs |
| Burlington Ditch | 12/1/1885 | 7/8/1893 | Sand Creek | 11200 | | | 250 cfs | 13.95 cfs |
| Burlington Ditch | 9/1/1886 | 7/8/1893 | First Creek | 11200 | | | 50 cfs | 2.79 cfs |
| Burlington Ditch | 11/15/1886 | 7/8/1893 | Second Creek | 11200 | | | 250 cfs | 13.95 cfs |
| Burlington Ditch | 9/15/1887 | 7/8/1893 | Third Creek | 11200 | | | 250 cfs | 13.95 cfs |
| Duck Lake | 9/15/1904 | 5/18/1918 | Geneva Creek | 1777 | | | 750 ac-ft | 41.85 ac-ft |
| Wellington Reservoir Co. | | | | | 1838.660 | 134.545 | | |
| Duggan Right | 4/1/1864 | 4/28/1883 | South Platte River | 6009 | | | 7.987 out of 27.4 cfs | 0.58 cfs |
| Wellington Reservoir | 5/31/1892 | 6/21/1922 | Buffalo Creek | 1839 | | | 2747.72 ac-ft | 201.13 ac-ft |
| Wellington Reservoir Enlargement | 6/5/1920 | 6/21/1922 | Buffalo Creek | 1839 | | | 1652.00 ac-ft | 120.93 ac-ft |
| Hicks Creek Feeder Ditch | 12/21/1921 | 6/21/1922 | Hicks Creek | 1839 | | | 25 cfs | 1.83 cfs |
| Mendenhall Feeder Ditch | 9/3/1892 | 6/21/1922 | Mendenhall Creek | 1839 | | | 25 cfs | 1.83 cfs |
| Ford Water Recharge Facility | 11/28/1984 | 12/31/1986 | South Platte River | W-8440-76D | | | 20 cfs | 20 cfs |

Notes:

- (1) Duggan right changed in Case No. W-8440-76.
- (2) Burlington and Wellington shares changed in Case No. W-8440-76 (68.045 Burlington and 102.045 Wellington) and W-8440-76A (35 Burlington and 32.5 Wellington).
- (3) Ford Water Recharge Facility water right adjudicated in Case No. W-8440-76D, limited to 400 ac-ft per year diversion. Water right made absolute 3/28/1995.

SACWSD

Summary of New Water Rights to be Used for Augmentation and Exchange - Case No. 2001CW258

