

ROC on LTO CalSimII Simulation Results - COS

North-of-Delta Deliveries to CVP Ag Service Contractors in TAF

SIMULATED

WATER

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1922	4.9	0.0	0.0	0.0	0.0	0.5	44.3	57.9	72.6	82.4	66.2	32.1
1923	1.0	0.0	0.0	0.0	0.0	5.2	14.7	30.8	34.1	42.1	34.0	9.2
1924	4.6	0.4	0.0	0.0	0.0	2.7	13.3	14.9	16.6	18.6	14.9	7.2
1925	0.0	0.0	0.0	0.0	0.0	0.0	10.0	35.6	51.6	66.2	53.0	20.9
1926	9.9	0.0	0.0	0.0	0.0	1.4	3.3	17.2	25.7	29.0	22.7	11.2
1927	1.4	0.0	0.0	0.0	0.0	0.5	34.4	59.2	69.8	87.0	70.3	33.8
1928	1.7	0.0	0.0	0.0	0.0	0.0	13.0	34.3	42.7	48.7	39.3	18.7
1929	6.8	0.0	0.0	0.0	0.0	0.6	14.1	20.8	18.2	25.9	20.9	10.1
1930	4.0	0.6	0.0	0.0	0.0	0.0	3.1	8.8	13.0	14.7	11.9	4.7
1931	1.9	0.0	0.0	0.0	0.0	3.0	10.9	10.2	11.8	15.6	12.6	6.0
1932	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1933	0.0	0.0	0.0	0.0	0.0	1.3	11.6	11.4	13.9	15.7	12.7	6.1
1934	1.4	0.4	0.0	0.0	0.0	0.3	10.1	15.1	17.7	20.9	16.9	6.6
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.5	15.1	23.3	26.1	21.1	9.8
1936	1.6	0.1	0.0	0.0	0.0	0.2	12.9	29.3	33.7	46.5	37.7	17.1
1937	6.9	1.1	0.0	0.0	0.0	0.0	11.4	30.6	33.5	42.4	34.4	16.6
1938	1.4	0.0	0.0	0.0	0.0	0.0	16.7	56.2	81.2	91.3	73.8	28.5
1939	4.6	0.1	0.0	0.0	4.4	17.2	39.3	33.1	44.2	49.3	40.2	15.2
1940	5.0	1.0	0.0	0.0	0.0	0.0	17.0	41.9	57.9	66.2	53.5	24.8
1941	1.3	0.0	0.0	0.0	0.0	0.0	6.8	36.7	77.4	91.8	74.2	35.3
1942	2.5	0.0	0.0	0.0	0.0	0.0	7.3	45.3	81.4	93.5	75.5	35.4
1943	11.4	0.0	0.0	0.0	0.0	0.1	14.6	51.9	55.3	63.9	51.9	25.0
1944	8.2	0.2	0.0	0.0	0.0	0.4	6.8	10.8	14.9	17.9	14.5	7.0
1945	1.7	0.0	0.0	0.0	0.0	0.0	17.1	26.9	38.4	49.2	39.7	19.1
1946	0.1	0.0	0.0	0.0	0.0	1.0	37.4	58.2	56.8	62.6	51.6	24.1
1947	8.8	0.0	0.0	0.0	0.0	0.0	13.3	20.6	22.4	30.2	24.3	11.9
1948	0.1	0.0	0.0	0.0	0.5	1.0	2.8	28.0	47.7	69.7	56.2	23.3
1949	5.1	0.4	0.0	0.0	0.0	0.0	18.1	37.2	45.4	51.2	41.2	19.6
1950	8.3	0.1	0.0	0.0	0.0	0.3	17.5	24.7	28.5	32.8	26.5	11.7
1951	0.3	0.0	0.0	0.0	0.0	1.5	37.5	48.6	64.7	73.2	59.0	28.1
1952	0.5	0.0	0.0	0.0	0.0	0.0	27.2	59.7	67.1	86.0	70.4	33.3
1953	13.3	0.0	0.0	0.0	0.0	3.0	27.2	55.4	71.7	87.8	64.6	34.4
1954	10.4	0.0	0.0	0.0	0.0	0.0	18.2	59.1	67.8	80.3	56.6	30.6
1955	10.5	0.0	0.0	0.0	0.0	3.2	14.3	24.7	29.0	32.8	26.5	10.7
1956	3.9	0.0	0.0	0.0	0.0	5.3	38.5	47.6	71.6	86.8	70.2	29.9
1957	5.5	1.6	0.0	0.0	0.0	3.5	30.2	47.0	57.8	65.0	52.8	9.7
1958	0.0	0.2	0.0	0.0	0.0	0.0	7.9	41.9	73.3	90.2	75.5	35.8
1959	12.9	1.6	0.0	0.0	0.0	1.7	34.6	52.7	49.5	55.8	43.9	9.0
1960	9.0	1.3	0.0	0.0	0.0	0.0	13.9	21.3	30.1	33.9	27.4	13.1

