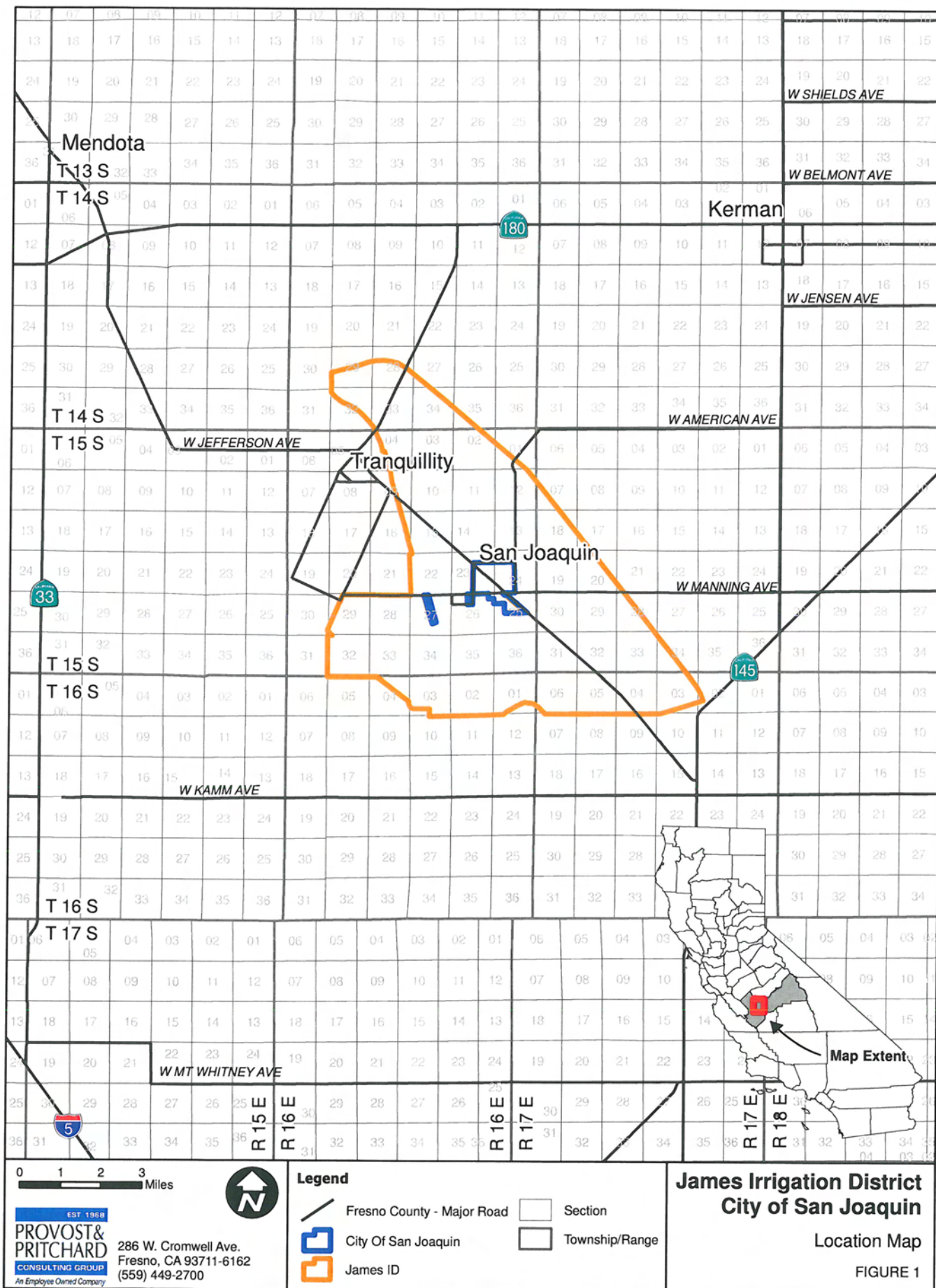
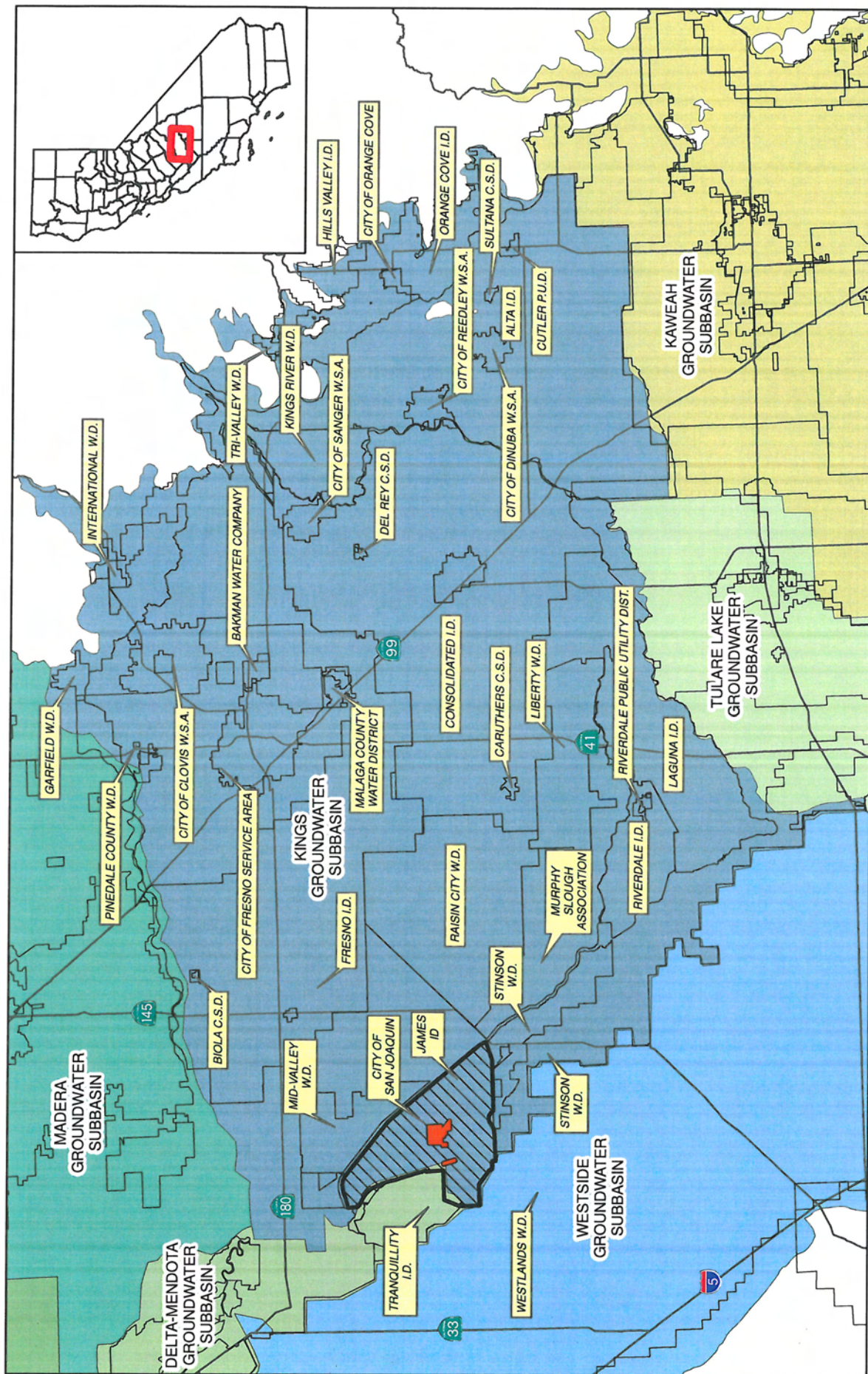