| Water Right | Appropriation Date | Adjudication Date | Source | Original Decree | Total Shares | Total SACWSD Shares | Total Amount | SACWSD Prorata Amount |
|---|--------------------|-------------------|---|-----------------|--------------|---------------------|-------------------|-----------------------|
| Burlington Ditch, Reservoir and Land Co. | | | | | 1848.327 | 151.465 | | |
| Duggan Right | 4/1/1864 | 4/28/1883 | South Platte River | 6009 | | | 16.28 of 27.4 cfs | 1.33 cfs |
| Burlington Ditch | 11/20/1885 | 7/8/1893 | South Platte River | 11200 | | | 200 cfs | 16.38 cfs |
| Burlington Ditch | 12/1/1885 | 7/8/1893 | Sand Creek | 11200 | | | 250 cfs | 20.48 cfs |
| Burlington Ditch | 9/1/1886 | 7/8/1893 | First Creek | 11200 | | | 50 cfs | 4.10 cfs |
| Burlington Ditch | 11/15/1886 | 7/8/1893 | Second Creek | 11200 | | | 250 cfs | 20.48 cfs |
| Burlington Ditch | 9/15/1887 | 7/8/1893 | Third Creek | 11200 | | | 250 cfs | 20.48 cfs |
| Duck Lake | 9/15/1904 | 5/18/1918 | Geneva Creek | 1777 | | | 750 ac-ft | 61.43 ac-ft |
| Wellington Reservoir Co. | | | | | 1838.660 | 128.955 | | |
| Duggan Right | 4/1/1864 | 4/28/1883 | South Platte River | 6009 | | | 7.987 of 27.4 cfs | 0.56 cfs |
| Wellington Reservoir | 5/31/1892 | 6/21/1922 | Buffalo Creek | 1839 | | | 2,747.72 ac-ft | 192.62 ac-ft |
| Wellington Reservoir Enlargement | 6/5/1920 | 6/21/1922 | Buffalo Creek | 1839 | | | 1652.00 ac-ft | 115.81 ac-ft |
| Hicks Creek Feeder Ditch | 12/21/1921 | 6/21/1922 | Hicks Creek | 1839 | | | 25 cfs | 1.75 cfs |
| Mendenhall Feeder Ditch | 9/3/1892 | 6/21/1922 | Mendenhall Creek | 1839 | | | 25 cfs | 1.75 cfs |
| Fulton Irrigating Ditch Co. | | | | | 6009 | 7185 | 446 | |
| Fulton Ditch | 5/1/1865 | 4/28/1883 | | | | | 79.7 cfs | 4.95 cfs |
| Fulton Ditch | 7/8/1876 | 4/28/1883 | | | | | 74.25 cfs | 4.61 cfs |
| Fulton Ditch | 11/5/1879 | 4/28/1883 | | | | | 50.23 cfs | 3.12 cfs |
| Brighton Ditch Co. | | | | | 6009 | 20 | 1.105 | |
| Brighton Ditch | 12/1/1863 | 4/28/1883 | South Platte River | 6009 | 20 | 1.105 | 22.22 cfs | 1.23 cfs |
| Brighton Ditch | 11/1/1871 | 4/28/1883 | | | | | 22.58 cfs | 1.25 cfs |
| Lupton Meadows Ditch Co. | | | | | 6009 | 3948 | 712 | |
| Lupton Bottom Ditch | | | | | 3618 | 592 | | |
| | 5/15/1863 | 4/28/1883 | | | | | 47.7 cfs | 4.07 cfs |
| | 3/10/1871 | 4/28/1883 | | | | | 37.6 cfs | 1.64 cfs |
| | 9/15/1873 | 4/28/1883 | | | | | 92.78 cfs | 7.91 cfs |
| Meadow Island No. 1 Ditch | | | | | 330 | 120 | | |
| | 5/1/1866 | 4/28/1883 | | | | | 26.33 cfs | 1.57 cfs |
| | 4/29/1882 | 4/28/1883 | | | | | 94.8 cfs | 6.76 cfs |
| Contract for Fully Consumable Water from the City of Westminster | | | South Platte River, Clear Creek, or Big Dry Creek | Various | | | | 1,000 ac-ft |

| Water Right | Appropriation Date | Adjudication Date | Furthest Exchange From Point | Furthest Exchange To Point | Amount |
|------------------------------|--------------------|-------------------|---|---|-----------|
| Exchange Water Rights | | | | | |
| Meadow Island No. 1 | 12/12/2001 | 12/31/2001 | Meadow Island No. 1 - Little Dry Aug. Station | Confluence of South Platte River and Sand Creek | 8.33 cfs |
| Lupton Bottom | 12/12/2001 | 12/31/2001 | Lupton Bottom - East Lateral Aug. Station | Confluence of South Platte River and Sand Creek | 13.62 cfs |
| Brighton Ditch | 12/12/2001 | 12/31/2001 | Brighton Ditch - Wattenberg Aug. Station | Confluence of South Platte River and Sand Creek | 2.48 cfs |
| Fulton Ditch | 12/12/2001 | 12/31/2001 | Fulton Ditch Aug. Stations | Confluence of South Platte River and Sand Creek | 15.52 cfs |
| Wattenberg Storage | 12/12/2001 | 12/31/2001 | Wattenberg Storage Reservoir Outlet | Confluence of South Platte River and Sand Creek | 50.00 cfs |

South Platte River Calls

- Call = Unsatisfied Demand for Water
- If junior wells do not replace depletions to senior call, someone is injured
- Past unaugmented depletions = injury