Full Year			End-of-April (May 1st)
Oct-Apr	Mar-Feb	Allocation	Shasta Storage Volume (TAF)
TOT	TOT	PCT	
49.7	357.1	100%	4552.0
21.0	175.2	49%	3743.1
20.9	88.2	25%	2500.0
10.0	247.1	69%	4202.8
14.6	112.0	31%	3896.7
36.4	356.8	100%	4552.0
14.7	203.5	57%	4536.7
21.5	115.0	32%	2771.1
7.7	58.1	16%	2916.8
15.8	72.1	20%	1860.3
1.9	0.0	0%	1787.3
12.9	74.6	21%	1716.4
12.1	87.6	25%	1640.1
0.5	97.6	27%	2701.3
14.9	185.4	52%	4126.4
19.4	170.2	48%	4047.6
18.1	356.8	100%	4058.0
65.5	244.5	68%	3617.4
23.0	262.6	74%	4211.6
8.0	324.7	91%	4456.0
9.9	349.9	98%	4510.0
26.1	271.0	76%	4552.0
15.6	74.0	21%	3187.8
18.8	190.6	53%	4155.4
38.4	300.5	84%	4552.0
22.2	123.4	35%	3390.0
4.4	234.2	66%	4304.8
23.5	221.0	62%	4435.9
26.1	142.2	40%	4233.7
39.3	313.1	88%	4516.5
27.7	357.0	100%	4290.0
43.5	354.5	99%	4552.0
28.6	323.1	91%	4546.0
28.0	145.1	41%	3901.0
47.7	356.9	100%	4526.0
40.8	266.2	75%	4535.8
8.1	339.0	95%	4173.0
50.8	257.6	72%	4403.0
24.2	144.2	40%	4173.0

19.3	170.4	48%	4552.0
33.6	271.4	76%	4552.0
6.3	342.1	96%	4137.0
26.6	131.6	37%	3746.6
15.6	261.5	73%	4500.0
44.9	272.7	76%	4552.0
16.7	338.2	95%	4479.0
37.6	247.2	69%	4387.3
35.4	356.9	100%	4434.0
30.9	236.9	66%	4291.1
49.0	303.0	85%	4470.4
39.1	152.9	43%	4552.0
28.7	327.9	92%	4464.5
20.9	354.7	99%	4289.0
26.9	357.0	100%	4449.7
22.5	83.3	23%	3878.5
20.8	77.1	22%	1944.7
11.4	354.7	99%	4552.0
28.8	185.2	52%	4053.4
23.6	305.8	86%	4390.5
24.8	244.4	68%	4273.5
12.4	330.6	93%	4094.0
7.4	340.5	95%	4074.0
51.8	313.5	88%	4552.0
25.0	229.0	64%	3952.7
17.5	183.6	51%	4012.6
19.3	97.7	27%	3623.0
11.8	71.3	20%	3432.6
20.1	161.3	45%	4257.5
13.2	67.9	19%	3256.0
9.7	114.8	32%	2608.7
5.9	33.0	9%	2746.1
28.1	351.4	98%	4552.0
41.0	261.6	73%	3428.3
28.3	352.7	99%	4216.8
40.0	344.1	96%	4477.1
46.8	285.7	80%	4284.2
21.4	318.2	89%	4367.8
36.3	357.0	100%	4552.1
32.5	335.1	94%	4550.5
10.1	110.6	31%	3754.8
42.1	268.7	75%	4552.1
20.0			4552.1