JAMES IRRIGATION DISTRICT
CITY OF SAN JOAQUIN

GROUNDWATER MANAGEMENT PLAN

FIGURES AND ATTACHMENTS





Legend

Water District Boundary City Of San Joaquin

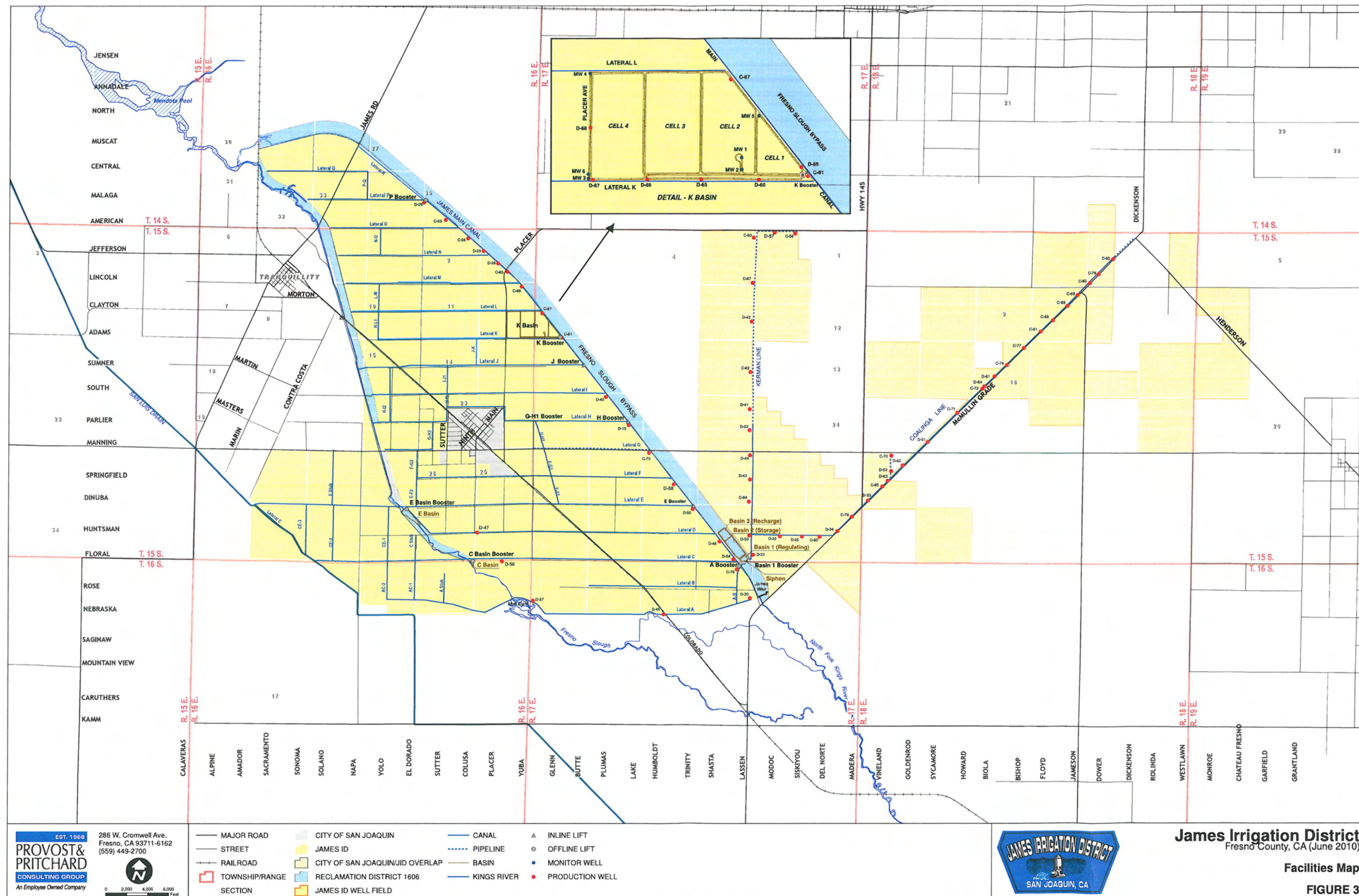
James ID

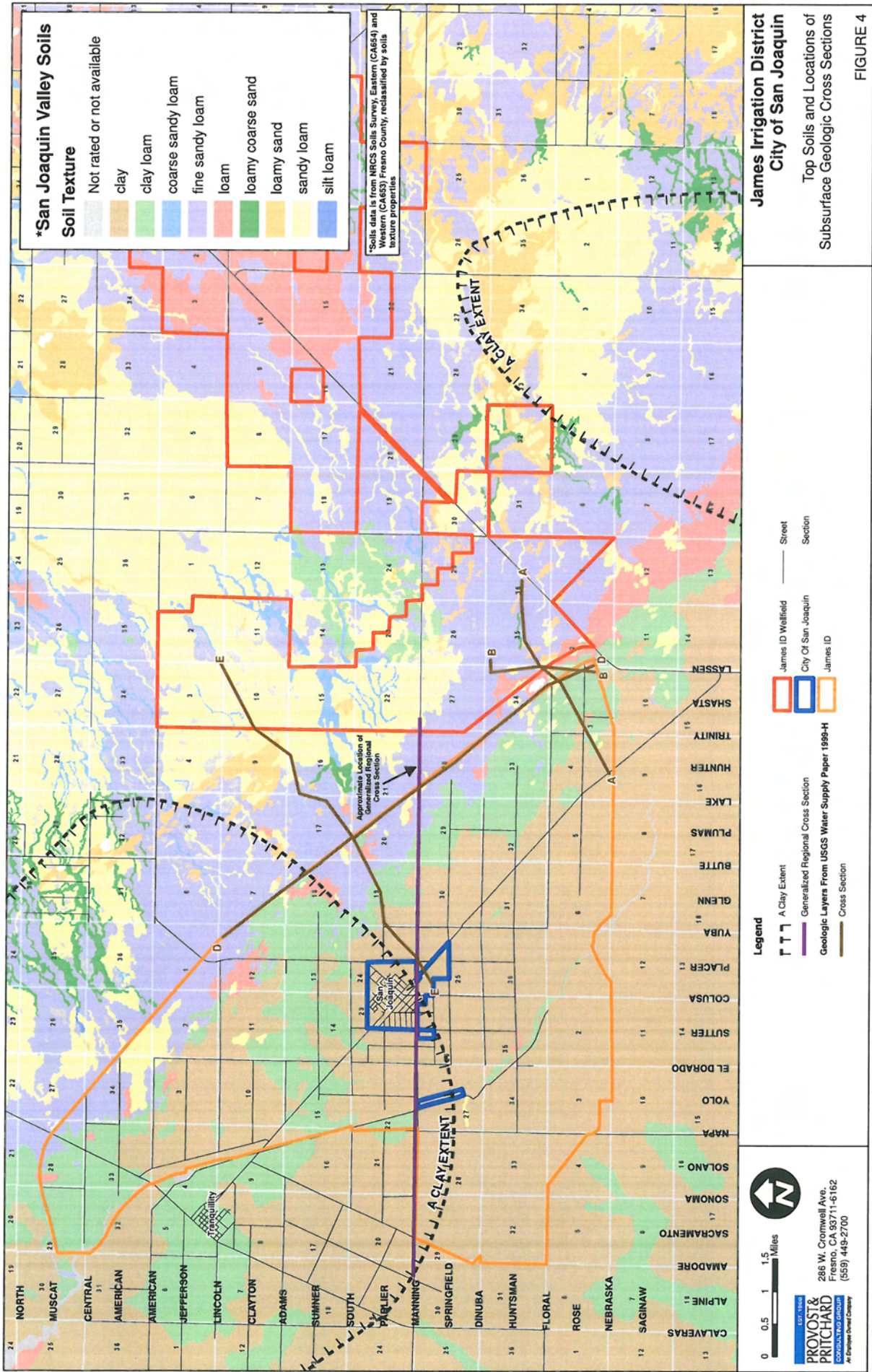
Source: California Department of Water Resources Bulletin 118, California's Groundwater Update 2003

