

Water-Energy Grant Application  
Cross Valley Canal Extension Lining - Pool No. 8

Appendix 3.1 - Improvement District No. 4 – Report  
on Water Conditions 2013

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# Improvement District No. 4

## Report on Water Conditions 2013

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Kern River at Keysville

## 2013 ID4 Water Supplies Exchanges, and Deliveries (acre-feet)

All units in acre-feet unless otherwise noted.

ID4 SUPPLIES	SWP <sup>1</sup>	SWP by Exchange <sup>2</sup>	Kern River	SWP by Exchange <sup>3</sup>	Bank Recovery	Total
SWP (M&I)	26,950					26,950
SWP (Ag)	2,081					2,081
2012 Carryover	2,301					2,301
2013 Agency Table A	238					238
Multi-Year	3,600					3,600
Turn Back Pool A	100					100
Yuba Accord	4,075					4,075
Recovered Supplies:						
2800 Acres	83				1,942	2,025
Joint Use Recovery Project					3,303	3,303
Kern Water Bank	5,230				4,067	9,297
Pioneer Project	5,144				10,902	16,046
<b>Subtotal</b>	<b>49,802</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>20,214</b>	<b>70,016</b>
<b>ID4 EXCHANGES / OBLIGATIONS</b>						
California Aqueduct					(5,000)	(5,000)
City of Bakersfield	(506)	506	3,100			3,100
Kern Delta WD Exchange	(26,366)	16,366			10,000	-
Kern Tulare WD Exchange 2013	(3,630)	3,296				(334)
North Kern WSD Category A		4,758			(4,067)	691
North Kern WSD Category B	(6,055)	6,055				-
Pastoria					(322)	(322)
Truxtun Lakes	(234)	(177)				(411)
<b>Total Exchanges/Obligations</b>	<b>(36,557)</b>	<b>30,981</b>	<b>3,100</b>	<b>-</b>	<b>611</b>	<b>(1,865)</b>
<b>Available Supplies</b>	<b>13,244</b>	<b>30,981</b>	<b>3,100</b>	<b>-</b>	<b>20,825</b>	<b>68,151</b>

ID4 DELIVERIES	SWP <sup>1</sup>	SWP by Exchange <sup>2</sup>	Kern River	SWP by Exchange <sup>3</sup>	Bank Recovery	Total
Henry C. Garnett Water Purification Plant	2,554	19,049	3,007		13,051	37,661
In-District Transportation Recharge	1,568	7,023			7,268	15,859
In-District Recharge	2,623	4,910			234	7,767
Out of District Losses	2,600				272	2,872
Carryover 2013	3,899		93			3,992
<b>Total Deliveries</b>	<b>13,244</b>	<b>30,981</b>	<b>3,100</b>	<b>-</b>	<b>20,825</b>	<b>68,151</b>

acre-feet

## ID4 Groundwater Recharge and Recovery Asset Summary

Groundwater Banking Facility	ID4 Interest	Annual Recharge Capacity	Annual Recovery Capacity <sup>6</sup>	ID4 Recharge Capacity	ID4 Recovery Capacity	Summary of Banked Water
Kern Water Bank	9.62%	450,000	230,000	43,290	22,126	159,621
Pioneer Project	10%	146,000	100,000	14,600	10,000	49,868
ID4 Banking Wells <sup>4</sup>	100%		12,000		12,000	58,406
ID4/Rosedale Joint Use Recovery Project <sup>5</sup>	22.2%		21,000		5,940	1,170
Allen Road Well Field	100%		36,000		36,000	
<b>Total</b>		<b>596,000</b>	<b>399,000</b>	<b>57,890</b>	<b>86,066</b>	<b>269,065</b>

<sup>1</sup> SWP allocation for 2011 was 80%.

<sup>2</sup> SWP water by exchange with Kern River interests.

<sup>3</sup> SWP water by exchange with Friant-Kern interests.

<sup>4</sup> ID4 recovery wells and banked water in City of Bakersfield's 2800 Acres Recharge Facility.

<sup>5</sup> First priority for 10 cfs of recovery capacity.

<sup>6</sup> Recovery capacity varies with respect to depth to groundwater.

## ID4 History of Purification Plant Water Use by Sources (acre-feet)

Year	State Water Project	State Water Project by Exchange <sup>1</sup>	Kern River	State Water Project by Exchange <sup>2</sup>	Recovered	Total
1975						-
1976						-
1977	15,950					15,950
1978	8,329	15,607				23,936
1979	5,347	21,078				26,425
1980	4,288	18,551				22,839
1981	20,457	3,407				23,864
1982	3,584	21,488				25,072
1983	1,287	23,317				24,604
1984	21,068	5,200				26,268
1985	942	23,331				24,273
1986	1,487	22,967				24,454
1987	1,974	23,534				25,508
1988	7,971	21,360				29,331
1989	11,844	15,593				27,437
1990	24,728	2,694				27,422
1991	2,467	9,146			7,719	19,332
1992	6,830	8,442			12,241	27,513
1993	4,653	23,414		2,883		30,950
1994	4,030	20,680		715	4,186	29,611
1995	2,528	28,883			222	31,633
1996	24	28,527		1,387		29,938
1997		25,416		7,980		33,396
1998		26,510		1,906		28,416
1999		28,340				28,340
2000	132	29,023				29,155
2001	3,503	7,579			15,810	26,892
2002	5,228	21,327			1,194	27,749
2003	9,826	14,011			2,111	25,948
2004	4,282	14,419			6,693	25,394
2005	1,967	24,320			787	27,074
2006	7,160	18,412				25,572
2007	4,826	14,874			7,301	27,001
2008	1,462	25,000				26,462
2009	-	28,335				28,335
2010	718	29,231				29,949
2011	2,473	20,751	13,021			36,245
2012	22,272	8,892	14,066			45,230
2013	2,554	19,049	3,007		13,051	37,661
<b>TOTAL</b>	<b>216,191</b>	<b>692,708</b>	<b>30,094</b>	<b>14,871</b>	<b>71,315</b>	<b>1,025,179</b>

<sup>1</sup> SWP water by exchange with Kern River interests.

<sup>2</sup> SWP water by exchange with Friant-Kern interests.