ROC on LTO CalSimII Simulation

North-of-Delta Deliveries to CVP Ag Service Contract

WATER YEAR	Allocation/Contract Year											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1922	4.9	0.0	0.0	0.0	0.0	0.5	44.3	57.9	72.6	82.4	66.2	32.1
1923	1.0	0.0	0.0	0.0	0.0	9.2	26.2	62.8	61.7	76.1	61.4	16.5
1924	8.3	0.7	0.0	0.0	0.0	3.0	14.9	16.8	18.6	20.9	16.8	8.1
1925	0.0	0.0	0.0	0.0	0.0	0.0	10.7	42.1	67.1	86.0	68.9	27.1
1926	12.9	0.0	0.0	0.0	0.0	1.5	3.4	17.8	26.7	30.1	23.6	11.6
1927	1.5	0.0	0.0	0.0	0.0	0.5	34.4	59.2	69.8	87.0	70.3	33.8
1928	1.7	0.0	0.0	0.0	0.0	0.0	13.1	36.1	44.8	51.1	41.3	19.7
1929	7.1	0.0	0.0	0.0	0.0	0.9	20.3	29.9	26.2	37.3	30.2	14.5
1930	5.7	0.9	0.0	0.0	0.0	0.0	5.1	13.9	20.6	23.2	18.7	7.5
1931	3.0	0.0	0.0	0.0	0.0	3.6	12.9	12.1	14.0	18.5	14.9	7.1
1932	2.2	0.0	0.0	0.0	0.0	0.1	0.7	0.9	1.2	1.4	1.1	0.5
1933	0.2	0.0	0.0	0.0	0.0	1.4	13.0	12.7	15.5	17.6	14.2	6.8
1934	1.5	0.4	0.0	0.0	0.0	0.3	11.3	16.9	19.8	23.4	19.0	0.8
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.6	16.8	25.8	29.0	23.4	10.8
1936	1.7	0.2	0.0	0.0	0.0	0.2	13.5	30.7	35.4	48.7	39.5	17.9
1937	7.2	1.1	0.0	0.0	0.0	0.0	11.6	31.3	34.2	43.4	35.1	16.9
1938	1.4	0.0	0.0	0.0	0.0	0.0	16.7	56.2	81.2	91.3	73.8	28.5
1939	4.6	0.1	0.0	0.0	4.4	19.9	43.7	36.6	49.6	55.1	45.2	17.2
1940	5.8	1.3	0.0	0.0	0.0	0.0	18.0	48.4	61.4	70.3	56.8	26.3
1941	1.3	0.0	0.0	0.0	0.0	0.0	6.8	36.7	77.4	91.8	74.2	35.3
1942	2.5	0.0	0.0	0.0	0.0	0.0	7.3	45.3	81.4	93.5	75.5	35.4
1943	11.4	0.0	0.0	0.0	0.0	0.1	17.2	58.9	65.1	75.1	61.0	29.4
1944	9.6	0.2	0.0	0.0	0.0	0.8	12.3	20.3	27.8	33.5	27.1	13.0
1945	3.1	0.0	0.0	0.0	0.0	0.0	25.3	50.2	56.7	72.6	58.6	28.2
1946	0.1	0.0	0.0	0.0	0.0	1.1	45.2	58.2	68.7	75.7	62.4	29.1
1947	10.7	0.0	0.0	0.0	0.0	0.0	18.1	28.0	30.4	41.0	33.0	16.1
1948	0.2	0.0	0.0	0.0	0.7	1.8	3.7	30.7	61.3	89.6	72.1	29.7
1949	6.2	0.5	0.0	0.0	0.0	0.0	21.4	43.9	53.6	60.5	48.7	23.1
1950	9.8	0.1	0.0	0.0	0.0	0.2	17.2	24.2	27.9	32.2	26.0	11.4
1951	0.3	0.0	0.0	0.0	0.0	1.6	42.0	48.6	72.5	82.1	66.2	31.5
1952	0.5	0.0	0.0	0.0	0.0	0.0	27.2	59.7	67.1	86.0	70.4	33.3
1953	13.3	0.0	0.0	0.0	0.0	3.7	28.0	55.4	71.7	87.8	64.6	34.4
1954	10.4	0.0	0.0	0.0	0.0	0.0	18.7	59.1	71.3	84.4	59.5	32.2
1955	11.1	0.0	0.0	0.0	0.0	3.6	15.9	27.6	32.3	36.6	29.6	12.0
1956	4.4	0.0	0.0	0.0	0.0	5.3	38.5	47.6	71.6	86.8	70.2	29.9
1957	5.5	1.6	0.0	0.0	0.0	4.1	32.3	54.1	67.1	75.7	61.2	11.2
1958	0.0	0.2	0.0	0.0	0.0	0.0	7.9	41.9	73.3	90.2	75.5	35.8
1959	12.9	1.6	0.0	0.0	0.0	2.2	44.2	63.1	63.4	71.4	56.2	11.6
1960	11.5	1.7	0.0	0.0	0.0	0.0	11.1	17.1	24.1	27.2	22.0	10.5