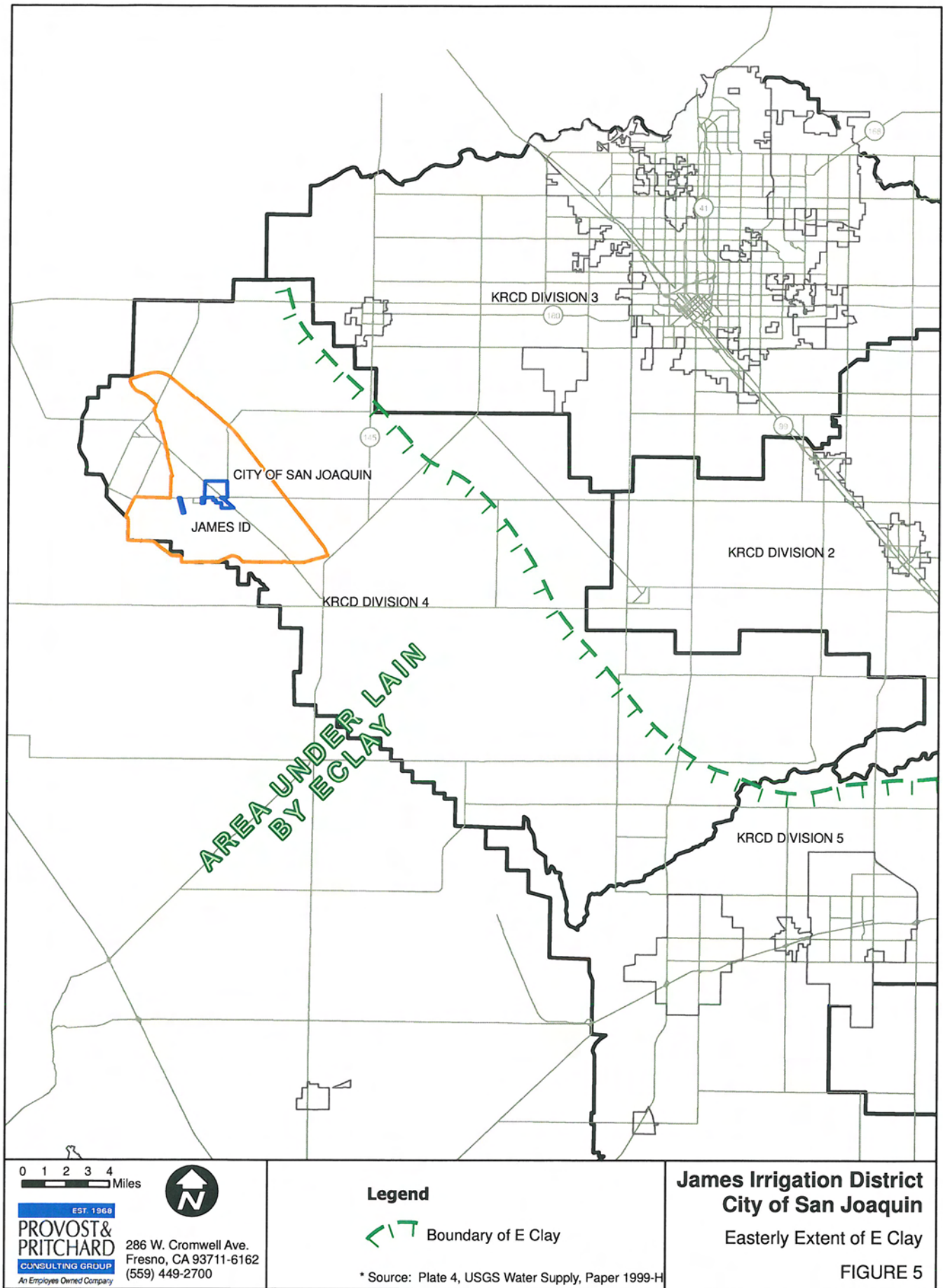
James Irrigation District
City of San Joaquin
 Groundwater Subbasins