South Platte River

Days of Free River – Districts 1 & 2

| Year | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Apr-Oct | Nov-Mar | Total |
|------|------|------|------|------|------|------|------|------|-----|-----|------|------|---------|---------|-------|
| 1950 | 30 | 31 | 31 | 28 | 31 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 151 | 157 |
| 1951 | 22 | 31 | 31 | 28 | 31 | 30 | 2 | 0 | 0 | 10 | 0 | 27 | 69 | 143 | 212 |
| 1952 | 30 | 31 | 31 | 28 | 31 | 30 | 21 | 15 | 0 | 0 | 0 | 2 | 68 | 151 | 219 |
| 1953 | 30 | 31 | 31 | 28 | 31 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 151 | 178 |
| 1954 | 7 | 31 | 31 | 28 | 21 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 118 | 122 |
| 1955 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| 1956 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 7 | 0 | 7 |
| 1957 | 29 | 31 | 31 | 28 | 31 | 25 | 19 | 13 | 11 | 8 | 30 | 31 | 137 | 150 | 287 |
| 1958 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 22 | 0 | 0 | 0 | 0 | 83 | 151 | 234 |
| 1959 | 0 | 0 | 0 | 0 | 0 | 23 | 21 | 4 | 0 | 0 | 0 | 0 | 48 | 0 | 48 |
| 1960 | 0 | 0 | 0 | 0 | 0 | 2 | 29 | 14 | 0 | 0 | 0 | 14 | 59 | 0 | 59 |
| 1961 | 30 | 31 | 31 | 28 | 14 | 30 | 17 | 25 | 0 | 8 | 5 | 31 | 116 | 134 | 250 |
| 1962 | 30 | 31 | 31 | 28 | 31 | 24 | 0 | 12 | 0 | 0 | 0 | 0 | 36 | 151 | 187 |
| 1963 | 12 | 31 | 31 | 28 | 31 | 8 | 0 | 5 | 0 | 0 | 2 | 0 | 15 | 133 | 148 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 17 | 31 | 30 | 31 | 128 | 0 | 128 |
| 1966 | 30 | 31 | 31 | 28 | 31 | 20 | 0 | 0 | 0 | 0 | 0 | 7 | 27 | 151 | 178 |
| 1967 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 30 | 25 | 0 | 0 | 17 | 74 | 3 | 77 |
| 1968 | 30 | 31 | 31 | 28 | 31 | 30 | 9 | 12 | 0 | 0 | 0 | 17 | 68 | 151 | 219 |
| 1969 | 30 | 31 | 31 | 28 | 31 | 20 | 25 | 30 | 10 | 0 | 12 | 31 | 128 | 151 | 279 |
| 1970 | 30 | 31 | 31 | 28 | 31 | 30 | 30 | 30 | 5 | 0 | 17 | 31 | 143 | 151 | 294 |
| 1971 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 27 | 0 | 0 | 14 | 31 | 133 | 151 | 284 |
| 1972 | 30 | 31 | 31 | 28 | 31 | 9 | 7 | 14 | 0 | 0 | 2 | 31 | 63 | 151 | 214 |
| 1973 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 11 | 10 | 21 | 31 | 164 | 151 | 315 |
| 1974 | 30 | 31 | 31 | 28 | 31 | 30 | 8 | 22 | 0 | 0 | 25 | 31 | 116 | 151 | 267 |
| 1975 | 30 | 31 | 31 | 28 | 28 | 22 | 4 | 28 | 3 | 0 | 1 | 31 | 89 | 148 | 237 |
| 1976 | 30 | 31 | 31 | 28 | 24 | 0 | 10 | 7 | 0 | 0 | 0 | 0 | 17 | 144 | 161 |
| 1977 | 0 | 0 | 0 | 0 | 18 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 18 | 26 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 15 | 0 | 0 | 0 | 0 | 20 | 0 | 20 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 9 | 31 | 11 | 0 | 15 | 30 | 31 | 127 | 0 | 127 |
| 1980 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 9 | 0 | 20 | 31 | 151 | 151 | 302 |
| 1981 | 30 | 31 | 31 | 28 | 31 | 15 | 22 | 0 | 0 | 0 | 0 | 23 | 60 | 151 | 211 |
| 1982 | 12 | 0 | 0 | 0 | 0 | 0 | 4 | 10 | 6 | 0 | 17 | 31 | 68 | 12 | 80 |
| 1983 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 26 | 31 | 30 | 31 | 209 | 151 | 360 |
| 1984 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 22 | 31 | 30 | 31 | 205 | 151 | 356 |
| 1985 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 15 | 8 | 24 | 31 | 169 | 151 | 320 |
| 1986 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 28 | 8 | 0 | 28 | 31 | 156 | 151 | 307 |
| 1987 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 27 | 9 | 6 | 30 | 31 | 164 | 151 | 315 |
| 1988 | 30 | 31 | 31 | 28 | 31 | 30 | 28 | 21 | 0 | 0 | 19 | 31 | 129 | 151 | 280 |
| 1989 | 30 | 31 | 31 | 28 | 31 | 23 | 1 | 0 | 0 | 0 | 22 | 31 | 77 | 151 | 228 |
| 1990 | 30 | 31 | 31 | 28 | 31 | 30 | 6 | 14 | 0 | 4 | 2 | 31 | 87 | 151 | 238 |
| 1991 | 30 | 31 | 31 | 28 | 31 | 30 | 10 | 23 | 0 | 0 | 0 | 21 | 84 | 151 | 235 |
| 1992 | 30 | 31 | 31 | 28 | 31 | 28 | 0 | 4 | 0 | 8 | 30 | 31 | 101 | 151 | 252 |
| 1993 | 30 | 31 | 31 | 28 | 31 | 30 | 11 | 10 | 0 | 18 | 31 | 31 | 100 | 151 | 251 |
| 1994 | 30 | 31 | 31 | 28 | 31 | 17 | 0 | 0 | 0 | 0 | 0 | 13 | 30 | 151 | 181 |
| 1995 | 30 | 31 | 31 | 28 | 31 | 4 | 30 | 30 | 31 | 8 | 19 | 31 | 153 | 151 | 304 |
| 1996 | 30 | 31 | 31 | 28 | 31 | 8 | 6 | 30 | 0 | 0 | 21 | 31 | 96 | 151 | 247 |
| 1997 | 30 | 31 | 31 | 28 | 31 | 28 | 20 | 30 | 5 | 31 | 30 | 31 | 175 | 151 | 326 |
| 1998 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 19 | 8 | 11 | 17 | 31 | 147 | 151 | 298 |
| 1999 | 30 | 31 | 31 | 28 | 15 | 9 | 31 | 30 | 11 | 31 | 30 | 31 | 173 | 135 | 308 |
| 2000 | 30 | 31 | 31 | 28 | 31 | 25 | 5 | 0 | 0 | 0 | 0 | 0 | 30 | 151 | 181 |
| 2001 | 0 | 19 | 31 | 28 | 31 | 30 | 20 | 14 | 2 | 0 | 22 | 31 | 119 | 109 | 228 |
| 2002 | 30 | 31 | 31 | 28 | 31 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 151 | 161 |
| 2003 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2005 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 0 | 0 | 0 | 3 | 22 | 0 | 22 |
| 2006 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| 2007 | 0 | 7 | 10 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| AVG | 20.6 | 22.4 | 22.6 | 20.8 | 22.3 | 17.5 | 13.2 | 14.3 | 4.1 | 4.5 | 10.5 | 18.3 | 82.4 | 109.5 | 191.1 |
| MIN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAX | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 209 | 151 | 365 |