Results - PA			Shasta Storage	Storage could	
Oct-Apr			Allocation	Is May 1st storage < 4000 ?	have been boosted by a MAX of
Oct-Apr	Mar-Feb	Allocation	End-of-April (May 1st) Volume (TAF)		
TOT	TOT	PCT			
49.7	357.1	100%	4552.0		
36.5	322.9	90%	4303.7		
27.0	99.2	28%	2520.9	Check	340.8
10.7	314.8	88%	4271.7	Check	319.7
17.7	116.1	33%	3888.7		
36.4	356.9	100%	4552.0		
14.8	213.2	60%	4536.7	Check	21.2
28.3	165.9	46%	3205.2	Check	170.9
11.6	92.0	26%	3229.9	Check	274.4
19.5	85.3	24%	2072.0	Check	343.9
3.0	6.2	2%	1884.3	Check	363.7
14.6	83.1	23%	1853.1	Check	444.1
13.6	91.6	26%	1667.0	Check	524.0
0.6	108.4	30%	2701.3	Check	
15.7	194.4	54%	4133.1		
20.0	173.9	49%	4078.8		
18.2	356.8	100%	4058.0		
72.7	274.4	77%	3845.6	Check	356.8
25.0	282.6	79%	4211.6		
8.1	324.7	91%	4456.0		
9.9	349.9	98%	4510.0		
28.7	316.5	89%	4552.0		
22.9	137.8	39%	3750.6	Check	13.1
28.3	291.6	82%	4517.6		
46.4	351.1	98%	4552.0		
28.8	167.4	47%	3822.6	Check	18.1
6.3	295.7	83%	4405.4		
28.1	261.0	73%	4431.0		
27.3	139.4	39%	4117.0		
44.0	345.1	97%	4516.5		
27.8	357.0	100%	4290.0		
45.0	356.0	100%	4552.0		
29.1	336.3	94%	4546.0		
30.5	161.9	45%	4107.9		
48.1	356.9	100%	4526.0		
43.5	306.0	86%	4535.8		
8.1	339.0	95%	4173.0		
61.0	325.3	91%	4330.6		
24.3	115.7	32%	4117.5		