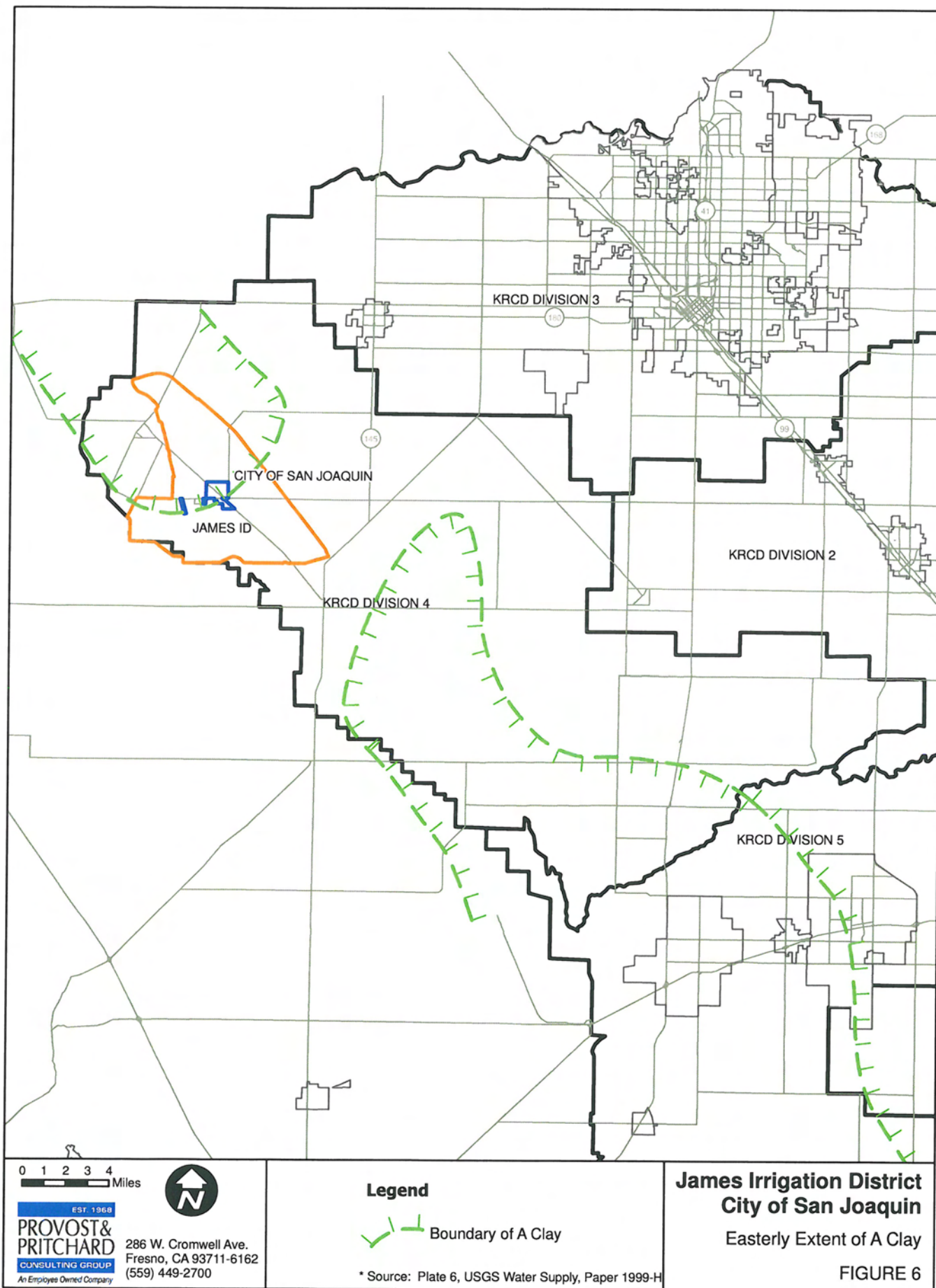
FIGURE 2

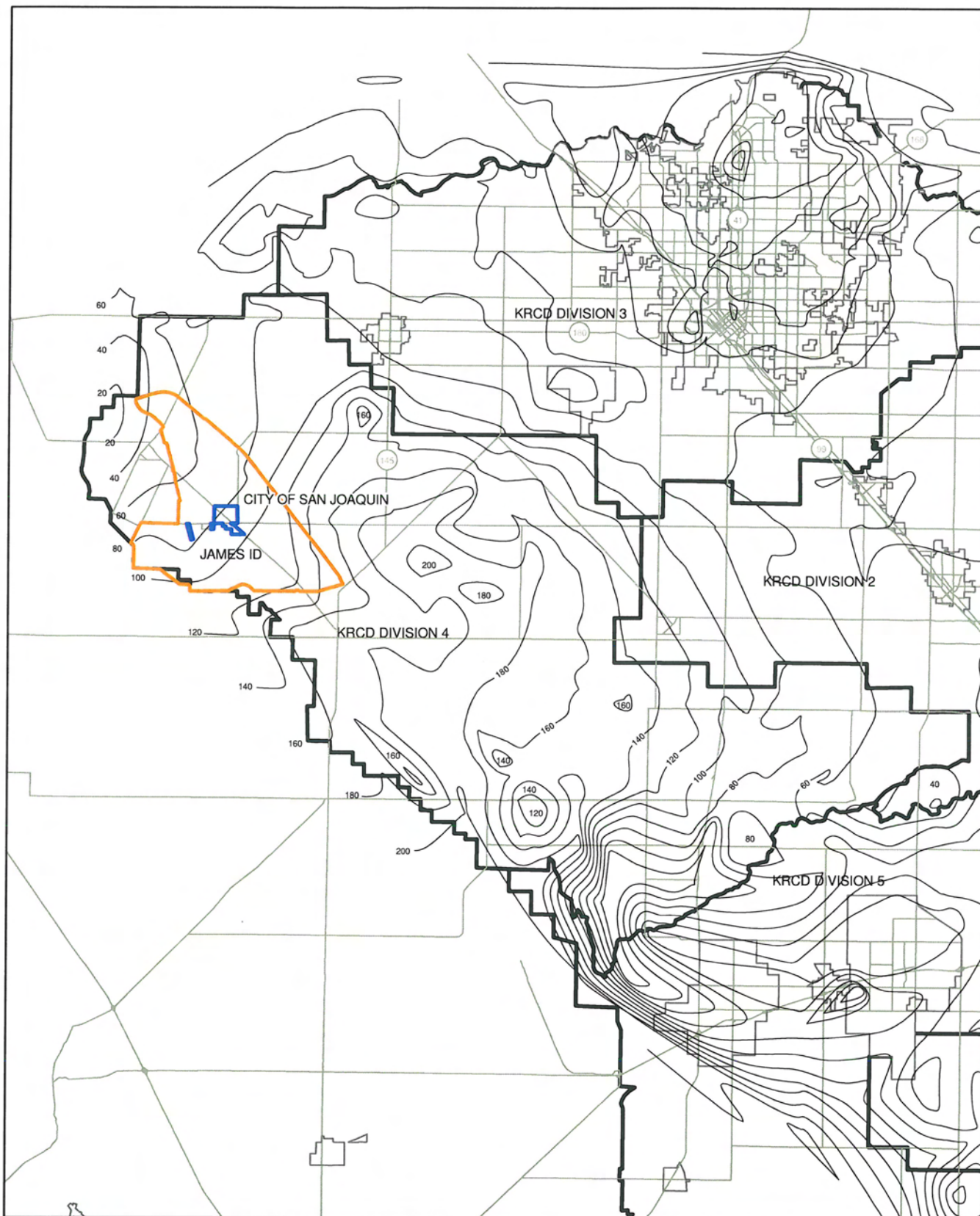
PROVOST & PRITCHARD
 EST. 1966
 286 W. Cromwell Ave.
 Fresno, CA 93711-6162
 (559) 449-2700
 An Employee Owned Company











0 1 2 3 4 Miles



EST. 1969
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

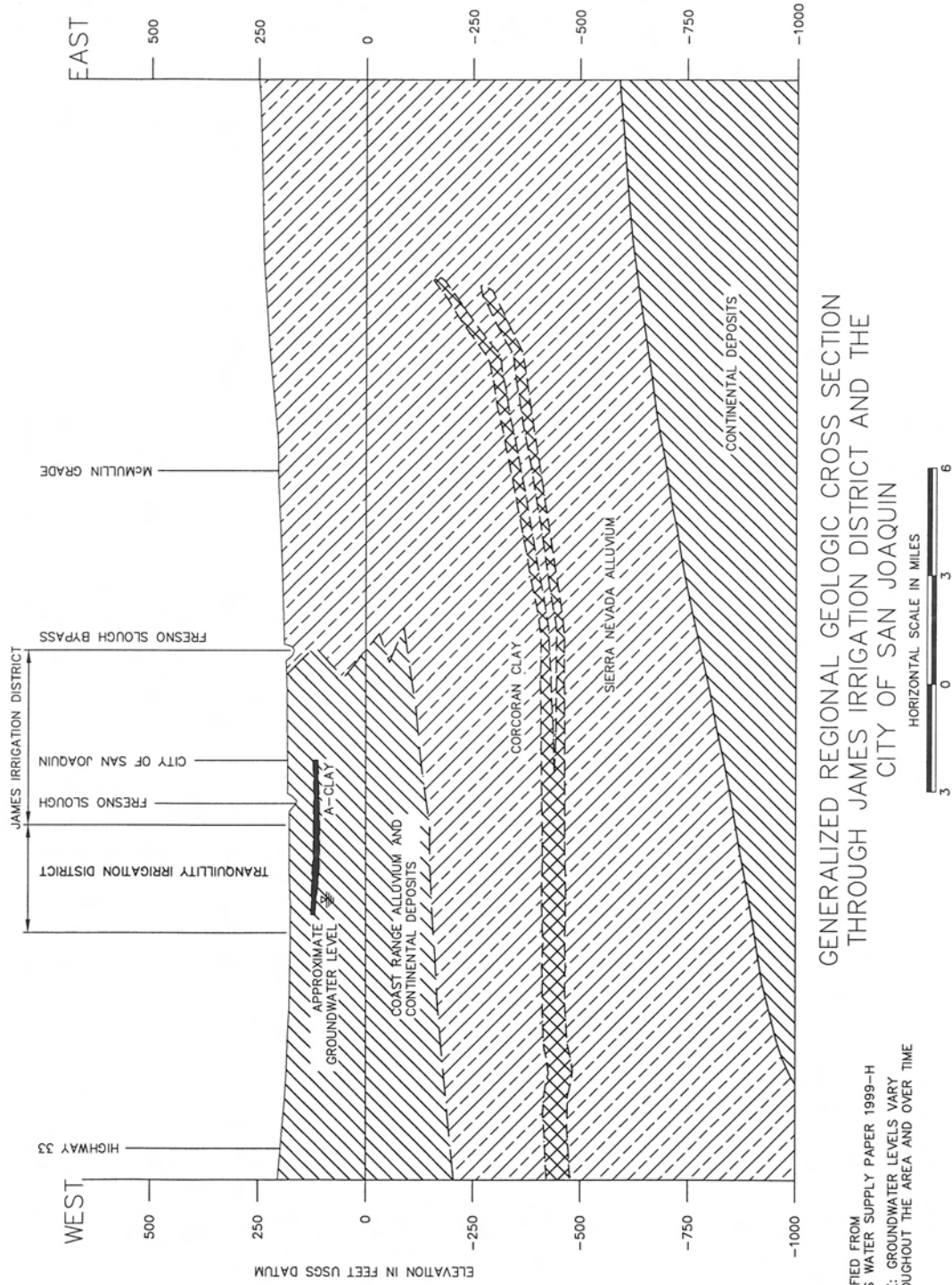
Legend

— Line of Equal Depth (ft)