Notes: Values listed above from daily priority analysis based on Division 1 call records through January 31, 2007.

Release dates not listed for all calls until 1981 water year. Listed calls assumed in place until next call or 'no demand' listed for water years prior to 1981.

Daily analysis assumes 28 days during each February.

(Burlington and Barr Lake Calls taken out of analysis if not bypass calls)

Current through December 2006. (WY 2007)

Free river days in December 2006 (WY 2007) were due to blizzard conditions and inability of senior reservoirs to divert. This is an anomaly. Due to Blizzard, CCWCD would probably not have been able to divert either, and without the blizzard, a call would have continued.



BISHOP-BROGDEN ASSOCIATES, INC.

South Platte River Calling Water Rights

District 1

- Riverside Canal
- Bijou Canal
- Fort Morgan Canal
- Upper Platte & Beaver Canal
- Lower Platte & Beaver Canal
- North Sterling Canal

- Riverside Reservoir
- Jackson Lake
- North Sterling Reservoir
- Prewitt Reservoir

District 2

- Burlington Ditch
- Fulton Ditch
- Brantner Ditch
- Brighton Ditch
- Lupton Bottoms Ditch
- Platteville Ditch
- Meadow Island # 1 Ditch
- Platte Valley Canal (Evans #2)
- Jay Thomas Ditch
- Western Ditch
- Union Ditch
- Godfrey Bottom Ditch
- Union Ditch