20.0	189.0	53%	4512.9		
38.2	309.7	87%	4552.0		
6.3	342.0	96%	4137.0		
34.2	173.0	48%	3964.4	Check	342.0
16.5	303.4	85%	4500.0		
57.9	350.5	98%	4552.0		
19.7	338.2	95%	4479.0		
43.3	304.3	85%	4387.3		
36.3	356.8	100%	4434.0		
33.6	262.2	73%	4291.1		
59.1	356.7	100%	4470.4		
51.0	189.6	53%	4536.6		
31.8	357.0	100%	4459.3		
21.0	354.7	99%	4289.0		
26.9	357.0	100%	4449.7		
25.0	95.3	27%	4083.8		
21.4	77.0	22%	1751.9	Check	113.3
11.2	355.2	100%	4552.0		
34.1	264.5	74%	4441.6		
27.3	350.0	98%	4421.4		
31.6	324.5	91%	4462.4		
12.5	330.6	93%	4094.0		
7.4	340.5	95%	4074.0		
57.8	349.7	98%	4552.0		
29.3	285.0	80%	4041.1		
19.0	191.5	54%	3892.5	Check	297.6
29.8	180.1	50%	4198.4		
19.2	112.3	31%	3757.8	Check	15.1
23.4	177.2	50%	4273.1		
12.2	61.9	17%	3201.3	Check	11.2
9.6	116.2	33%	2424.1	Check	69.2
6.9	46.7	13%	2703.3	Check	181.2
28.1	351.4	98%	4552.0		
42.2	271.5	76%	3750.2	Check	35.1
28.7	352.7	99%	4216.8		
40.0	344.1	96%	4477.1		
54.3	325.1	91%	4278.7		
22.3	303.7	85%	4367.8		
35.5	357.0	100%	4552.1		
32.5	335.1	94%	4550.5		
13.3	145.8	41%	4158.2		
50.7	318.8	89%	4552.1		
21.9			4552.1		

Resulting
in
End-of-April
(May 1st)
Shasta Storage
Volume (TAF)

- 2861.7 with zero allocation in prior BN year and zero allocation in current CRT year
- 4208.4** with zero allocation in prior DRY year and zero allocation in current DRY year
- 3226.4 with zero allocation in current year (CRT)
3400.8 with zero allocation in prior CRT year and zero allocation in current DRY year
2346.3 with zero allocation in 1929 (CRT), 1930 (DRY) & 1931 (CRT)
2228.1 with zero allocation in 1929 (CRT), 1930 (DRY), 1931 (CRT), 1932 (DRY)
2216.7 with zero allocation in 1929 (CRT), 1930 (DRY), 1931 (CRT), 1932 (DRY), 1933 (CRT)
2111.1 with zero allocation in 1929 (CRT), 1930 (DRY), 1931 (CRT), 1932 (DRY), 1933 (CRT), 1934 (CI)
3225.3 with zero allocation in 1929 (CRT), 1930 (DRY), 1931 (CRT), 1932 (DRY), 1933 (CRT), 1934 (CI)
- 4202.4** with zero allocation in prior year (WET)
- 3763.7 with zero allocation in current year (DRY)
- 3840.6 with zero allocation in current year (DRY)

4306.4 with zero allocation in prior year (WET)

1865.2 with zero allocation in prior CRT year and zero allocation in current CRT year

4190.1 with zero allocation in prior DRY year and zero allocation in current WET year

3772.9 with zero allocation in current year (CRT)

3212.5 with zero allocation in current year (CRT)

2493.3 with zero allocation in prior CRT year and zero allocation in current CRT year

2884.6 with zero allocation in 1990 (CRT), 1991 (CRT) & 1992 (CRT)

3785.3 with zero allocation in current year (CRT)

Perfect hindsight/foresight

RT)
RT)

Perfect hindsight/foresight

Perfect hindsight/foresight

Perfect hindsight/foresight