* Source: Figure 3, 2001-2003 Groundwater Report,
Kings River Conservation District, Feb. 2004

James Irrigation District
City of San Joaquin
Regional Groundwater Contours 2003
Depth To Groundwater
FIGURE 7

FIGURE 8



MODIFIED FROM
USGS WATER SUPPLY PAPER 1999-H
NOTE: GROUNDWATER LEVELS VARY
THROUGHOUT THE AREA AND OVER TIME

GENERALIZED REGIONAL GEOLOGIC CROSS SECTION
THROUGH JAMES IRRIGATION DISTRICT AND THE
CITY OF SAN JOAQUIN

CATEGORY: CROP	2009 ACRES	2008 ACRES	2007 ACRES	2006 ACRES	2005 ACRES	2004 ACRES	2003 ACRES	2002 ACRES	2001 ACRES	2000 ACRES	1999 ACRES	1998 '(2) ACRES	1997 ACRES	1996 ACRES	1995 ACRES	1994 ACRES	1993 ACRES	HISTORICAL AVERAGE
FIELD: COTTON	5,814	6,550	11,090	12,683	14,321	14,390	12,766	12,648	13,135	10,707	10,896	10,541	14,905	15,761	15,200	13,755	14,173	12,314
FIELD: SUGAR BEETS		548	795	764	504	237	399	574	264	381	734	382	219	90	449	920	589	491
FRUITS: POMEGRANATES	597	526	514	157														449
GRAIN: BARLEY	112	114	171	137	161	213	214	144	0	12	0	12	100	134	380	426	296	154
GRAIN: CORN / HUMAN CONSUMPTION	225	1,676	2,039	119	1,099	1,051	932	1,021	74	119	195	0	0	0	0	0	0	503
GRAIN: OATS						100	230	281	90	0	0	0	0	0	43	247	0	83
GRAIN: WHEAT	1,378	1,947	801	328	671													0
GRAPES: WINE / BEARING	1,253	1,253	1,253	1,253	721	458	383	383	383	212	691	583	184	462	109	275	426	814
GRAPES: WINE / NON-BEARING				incl		150	0	0	0	0	0	190	114	114	114	114	114	521
HAY: ALFALFA	151	108	190	40	165	84	147	448	876	140	120	120	56	126	69	147	165	58
HAY: BARLEY			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185
HAY: GRASS (Var. Love)	56		48		56	0	0	0	0	0	12	0	0	0	0	0	0	1
HAY: GRASS (Var. Sudan)		160	84		80	80	0	0	0	0	0	260	0	0	0	0	0	11
HAY: OAT	38	8	92	92		64	262	575	280	216	111	103	53	0	0	0	0	44
MELONS: CANTALOUPe						0	0	0	0	5	0	375	65	0	0	60	424	77
MELONS: HONEYDEW						0	0	0	0	0	140	0	57	0	0	0	0	16
NUTS: ALMONDS / BEARING	2,428	2,320	2,108	1,886	1,514	991	615	842	438	695	635	280	80	40	40	20	20	880
NUTS: ALMONDS / NON-BEARING				incl		179	320	37	367	138	134	240	360	400	140	20	20	196
PASTURE (PERMANENT)	58	58	14	15	16	10	16	11	7	11	11	5	9	63	59	68	69	29
SEED: ALFALFA	6,005	4,099	3,127	2,604	2,407	2,321	1,772	2,256	4,632	6,942	8,194	7,405	5,568	5,320	5,663	5,562	5,116	4,647
SEED: BROCCOLI				54	54	0	0	0	0	0	0	0	0	0	0	0	0	8
SEED: CARROT					12	12	0	0	0	0	0	0	0	0	0	0	0	2
SEED: CORN	30	16	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
SEED: LETTUCE	115	13	37	38	38	42	40	39	0	42	36	75	0	0	0	0	0	30
SEED: MUSTARD		1	26	26	51	25	0	0	0	5	0	0	0	0	0	0	0	7
SEED: ONION	2	2																2
SEED: RADISH				5	5													5
SEED: SPINACH (Var. Komatsuna)				8	8													8
SEED: SUDAN GRASS						0	0	156	0	0								

(1) 1998 - INCLUDES ADJUSTMENT (131.24) ACFT / ALMONDS FOR ERRONEOUS METER READINGS/PRIOR YEAR

* (2) 1999 - COTTON: ABANDONED 402 ACRES

JAMES IRRIGATION DISTRICT
SUMMARY OF PRODUCTION WELL ATTRIBUTES

ATTACHMENT 2

Well No.	Type	State ID #	Location	Casing Diameter (in)	Depth (ft)	Perforated Interval (ft)	Date Constructed	Capacity (gpm)	Notes
C-49	Agricultural		Coalinga Alignment (McMullin Grade)						ABANDONED
C-53	Agricultural		Coalinga Alignment (McMullin Grade)						ABANDONED
C-54	Agricultural		Coalinga Alignment (McMullin Grade)						ABANDONED
C-55	Agricultural		Main Canal Alignment	16	500	275 to 496	*	1621	DIFFICULT TO READ
C-56	Agricultural		Main Canal Alignment	18	484	218 to 478	6/12/1959	1661	
C-57	Agricultural	15/18-30F2	Coalinga Alignment (McMullin Grade)	16	365	167 to 361	3/16/1960	-	MULTIPLE C-57'S
C-58	Agricultural	15/17-2	Kerman Alignment (Lassen Avenue)	16	382	148 to 376	6/5/1960	1786	
C-59	Agricultural	15/17-23	Kerman Alignment (Lassen Avenue)	16	416	154 to 408	11/29/1960	-	Abandoned as of 2008
C-60	Agricultural	15/17-3	Kerman Alignment (Lassen Avenue)	16	405	148 to 400	2/16/1961	1490	
C-61	Agricultural	15/18-10	Coalinga Alignment (McMullin Grade)	16	418	163 to *	2-8*	1190	
C-62	Agricultural	15/17-14	Kerman Alignment (Lassen Avenue)	16	430	168 to 410 to 427	6/18/1962	1197	
C-63	Agricultural	15/17-34	Main Canal Alignment	16	477	220 to 470	4/31/1963	-	ABANDONED
C-64	Agricultural	15/16-2	Main Canal Alignment	16	492	212 to 485	6/20/1963	-	ABANDONED
C-65	Agricultural	15/16-1	Main Canal Alignment	16	496	200 to 488	7/6/1961	1032	
C-66	Agricultural		Main Canal Alignment						ABANDONED
C-67	Agricultural	15/17-3	Kerman Alignment (Lassen Avenue)	16	414	200 to 400	2/3/1966	926	
C-68	Agricultural	15/16-12	Main Canal Alignment	16	494	250 to 488	6/8/1967	1149	
C-69	Agricultural	15/18-10	Coalinga Alignment (McMullin Grade)	16	417	200 to 411	1/22/1963	975	
C-70	Agricultural	15/18-30	Coalinga Alignment (McMullin Grade)	16	458	230 to 452	4/28/1969	1225	
C-71	Agricultural	15/18-20	Coalinga Alignment (McMullin Grade)	16	422	230 to 415	6/25/1969	1110	
C-72	Agricultural	15/18-16	Coalinga Alignment (McMullin Grade)	16	424	230 to 404; 412 to 418	12/9/1969	1491	
C-73	Agricultural	15/17-28D	Main Canal Alignment	16	490	250 to 284; 308 to 484	4/24/1972	1362	
C-74	Agricultural	-	Coalinga Alignment (McMullin Grade)	16	442	235 to 437	5/9/1972	1470	
C-75	Agricultural	15/16-12	Main Canal Alignment	16	499	250 to 494	5/30/1972	-	
C-76	Agricultural	16/17-3	Main Canal Alignment	16 @ 0 to 386 14 @ 315 to 515	515	260 to 380; 330 to 511	5/24/1974	1058	
C-77	Agricultural	15/18-16	Coalinga Alignment (McMullin Grade)	16	458	245 to 454	6/21/1974	1311	
C-78	Agricultural	15/18-2	Coalinga Alignment (McMullin Grade)	16	518	280 to 345; 375 to 512	12/20/1976	1906	
C-79	Agricultural	15/17-36A	Coalinga Alignment (McMullin Grade)	16		250 to 520; 520 to 528	12/16/1979	1454	
C-80	Agricultural	-	Coalinga Alignment (McMullin Grade)	16	576	250 to 504	3/17/1981	2086	