South Platte River Calls

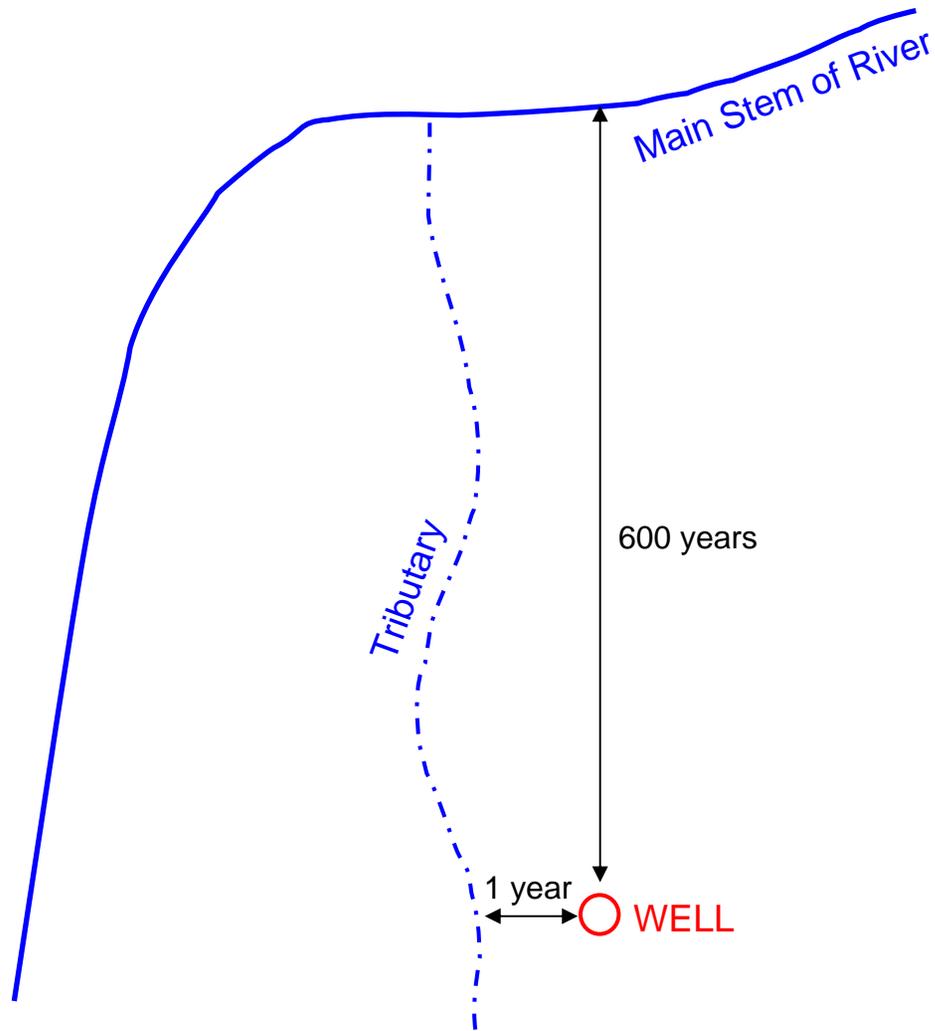
- Injury to SACWSD due to unreplaced depletions:
 - Users who fully augment well depletions doubly injured by those who do not.
 - Surface water rights injured because less water available and less aug water yield
 - Wells are called out more often by other senior water rights, therefore require more replacement water

South Platte River Timing of Depletions

- How long does it take the wells to deplete the stream?
 - 600 year example
 - Assumes that the water from that well would have traveled underground without the well all the way to the SPR
 - Show dried up tributary – Without well, tributary flowed, water from the well would have only take a short time to reach tributary

South Platte River

Timing of Depletions



- Well located close to Tributary
- Well depletions cause Tributary to become dry
- This situation does not permit well to lag to River instead of Tributary
- Well depletions must be replaced to closest flowing river, tributary or drain at the time that depletions began.
- Past pumping of wells creating dry stream does not allow for wells to be lagged to River

South Platte River

Past Depletions not Zeroed out by 6 weeks of Free River

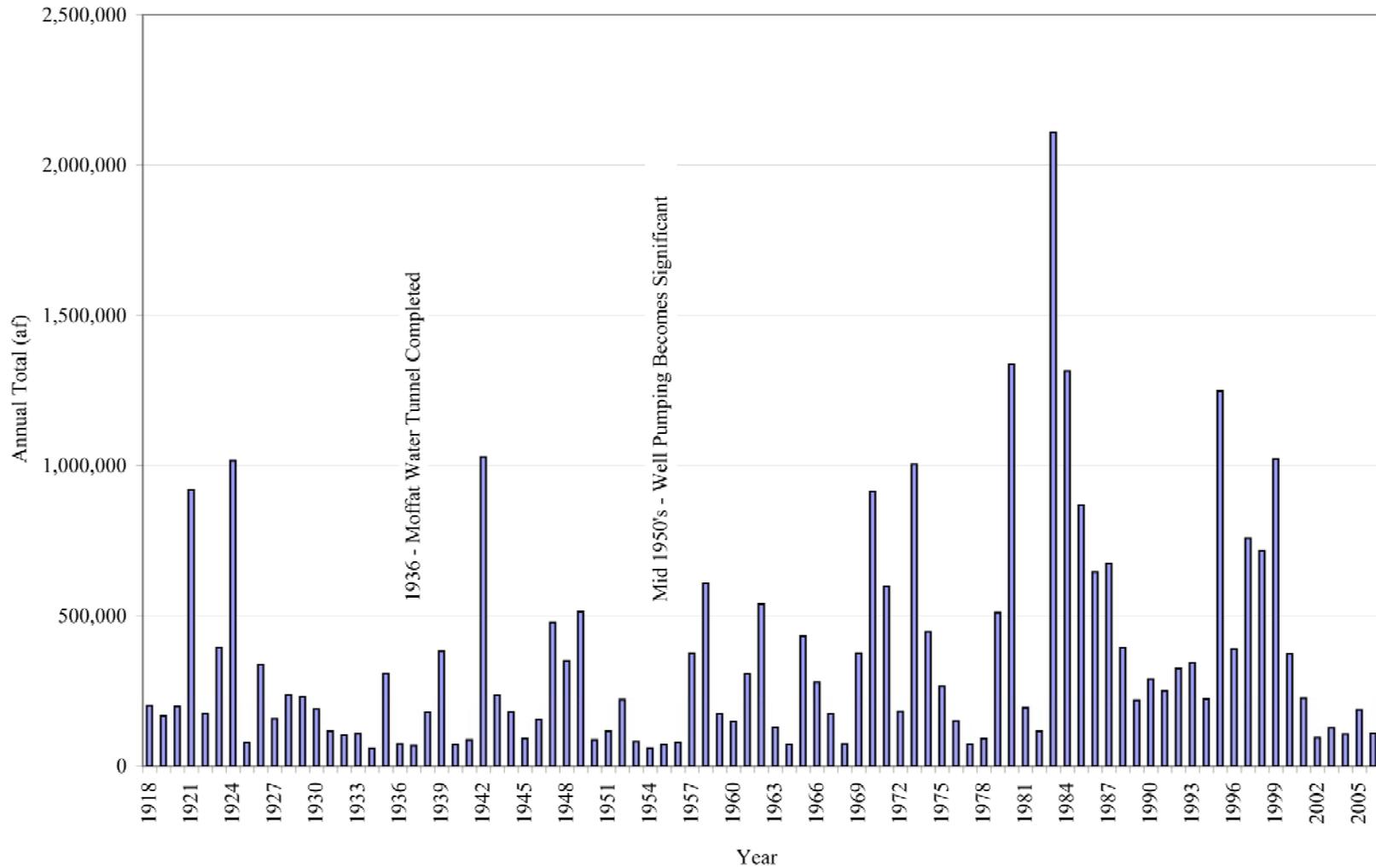
- Aquifer is like a sponge, water is stored in pore space.
- The time it takes to fill the pore space is a function of the aquifer material
 - Does not just fill instantly, when there is free river
 - Fills very slowly over time, based upon the speed that the water can travel through the pores
- It takes years for aquifer depletions to affect the river, in some instances
- It takes just as long for the “hole” in the aquifer caused by the depletions to fill back up
- No matter how high the flow in the river is, the rate of recharge is still limited by the aquifer

South Platte River

Source of Current Problem

- Not the priority system
– its been proven to work
- Problem is recent drought conditions and poor preparation for it by well owners

South Platte River Streamflow at Balzac Gage Water Flowing into District 64



South Platte River

Source of Current Problem

- Well users did not have enough water going into drought and did not get any under junior rights during drought
 - Little or no recharge diverted during peak flows of 1990's to protect wells during drought
 - When more wet and average years occur in future, well users should be able to divert to recharge, therefore future droughts should be less of a problem.