JAMES IRRIGATION DISTRICT
SUMMARY OF PRODUCTION WELL ATTRIBUTES

ATTACHMENT 2

Well No.	Type	State ID #	Location	Casing Diameter (in)	Depth (ft)	Perforated Interval (ft)	Date Constructed	Capacity (gpm)	Notes
C-81	Agricultural	15/17-7	Main Canal Alignment	16	504	250 to 500	3/30/1982	1655	
C-82	Agricultural	15/17-36L	Coalinga Alignment (McMullin Grade)	16	533	270 to 282; 292 to 302; 310 to 322; 330 to 380; 384 to 420; 434 to 464; 506 to 524	11/16/1989	1379	
C-83	Agricultural	15/18-2	Coalinga Alignment (McMullin Grade)	16	511	253 to 265; 280 to 300; 324 to 330; 360 to 370; 380 to 422; 446 to 450; 470 to 500	4/19/1997	2008	
C-84	Agricultural	15/17-26	Kerman Alignment (Lassen Avenue)	16	500	340 to 476	4/29/1998	1670	
C-85	Agricultural	15/18-30	Coalinga Alignment (McMullin Grade)	16	532	340 to 320; 370 to 520	6/17/1998	1430	
C-86	Agricultural	15/16-36	Main Canal Alignment	16	500	330 to 420	5/24/2000	1211	Abandoned in 2010
C-87	Agricultural	15/17-7	Main Canal Alignment	16	492	330 to 484	10/25/2001	1391	
C-88	Agricultural	15/18-10	Coalinga Alignment (McMullin Grade)	16	500	335 to 406; 424 to 460; 480 to 490	10/29/2002	1419	
C-89	Agricultural	15/18-10	Coalinga Alignment (McMullin Grade)	16	500	300 to 306; 326 to 335; 368 to 376; 398 to 448; 469 to 483	7/19/2003	-	
D-04	Agricultural		Main Canal Alignment						ABANDONED
D-06	Agricultural		Kerman Alignment (Lassen Avenue)						ABANDONED
D-08	Agricultural	-	Main Canal Alignment	-	-	-	-	-	LIMITED LOG INFO
D-09	Agricultural		Main Canal Alignment						ABANDONED
D-10	Agricultural	15/17-28	Main Canal Alignment	18	808	208 to 808	1948	-	LIMITED LOG INFO
D-15	Agricultural	-	Main Canal Alignment	-	-	-	3/16/1950	-	LIMITED LOG INFO
D-16	Agricultural	-	Kerman Alignment (Lassen Avenue)	16	811	257-807	3/14/1952	-	ABANDONED
D-17	Agricultural		Kerman Alignment (Lassen Avenue)						ABANDONED
D-21	Agricultural		Main Canal Alignment						ABANDONED
D-22	Agricultural		Kerman Alignment (Lassen Avenue)						ABANDONED
D-23	Agricultural		Kerman Alignment (Lassen Avenue)						ABANDONED
D-24	Agricultural	-	Main Canal Alignment						MISSING
D-25	Agricultural		Main Canal Alignment						ABANDONED
D-29	Agricultural	-	Main Canal Alignment						MISSING
D-30	Agricultural	16/17-3	Main Canal Alignment	16	550	240 to 540	4/28/1972	1390	
D-31	Agricultural	15/17-35N	Kerman Alignment (Lassen Avenue)	16	520	240 to 510	4/19/1977	1345	

**JAMES IRRIGATION DISTRICT
SUMMARY OF PRODUCTION WELL ATTRIBUTES**

ATTACHMENT 2

Well No.	Type	State ID #	Location	Casing Diameter (in)	Depth (ft)	Perforated Interval (ft)	Date Constructed	Capacity (gpm)	Notes
D-32	Agricultural	15/17-35K	Coalinga Alignment (McMullin Grade)	16	525	270 to 510	9/15/1977	1399	
D-33	Agricultural	15/18-30	Coalinga Alignment (McMullin Grade)	16	495	270 to 480	9/17/1977	950	
D-34	Agricultural	15/17-36F	Coalinga Alignment (McMullin Grade)	16	575	270 to 540	11/17/1978	971	
D-35	Agricultural	15/17-35J	Coalinga Alignment (McMullin Grade)	16	550	270 to 540	1/24/1979	1267	
D-36	Agricultural	15/18-10	Coalinga Alignment (McMullin Grade)	16	543	270 to 540	2/2/1980	-	
D-37	Agricultural	-	Inside IID Boundary	16	520	270 to 480	11/13/1980	-	
D-38	Agricultural	15/16-1	Main Canal Alignment	16	515	270 to 510	11/12/1981	1157	
D-39	Agricultural	15/16-1	Main Canal Alignment	16	525	240 to 480	11/7/1984	1008	
D-40	Agricultural	15/17-20	Main Canal Alignment	16	525	270 to 510	5/3/1985	1349	
D-41	Agricultural	15/17-22	Kerman Alignment (Lassen Avenue)	16	520	270 to 510	4/30/1987	1319	
D-42	Agricultural	15/17-10	Kerman Alignment (Lassen Avenue)	16	520	270 to 510	5/9/1987	1343	
D-43	Agricultural	15/17-27	Kerman Alignment (Lassen Avenue)	16	525	270 to 510	5/20/1987	1199	
D-44	Agricultural	16/16-1	Inside IID Boundary	16	520	240 to 510	4/29/1989	-	ABANDONED
D-45	Agricultural	15/16	Inside IID Boundary	16	495	240 to 480	5/25/1990	-	ABANDONED
D-46	Agricultural	16/17-9	Inside IID Boundary	16	540	280 to 520	4/3/1991	-	
D-47	Agricultural	15/16-36	Inside IID Boundary	16	538	280 to 520	4/12/1991	-	
D-48	Agricultural	15/17-34	Main Canal Alignment	18	480	240 to 480	5/15/1992	1470	
D-49	Agricultural	15/17-27	Kerman Alignment (Lassen Avenue)	18	480	240 to 480	-	1355	Date Completed not given. Date of permit is 12/1/92
D-50	Agricultural	15/17-35D	Kerman Alignment (Lassen Avenue)	18	480	240 to 480	12/23/1992	1590	
D-51	Agricultural	15/16-20	Coalinga Alignment (McMullin Grade)	16	500	240 to 500	1/28/1994	1754	
D-52	Agricultural	15/17-22	Kerman Alignment (Lassen Avenue)	16	500	260 to 500	2/7/1995	1465	
D-53	Agricultural	-	Coalinga Alignment (McMullin Grade)	-	-	-	-	1625	No Info
D-54	Agricultural	15/17-34	Main Canal Alignment	16	480	240 to 480	7/12/1996	1248	
D-55	Agricultural	7/16/1996	Main Canal Alignment	16	480	240 to 480	7/16/1996	1523	
D-56	Agricultural	15/16-36	Inside IID Boundary	16	520	260 to 520	6/22/2000	-	
D-57	Agricultural	15/17-2	Kerman Alignment (Lassen Avenue)	16	520	280 to 520	3/24/2004	1750	
D-58	Agricultural	15/17-28	Main Canal Alignment	16	520	280 to 520	6/23/2005	2103	

SOURCE / LOSS REPORT - CURRENT YEAR

SOURCE >>	SJQN RVR Schedule 2	CENTRAL VALLEY PROJECT					JAMES	KINGS RIVER						FRESNO IRRIGATION DISTRICT					TRANSFERRED / WHEELED					INFLOW SUB-TOTAL	JID WELL PUMPS	INFLOW GRAND TOTAL	TOTAL (DELIV)	OUTFLOW TOTAL (SPILLED)	RECOVERED (RECHARGED)	(LOSS) SURPLUS	LOSS %				
POINT OF ENTRY >>	BOOSTER P	BOOSTER P					BOOSTER P	JID WEST WEIR	JID EAST WEIR	BOOSTER P	BOOSTER P	TOTAL KINGS RIVER	MUD DAM	DRY CREEK	LINCOLN AVE	SPILL BACK EASTSIDE CHANNEL	TOTAL FRESNO IRR	BOOSTER P																	
PERIOD CONTRACTp	100% RIPARIAN WTR RTS 9,700	10% USBR CONTR ENTITLE 35,300	USBR RESCHED/ CARRYOVR 6,169	USBR SEC 215	TOTAL CVP	MENDOTA POOL +RECD -5% LOSS	WEST WEIR	REG BASIN #1	BOOSTER P	SPILL BACK					FRESNO IRR INFLOW					TRANQ IRR DISTR	RECL 1606 YRIBARREN	SAN LUIS WATER DISTR	MENDOTA POOL (BANKED)												
JAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
FEB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-405															
MAR	0	0	0	0	0	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
APR	495	0	0	0	0	209	0	0	0	0	0	0	0	0	138.8	0	138.8	0	0	0															
MAY	963	0	0	0	0	472	0	0	0	0	0	0	0	0	109.1	0	109.1	54	0	0															
JUN	5642	0	137	0	137	0	0	0	0	0	0	0	0	0	93.2	0	93.2	417	0	0															
JUL	2000	0	2939	0	2939	0	0	0	0	0	0	0	0	0	41.6	0	41.6	160	0	0															
AUG	400	0	152	0	152	0	0	0	0	0	0	0	0	0	63.5	0	63.5	0	0	0															
SEP	200	0	105	0	105	0	0	0	0	0	0	0	0	0	5.9	0	5.9	0	0	0															
OCT		0	319	0	319	0	0	0	0	0	0	0	0	0	0	0	140	0	0	0															
NOV		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
DEC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-28															
TOTALS	9700	0	3652	0	3652	857	0	0	0	0	0	0	0	0	452.1	0	452.1	771	0	0	-433	14999	55093	70092	-55403	-977	2039	15751	22%						
2008 CONTRACT YR / JAN-FEB	0	0	0	0	0	*Note 3																													
2009 CONTRACT YR / MAR-DEC	9700	3530	6169	0	9699																														
TOTAL ENTITLEMENT	9700	3530	6169	0	9699	<< TOTAL ENTITLEMENT																													
PAPER TRANSFERS OUT:																																			
JAN		0	0	0	0																														
FEB		0	-1200	0	-1200																														
MAR		0	0	0	0																														
APR		0	0	0	0																														
MAY		0	0	0	0																														
JUN		0	0	0	0																														
JUL		0	0	0	0																														
AUG		0	0	0	0																														
SEP		0	0	0	0																														
OCT		0	0	0	0																														
NOV		0	0	0	0																														
DEC		0	0	0	0																														
TOTAL PAPER TRANSFERS		0	-1200	0	-1200	DETAIL - PAPER TRANSFERS>>																			0										
JID ENTITLEMENT REMAINING	0	3530	1317	0	4847																														
	*Note 1	*Note 2																																	
HISTORICAL																																			
YEAR: RIPARIAN / CVP % ALLOCTN	SJQN RVR Schedule 2	USBR CONTRACT	USBR RESCHED/ CARRYOVR	USBR SEC 215	TOTAL CVP	MENDOTA POOL	JID WEST WEIR	JID EAST WEIR	BOOSTER P	SPILL BACK	TOTAL KINGS RIVER	MUD DAM	DRY CREEK	LINCOLN AVE	SPILL BACK EASTSIDE	TOTAL FRESNO IRR	TRANQ IRR DISTR	RECL 1606 YRIBARREN	SAN LUIS WATER DISTR	MENDOTA POOL (BANKED)	INFLOW SUB-TOTAL	JID WELL PUMPS	INFLOW GRAND TOTAL	TOTAL (DELIV)	OUTFLOW TOTAL (SPILLED)	RECOVERED (RECHARGED)	(LOSS) SURPLUS	LOSS %							
2009: 100% RIP / 10% CVP	9700	0	3652	0	3652	857	0	0	0	0	0	0	0	452	0	452	771	0	0	-433	14999	55093	70092	-55403	-977	2039	15751	22%							
2008: 100% RIP / 40% CVP	9700	7951	2579	0	2579	0	0	0	0	0	0	0	1618	801	0	2419	0	0	2897	28	21256	56886	78142	-63323	-410	0	14408	18%							
2007: 100% RIP / 50% CVP	9700	16571	3500	0	20071	28	0	0	0	0	0	0	0	355	0	355	0	0	9421	-28	39547	48713	82978	-63435	-383	877	20037	24%							
2006: 100% RIP / 100% CVP	9700	23866	0	0	23866	0	14159	2461	4419	0	21039	0	831	2519	0	3349	0	0	9452	0	67406	6282	73688	-47949	-344	-8610	16786	23%							
2005: 100% RIP / 85% CVP	9700	28343	0	2477	30820	0	5870	482	2227	0	8578	0	63	1148	0	1212	0	0	0	0	50310	22537	72847	-55419	-247	-2288	14892	20%							
2004: 100% RIP / 70% CVP	9700	27077	0	1690	28767	0	0	0	0	0	0	0	0	589	0	589	0	0	1200	0	38566	42983	81549	-63109	-137	-934	17370	21%							
2003: 100% RIP / 75% CVP	9700	26475	1945	0	28420	0	0	0	0	0	0	0	0	906	0	906	0	0	0	0	39026	37352	76378	-57544	-86	N/A	18748	25%							
2002: 100% RIP / 70% CVP	9700	24710	1488	0	26198	0	0	0	0	0	0	0	0	1467	0	1467	0	0	0	0	37365	48653	86018	-61695	-126	N/A	24196	28%							
2001: 100% RIP / 49% CVP	9700	15809	97	0	15906	3110	0	0	0	0	0	0	0	771	0	771	0	0	0	-3110	26377	48640	75017	-57516	-97	N/A	17403	23%							
2000: 100% RIP / 65% CVP	9700	22945	948	0	23893	0	0	0	0	-63	-63	0	133	1803	0	1936	0	0	0	0	35465	36416	71784	-55023	UNK	N/A	16761	23%							
1999: 100% RIP / 70% CVP	9700	23442	10000	0	33442	0	111	0	0	0	111	0	107	1356	0	1464	0	0	0	0	44717	33812	78529	-60294	UNK	N/A	18234	23%							
1998: 100% RIP / 100% CVP	1128	13142	0	0	13142	0	31242	0	7061	-153	38150	786	797	1979	-103	2673	0	0	0	0	55879	1916	57795	-42851	UNK	N/A	14944	26%							
1997: 100% RIP / 90% CVP	9700	31770	0	0	31770	0	13142	0	2377	-18	15501	0	280	1525	0	1805	0	0	0	0	58775	26484	85259	-66551	UNK	N/A	18708	22%							
1996: 100% RIP / 95% CVP	9700	27354	10000	0	37354	0	21302	0	2372	0	23674	0	286	1456	0	1741	-584	0	0	0	71885	7235	79120	-61085	UNK	N/A	18035	23%							
1995: 100% RIP / 100% CVP	3317	8126	0	0	8126	0	31413	0	12298	0	43711	0	0	1434	0	1434	0	0	0	0	56588	11326	67913	-54130	UNK	N/A	13783	20%							
1994: 7																																			

*Note 1: San Joaquin Riparian: FEB-JUN Schedule must be taken by June 30; JUL-SEP / Fixed Schedule must be taken by September 30; JAN, OCT-DEC No Deliveries
*Note 2: USBR CVP Contract Total Entitlement allocation reflects 14-month period
*Note 3: Mendota Pool Received: Includes 5% loss

Sampling Instructions for Aqueous Samples

FGL provides the appropriate containers, labels, chain of custodies, ice chests and blue ice at no charge. All samples should be cooled to approximately 4° C prior to shipping to the laboratory. A list of proper holding times and preservation techniques is available upon request. **If you have any questions concerning the containers or sampling techniques please call.** Please do not rinse out containers provided by FGL prior to filling. The containers are labeled as to the type of sampling.

Type 1 - Semi-volatile Organics, Inorganics, and Radio Chemistry (except Radon):

- 1) Fill the sample container to the top and cap.

Type 2 - Volatile Organics:

- 1) Fill the sample containers (two VOA vials) until there is a raised portion of water above the rim of the vial and cap carefully. It helps to run the water very slowly.
- 2) After capping, invert the sample vial, tap the vial, then check for bubbles (headspace).
- 3) If bubbles are present repeat sampling until no bubbles are observed. Having no headspace is very important to the overall quality of the analytical results.

Type 3 - Bacteriology:

Source sampling (testing the well) -

- 1) Selecting a spigot closest to the well and run the water for approximately 5 minutes. If only air is vented, turn on spigots after the holding tank to drop the holding tank pressure which should turn on the pump. The well pump should turn on and run through at least one cycle.
- 2) If the spigot is not frequently used it should be flamed with a propane torch or wiped with bleach and run the water again for 1 minute (longer for very contaminated spigots).
- 3) Please take care opening the sample container and do not remove the powder or pill inside. Permit only the water sample to contact the inside of the bottle and cap.
- 4) Fill the sample container to slightly more than the 100 mL line. This will insure adequate sample volume and enough headspace for mixing.
- 5) Because the analysis needs to be started as soon as possible (maximum time is 30 hours). Please keep the samples cool and ship or deliver to the lab as soon as possible.

System sampling (testing plumbing and faucets away from the well) -

- 1) If possible, select a tap in frequent use. If the tap has an aerator screen it will need to be removed.
 - 2) Turn on the faucet and allow the water to run for approximately 5 minutes.
 - 3) If the spigot is not frequently used it should be flamed with a propane torch or wiped with bleach and run the water again for 1 minute (longer for very contaminated spigots).
 - 4) Please take care opening the sample container and do not remove the powder or pill inside. Permit only the water sample to contact the inside of the bottle and cap.
 - 5) Fill the sample container to slightly more than the 100 mL line. This will insure adequate sample volume and enough headspace for mixing.
 - 6) Because the analysis needs to be started as soon as possible (maximum time is 30 hours). Please keep the samples cool and ship or deliver to the lab as soon as possible.
-

Reservoir and stream sampling -

- 1) Tilt the bottle approximately 45 degrees and hold at the base. In a scooping motion, move the bottle away from you, mouth first, as you fill the bottle.
- 2) Please take care opening the sample container. Permit only the water sample to contact the inside of the bottle and cap.
- 3) Fill the sample container to slightly more than the 100 mL line. This will insure adequate sample volume and enough headspace for mixing.
- 4) Because the holding time is 30 hours please ship or deliver to the lab as soon as possible.

Type 4 - Radon:

Radon is a gas and emanates quickly from agitated water. The hold time for regulated water is 4days. (8d for non-Reg.) Proper collection techniques and handling of the Radon sample is critical for valid data to be obtained. For best results follow the instructions listed below:

- 1) Sample by slowly run water from a hose into a 2 liter container until it overflows for 5 minutes. The water entering the container should be as free as possible of bubbles.
- 2) Fill 2 x 125 mL Boston round or 2 x 40 mL VOA vials under water by placing the hose into the bottle, taking care to release all of the air bubbles. Cap tightly under water.
- 3) Take the sample from container and turn it upside down to check for bubbles. If necessary, repeat sampling until no bubbles are observed.
- 4) Dry sample container and place electrical tape around cap.
- 5) Record time and date of the duplicate samples.
- 6) Pack in a cool ice chest and ship NEXT DAY AIR to the laboratory for analysis.

Other considerations for proper sampling:

- Make an accurate record on the chain of custody of every sample collected. Identify every container by attaching an appropriately inscribed tag or label which corresponds to the record on the chain of custody.
- Before collecting samples from a distribution system, be sure to flush lines sufficiently to insure that the sample is representative of the supply.
- Before sampling from a well, be sure to run the pump long enough to insure that the sample represents the groundwater source.
- When samples are collected from a river or stream, analytical values may vary with depth, stream flow, and distance from shore and channel width. If equipment is available, take and "integrated" sample from top to bottom in the middle of the stream in such a way that the sample is composited according to time or flow. If only a grab or catch sample can be collected, take it in the middle of the stream and, if possible, at mid-depth.
- Lakes and reservoirs are subject to considerable variations from normal influences such as seasonal stratification, rainfall, runoff, and wind. Choose the location, depth and frequency of sampling based on local conditions and the purpose of the investigation. Avoid surface scum.

Well Cleanup Procedure for Bacterial Contamination:

- FGL has a written procedure to help you through the well cleanup process. Please call to obtain a copy of this procedure.

**JAMES IRRIGATION DISTRICT
ANNUAL GROUNDWATER REPORT**

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**James Irrigation District and City of San Joaquin
Groundwater Management Plan
Implementation Schedule (2010-2015)**

Task No.	Task ¹	2010				2011				2012				2013				2014				2015			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
James Irrigation District																									
1	Prepare Annual Groundwater Reports																								
2	Well Canvass																								
3	Well SCADA/Telemetry																								
4	Water Augmentation Project																								
5	Federal Drought Relief Well Construction																								
6	Construct Replacement Wells																								
7	Well Abandonment Program																								
8	Recruit Groundwater Banking Partner																								
9	Negotiate Surface Water Purchases with Fresno Irrigation District																								
10	Evaluate Feasibility of Purchasing Wastewater Effluent from Fresno																								
11	Drought Preparedness Plan																								
City of San Joaquin																									
12	Seek Funding for Water Meters, a New Production Well and Storage Tank																								
13	Water Meter Installation																								
14	Construct 0.7 MG Storage Tank																								
15	Construct New Production Eall																								
16	Update Groundwater Management Plan																								

Notes:

- 1 - Only proposed new projects are shown in this schedule. Existing and on-going projects are not shown. Also, new policies and guidelines that will be implemented on a continuous basis are not shown.
- 2 - Implementation of these projects will depend on the results of current feasibility studies and the availability of funding.